# Whistling Ridge Energy Project

## Final Environmental Impact Statement

### Appendix G

August 2011

Washington State Environmental Policy Act Lead Agency:
State of Washington, Energy Facility Site Evaluation Council

# APPENDIX G – RESPONSE TO COMMENTS

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# INTRODUCTION

This Appendix presents and responds to all substantive comments received during the public comment period for the Whistling Ridge Energy Project Draft Environmental Impact Statement. The substantive comments and their respective responses are organized and presented by topic or subject area following the organization of this EIS (based on the topic of the comment received). Each comment is identified by the following notation: *[LRT X, CMT X]*. Each letter that was received by both BPA and EFSEC was given a numerical letter identifier (*LTR X*). Furthermore, each substantive comment within each letter was given a numerical comment identifier (*CMT X*). Non-substantive comments (general comments) and their respective responses that were received for this proposed project begin on page 593 of this Appendix.

An index to Appendix G is provided to facilitate the identification of the numerical identifier of each letter. A table of contents to Appendix G is provided to present the topic chapter organization of the comments and their responses, as well as what page these topics can be found on. If a reader is interested in a particular issue or topic, they should refer to the table of contents of Appendix G. If a reader is interested in learning what letter number their comment letter was assigned, they should refer to the index of Appendix G. A digital copy of this Appendix can be downloaded from the project website, *http://www.bpa.gov/go/whistling*. By downloading a copy of this Appendix, the viewers may search for their parsed comments within the Appendix using the search function to locate references to their particular letter notation (*LTR X*). You may also request a digital copy of this Appendix by calling 1-800-622-4520 and asking for the document by name. Or, requests for electronic copies can be obtained by writing to:

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208
ATTN: Public Affairs Office – DKE-7

All comment letters received by both Agencies can be viewed in Appendix H of the EIS. Combined, both Agencies received the following amount of comments from the public's review of the Draft Environmental Impact Statement:

- 320 individual letters were received (not counting duplicate form letters).
- 608 letters were received (counting form letters from different individuals).
- 2,168 parsed comments were sent out for response and are addressed in this Appendix.

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## G.1 SUMMARY AND PURPOSE OF AND NEED FOR ACTION

**Comment**: *Why did you decide this was the best spot? [LTR 22, CMT 2]*

**Response**: The lead agencies believe that the DEIS presented a reasonably thorough discussion of the consideration of alternatives for the proposed action, including why alternative locations were not being further studied. The reasons that the Applicant proposed the Project at this particular location are explained in Sections 1.4.1 and 2.3 of the EIS. As discussed in these sections, a variety of factors were considered in evaluating whether alternative locations might be feasible. To further clarify this consideration, Section 2.3.1 of the EIS has been revised to provide additional information on alternative locations that were considered for the proposed Project. Issues raised concerning alternative configurations for the proposed Project are addressed in other response to comments in this section.

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**Comment**: *Why are other spots not as desirable? [LTR 22, CMT 3]*

**Response**: Please see response to Comment LTR 22, CMT 2 above.

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**Comment**: *Why are they [the turbines] placed so that the majority of the central gorge will be seeing them? [LTR 22, CMT 5]*

**Response**: The concerns over turbine corridor A1-A7 are noted. As discussed in the EIS, however, the Project has been proposed as an "integrated whole", meaning essentially as a single power plant, not as a dissectible project where some turbines may be eliminated. An alternative that would eliminate turbine corridor A1-A7 therefore was considered and eliminated from further study. Nonetheless, in determining whether to issue a site certificate and enter a site certificate agreement for a proposed generation project, it is within authority of the State of Washington to condition approval of the proposed Project, consistent with RCW 80.50 and other applicable state statutes. In the draft certification agreement, EFSEC is empowered to include "conditions to protect state or local governmental or community interests affected by the construction or operation of the energy facility." See RCW 80.50.100. These conditions essentially serve to mitigate potential environmental or social impacts of the proposed Project. Accordingly, certain conditions, such as limiting the location of proposed turbine corridors, could be considered as a condition for Project approval (i.e., as a form of mitigation related to the Project's potential impacts).

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**Comment**: *From an economic perspective, the wind farm is supposed to generate power for 20,000 homes. This seems like very few homes for the cost, environmental impact, and degradation of a rural landscape. What would the cost be of conservation efforts to save the equivalent about of energy? We would assume that it would cost far less to save an equivalent*

*amount of power by practicing state of the art energy conservation measures than by generating new energy using wind turbines. Let's look at the real costs of wind power! We are residents of the Columbia Gorge and we oppose this project. [LTR 33, CMT 6]*

**Response**: As discussed in Chapter 1 of the EIS, the lead agencies need to respond to an application and request to site and interconnect a proposed wind project. While conservation could help meet the region's need for power, it would not be responsive to the Applicant's proposal to develop a wind project. Although conservation is not an alternative to the agencies' proposed actions, it is acknowledged in the EIS as a likely method by which energy needs in the region could be met if the No Action alternative was selected.

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**Comment**: *The DEIS erred in its analysis of the regional need for new sources of renewable energy. The DEIS cites the Draft Sixth Northwest Power Plan released in September 2009 by the Northwest Power and Conservation Council. What the DEIS fails to quantify is that this 20-year energy plan for our region concluded that, although population and energy demands will continue to grow in the Pacific Northwest, we can meet 80 percent of expected future energy demands through conservation efforts and improved energy efficiency. Conservation efforts not only have less environmental impact than building new energy sources, they are also considerably less expensive. Only about 20 percent of future needs must come from new sources of energy, according to the Council. And shown above, with 40 wind projects already constructed or proposed for this region, there are plenty of new sources to meet these needs. There is no demonstrated need for Whistling Ridge. The dirty little secret of wind power in the Columbia Plateau Ecoregion is that most of the electricity being generated here by wind turbines is not needed or used in the Pacific Northwest. Instead it is sold to utilities in California. There is regional need for new power sources; there is simply a California demand for electricity generated in Washington and Oregon. On page 3-91 of the DEIS, the applicant claims that the Klickitat County Energy Overlay Zone Final EIS "recently evaluated the projected energy demand in Klickitat County, Washington, the county immediately adjacent to Skamania County." (In fact, this evaluation is already more than six years old). The DEIS then mentions the EIS projection that "four wind power projects with total generating capacity of 1,000 MW" will be developed in Klickitat County by 2024. In fact, Klickitat County has already approved more than a dozen projects, with a total generating capacity of almost 2,000 megawatts. Rather than suggesting that more energy is needed regionally, this rapid development of wind power in Klickitat County indicates that more than enough wind power is already under development to meet the region's energy needs. [LTR 36, CMT 9]*

**Response**: The EIS analyzes the potential impacts of the proposed Project and is not intended to analyze regional need for renewable resources. Information presented in the EIS concerning the Northwest Power Plan is intended to provide context for the applicant's belief that there is sufficient need to support its proposal. The commenter's interpretation of the Northwest Power Plan and its relation to the Applicant's stated need for the Project is acknowledged.

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**Comment**: *Thank you for the opportunity to comment on the DEIS for Whistling Ridge. After reading though this document, I was struck by the generic and generally outdated content. I understand the need to plagiarize other EIS's to lessen preparation efforts; however, it does worry me that this project is not being looked at for the uniqueness of this site, and the natural and scenic resources. [LTR 60, CMT 1]*

**Response**: The opinions of the commenter concerning the completeness and adequacy of the DEIS are noted. EFSEC and BPA believe that the DEIS contains a reasonably thorough analysis of the potential environmental impacts of the proposed Project, as required by SEPA and NEPA. As discussed in the DEIS, environmental information was compiled based primarily on site-specific field studies, literature reviews, and communications with various knowledgeable resource agencies. Any assumptions made in the analysis were explained to the extent appropriate, and every attempt was made to use the most current data and information reasonably available. Specific issues with the DEIS analysis that are raised in these comments are addressed in the appropriate sections of these responses to comments.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS and issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. [LTR 66, CMT 4]*

**Response**: The opinions of the commenter concerning the sufficiency of the DEIS are noted. EFSEC and BPA believe that the DEIS contains a reasonably thorough discussion of the potential environmental impacts of the proposed Project and allows for meaningful analysis of the Project and its impacts, as required by SEPA and NEPA. As such, the lead agencies believe that a supplemental draft EIS is not necessary. As discussed throughout these responses to comments, appropriate clarifications and modifications to the EIS analysis as a result of public comment are contained in the Final EIS for this Project, as allowed under both SEPA and NEPA.

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**Comment**: *I also request that EFSEC and BPA extend the comment period in order to allow the public sufficient time to review and comment on the 1,578 pages of material contained in the DEIS and appendices. Please extend the comment period by 45 days. [LTR 66, CMT 5]*

**Response**: BPA and EFSEC initially allowed a 45-day public review and comment period for the DEIS, which is consistent with NEPA and SEPA regulations for allowing adequate time for DEIS review and comment. In order to further facilitate public involvement however, the lead agencies agreed to extend the end of the original comment period (July 19, 2010) for an additional 39 days (to August 27, 2010), thereby allowing a total of 91 days for public review and comment on the DEIS. The lead agencies provided timely and broad distribution of the DEIS, wide noticing, web postings, and periodic updates to ensure sufficient public awareness of the DEIS and comment period. The lead agencies also posted the DEIS on the agencies' websites and held public meetings on the DEIS to ensure that the public was provided with opportunities for involvement.

**Comment**: *Please hold another hearing, give us more than 3 weeks to analyze 1500 pages of technical material. [LTR 67, CMT 1]*

**Response**: EFSEC and BPA held two public meetings in mid June 2010 to receive comments on the DEIS. In addition, as discussed above, EFSEC and BPA provided a 91-day public review and comment on the DEIS (i.e. May 28, 2010 to August 27, 2010). EFSEC and BPA believe this provided sufficient opportunities for public review and comment.

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**Comment**: *The applicant says that he cannot go below 70mW and is trying to disguise his unwillingness to minimize this project by saying that public utilities seeking to fulfill their RPS requirements need a minimum of this kind of output "to be attractive." [LTR 74, CMT 3]*

**Response**: As discussed in Section 2.3.2 of the EIS, the Applicant considers a 70-MW project as the minimum size required to make the proposed Project economically feasible. In addition, the Applicant believes this is the minimum size needed for utilities looking to fulfill RPS requirements, based on the Applicant's assessment of other wind projects that have successfully entered purchase agreements with utilities seeking to meet RPS requirements. The lead agencies believe these are reasonable requirements for the proposed Project.

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**Comment**: *Pg. 1-7 states that "No other federal agencies have been identified as cooperating agencies for this EIS at this time." Cooperating, hmmm, is that because the NPS and FS have made concerned negative comments about this proposal as it now is written. [LTR 74, CMT 4]*

**Response**: No federal agencies are cooperating agencies for this EIS because no such agencies have formally expressed an interest in acting as a cooperating agency. As is noted in Chapter 1 of the EIS, however, the lead agencies, along with the Applicant, have conducted extensive outreach to various federal, state, local, and tribal agencies and entities to help identify any issues concerning the proposal to be addressed in the EIS.

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**Comment**: *On [DEIS] page 1-8 it states that "Other federal, state or local agencies also may have permitting or other approval authority for the proposed Whistling Ridge Energy Program. Those agencies may use this EIS in order to fulfill NEPA or SEPA responsibilities." Those agencies have an obligation to the public to do their own due diligence and evaluations, not depend on the project proponent's potentially biased data. This EIS states that the BPA substation would cover "4.25 acres and be sufficient for future installation of equipment if required for future development." What kind of future development -- 50 more wind turbines? I am concerned with scope creep. With the national and state mandates on "going green" I can see how once they are in, it would be much easier to expand the number of turbines. I don't want to see this project look like the Klickitat projects [LTR 74, CMT 6]*

**Response**: A summary of the required permits and approvals for the proposed Project and the responsible federal, state or local agencies can be found in Table 4-1 in Section 4.0 of the EIS. Section 4.1 also describes the statutes under NEPA and SEPA that require state and federal agencies to "take action to assess, consider, and disclose the potential impacts of their proposed actions on the environment." While other federal, state or local agencies may choose to use this EIS to help fulfill their NEPA or SEPA responsibilities, those agencies would be responsible for independently evaluating the information and analysis it contains to determine if this EIS satisfies their regulatory responsibilities. Those entities may determine that additional studies, review or public involvement are required to satisfy their requirements. There are currently no future requests in BPA's interconnection queue for new generation to interconnect at BPA's proposed new substation, and the transmission lines in the area will be near capacity if the decision is made to interconnect the generation from the proposed Project. The operation of the FCRTS within BPA's Balancing Authority often necessitates changes, upgrades or expansions to existing electrical yards and components in response to regional operational changes or adjustments. In the event that BPA receives future requests to interconnect electrical generation or determines a need to make changes to the proposed substation in response to the operation of the FCRTS, the resulting federal action would require an independent review under NEPA.

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**Comment**: *During a brief review of the referenced document, I was startled to note the appearance throughout, of a distinct bias. Right off the bat, in [DEIS] section 1.2.3.3, a discourse of almost a full page of text - five paragraphs worth - is entitled "Business Needs of the Applicant." No-one's "business need" is appropriate material for discussion in any EIS document, for what, I hope, are obvious reasons. (Only in a totalitarian regime is the "need" or desire of an individual more important than large-scale human, wildlife and scenic resources.) The only material in this section that is relevant- that dealing with the large number of temporary construction jobs that would result, and the small number of permanent jobs after project completion belongs elsewhere. [LTR 76, CMT 2]*

**Response**: The lead agencies believe that it is appropriate that the EIS identify the Applicant's stated reasons for proposing its wind project. These reasons help provide context for why the Applicant has made its proposal, and what objectives it hopes to achieve through its proposal.

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**Comment**: *I plan to submit a lengthier statement dealing with additional issues by the July deadline. Thank you for the opportunity to comment, if only in a cursory manner. I realize that it would take a great deal of your time, but it would be wonderful if a more generous amount of time were allotted to speak, especially on an issue with so many facets of concern. [LTR 76, CMT 12]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *Amid the draft's generally lucid narrative is the following mysterious sentence on page 1-9: "The site has a long history of commercial logging and associated absence of native habitat, reducing or eliminating the need to clear additional forest land." Could someone decipher that for us? [LTR 79, CMT 13]*

**Response**: The Applicant has owned this land since the 1940s and prior to their ownership, the Project Area has been actively logged since the early 1900s. Areas of Development that are being proposed can be further broken down on Table 2-1. Current forest types within the Project Area are described on Figure 2-2 and harvesting schedules are described on Figure 2-3. The summation sentence referenced on DEIS page 1-9 as commented upon is pointing out that additional forest clearing may not necessarily be needed due to the current forest types currently seen within the Project Area as well as tree harvest schedules.

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**Comment**: *We submitted Scoping comments, dated 5/15/2009, for this EIS. After reviewing the DEIS, we are of the opinion that, while the DEIS contains massive amounts of information on topics related to the issues we raised, the DEIS fails to directly address and respond to most of our concerns in a meaningful way. We have therefore resubmitted our previous comments in their entirety, and request that EFSEC and BPA revise the DEIS to respond directly and specifically to the concerns that our community has. Our residents have invested significant amounts of time, energy, money, and especially emotion in building homes and lifestyles focused on our rural, sylvan environment. While we have always known we would be affected by various rural activities such as agriculture and timber operations, we never anticipated that a major industrial activity like a wind farm could be located so near to us. We have grave concerns about several possible adverse effects of the project, and consequent reservations about the location of the Project. [LTR 119, CMT 2]*

**Response**: EFSEC and BPA considered all comments received during the scoping period for this Project, and made good faith efforts to attempt to ensure that the DEIS addressed all comments relevant to environmental concerns. In addition, many of the same issues raised in the scoping process were also raised in comments on the DEIS, and are thus addressed herein. In doing so, the lead agencies believe that they have adequately addressed comments made through the EIS process.

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**Comment**: *Precedent. We believe it is critical that the EIS address the potential precedent that would be set by approval of this Project. Because it is the first wind farm in Washington to be located in a forest environment (we are told), adjacent to a National Scenic Area, and close to so many residences, a very detailed and thorough analysis of its potential impacts must be provided. Approval of the current application for this project will have precedential effect not only for projects in other regions, but also for expansion of this Project. SDS and DNR have acknowledged that they are investigating a major possible expansion of this Project onto DNR land. We do not know if SDS will seek to expand this Project even further on its own adjacent lands (which would be closer to our community.) However, we are worried that if this Project is approved now based on its smaller size, it will be very difficult to prevent expansions that might*

*initially have been rejected based on an upfront perspective of the total impacts. Consequently, we request that the EIS take the broadest possible view when evaluating the impacts of this Project. [LTR 119, CMT 11]*

**Response**: It is unclear at this time whether approval of the proposed Project would set a precedent for siting other wind projects in the area. Since all projects are evaluated on a case-by-case basis, approval of this Project does not dictate that any other Project that may be proposed in the future would also be approved. In addition, most developers are aware of the challenges of attempting to site wind projects in this general area. For the Applicant, proposing a wind project in this area may make sense, but other wind project developers may have differing opinions. Nonetheless, because there are no current proposals for other wind projects in the area; such future development is considered too speculative at this time.

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**Comment**: *I request that EFSEC and BPA extend the comment period by 45 days, in order to allow the public sufficient time to review and comment on the 1,578 pages of material contained in the DEIS and appendices. [LTR 127, CMT 4]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *The public must also be kept informed about the environmental impacts of the project, so please extend the comment period by 45 days. [LTR 130, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *Related Concerns: 1. A first Gorge Windmill project will set a precedent. Other proposals and very likely other windmill farms will follow. New companies (for example a conglomerate such as General Electric) will be much less concerned about the welfare of this area than our neighbors at SDS. [LTR 135, CMT 3]*

**Response**: Please see response to Comment LTR 119, CMT 11 above.

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**Comment**: *Huge steel towers with massive concrete bases would be with us a very long time. The costs of removing an obsolete windmill would be substantial. But how long would a wind tower be useful? [LTR 135, CMT 7]*

**Response**: As discussed in Section 2.1.7 of the EIS, the proposed Project, including the wind turbines, is expected to have a useful life of at least 30 years. However, it is possible (and generally likely) that in the future, aging project components would be replaced as needed, which

could extend the useful life of the Project for years or even decades beyond the current expected project lifespan.

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**Comment**: *In our testimony of May 6, 2009 we specifically requested that three issues be directly addressed within the scope of the proposed Whistling Ridge Energy Project EIS. The current draft EIS does not adequately address the three issues. [LTR 139, CMT 1]*

**Response**: Please see response to Comment LTR 119, CMT 2 above.

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**Comment**: *The third issue we raised was partially resolved, not due to your actions, but as a result of a decision rendered by DNR, which prevented, at least temporarily, the leasing of adjacent DNR land to SDS for placement of additional wind turbines. We are still greatly concerned that this proposed project is reportedly the first of its kind in forested habitats in Washington. This begs the need for intelligent planning, caution and due consideration given the potentially profound impact on watersheds, wildfire risk, bats, avian species, mammals and humans. We feel greatly disappointed that the current draft EIS appears to hide behind outdated and inadequate state regulations, and pray that EFSEC and BPA will yet demonstrate desperately needed leadership in adopting a quality and accurate model for wind turbine siting that is in harmony with the environment while providing ample protection for the health and quality of life of all Washington residents. [LTR 139, CMT 25]*

**Response**: Please see response to Comment LTR 119, CMT 2 above.

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**Comment**: *There has not been enough time for the average citizen to go through the EIS! Most people I've spoken with haven't still have not seen the EIS. [LTR 142, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *At the last public hearing on Whistling Ridge, numerous public participants, including the Yakama Tribe asking for government to government contact, asked for more time to dissect the 1500+ DEIS for this proposed wind farm. Have you all made any decision to prolong the 30-day comment period? Frankly, 30 days is not enough time to dissect, digest, analyze, and make coherent comments upon, such a monster DEIS. I would like to see the public participation process extended to a more reasonable comment period. Thank you. [LTR 143, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *I am writing to request that you extend the comment period on the DEIS for the Whistling Ridge Energy Project. I received my hard copy of this 1500 page document on Monday, July 12, 2010. I requested it at the Underwood hearing on June 16th, after finding that looking at it online was not practical (hard to flip back and forth to cross-reference, etc.) and printing it on my printer impractical, too. When I tried to look at it at the library in White Salmon, I was only given the DEIS without the appendices. To summarize, I have been given less than a week to review a complex, 1500 page document. I am probably not the only one. We were assured at the hearings by Jim Luce that hard copies would be available on request. I think he thought we would get them in a more timely manner. A week is not enough time to assimilate the information, let alone formulate constructive comments. I respectfully request that your agencies extend the comment period at least 60 days. A cursory review of the document reveals much happy talk and shallow analysis of major issues associated with this project. I would like to provide detailed and meaningful input to this process, but will need more time. As I stated at the hearing, my community of Underwood, through which all construction traffic will be routed, feels like it is getting the bum's rush by your agencies and the applicant. As the first project of its kind in a forested, mountainous setting, on the doorstep of a internationally recognized scenic wonder, we hope that the process will be fair and thorough. [LTR 144, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *I am writing on behalf of Friends of the Columbia Gorge to request that the agencies extend the deadline for written comments on the Whistling Ridge Energy Project DEIS. We request an extension of 45 days in order to have sufficient time to review the 1,500 pages of material in the DEIS and appendices and make meaningful, informed comments. Until very recently, Friends' staff, consultants, and outside legal counsel have had a total of only two paper copies of the DEIS to use in our review. Essentially, nine different people in five different offices have had to share two paper copies. One of our consultants is often in the field and away from a computer; a paper copy has been essential for his review. Friends' staff attended the June 16 and 17 public hearings in Underwood and Stevenson. At those meetings, EFSEC Chair Luce stated that paper copies would be provided to the public upon request. Friends' staff requested three additional copies of the DEIS by checking the appropriate box on the sign-in sheets. On June 21, I requested by phone and email four paper copies of the DEIS from EFSEC. On July 7, not having received the copies, I reiterated the request by email. On July 12, Friends' staff finally received two additional paper copies. This was only one week before the comment deadline of July 19. We certainly understand that the EFSEC and BPA staff are overwhelmed with the regular press of business, not to mention furlough days and special projects. We do not fault the agency staff for the delays in distributing paper copies. However, we believe it is only fair for the agencies to extend the comment deadline, in order to give the public sufficient time to review and comment on the material in the DEIS. We are also sympathetic to the impact on the citizens of the Gorge. I have spoken to other people who received their first and only paper copy this week, after requesting it almost a month ago. Some citizens in rural areas of the Gorge are still using dial-up Internet access, or have no Internet access at all. For these citizens, obtaining electronic copies via the Internet was never an option. They are now left with an insufficient amount of time to digest 1,500 pages of material and write meaningful comments. Friends*

*respectfully requests an extension of the comment period on the DEIS. Thank you for considering this request. [LTR 145, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *I would like to request an extension of 30-45 days for the deadline for written comments on the DEIS for the Whistling Ridge Energy Project in order to have sufficient time to review, digest and then make meaningful comments on this proposal since this will be the one and only opportunity as a concerned Gorge resident to do so. This document along with its appendices is an enormous amount of material to try and make informed comments on since I only received my hard copy a matter of several weeks ago and I have dial-up internet at my home in the West end of Skamania county and simply can't download this material in any sort of realistic timeframe. I attended both the June 16th and 17th public hearings in Underwood and Stevenson where several other concerned citizens voiced their concerns that this is not an adequate amount of time for proper public review. As a resident of the Columbia River Gorge living in Skamania county for the past 16 years, I respectfully request that you allow for an extension for the public comment period on this DEIS of the Whistling Ridge Wind Energy Project. [LTR 146, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *I am writing to request an extension to the comment period for the WRE DEIS. I was able to obtain a hard copy of the DEIS from EFSEC's kind staff at the Underwood DEIS public meeting in mid-June. Since that time, of slightly less than 30 days, I have read through and marked up my copy, but still have not finished compiling and commenting, due to the complexity and size of the DEIS. Please provide additional time for the public to offer meaningful comments. [LTR 147, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *This office represents Save Our Scenic an interested party to the proposed Whistling Ridge Energy project. Given the length of the DEIS and the detailed materials found therein, we join in the request of Friends of the Columbia Gorge (Friends) to extend the comment period for 45 days to allow full opportunity to comment on this DEIS as well as to provide additional notice to interested persons. [LTR 148, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *Based on the foregoing, SOSA requests that the comment period for the DEIS be extended for at least 45 days. [LTR 148, CMT 4]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *They own lots of land (70,000 acres, according to Wally Stevenson) and can find another way to make money on it. There is another reason I question this project. The Northwest Power and Conservation Council's 6th Plan ranks conservation ahead of wind power in terms of cost-effectiveness. I work on verifying conservation technologies and, for the most part, they do work. The hardest part has been finding someone to do the work (thankfully that is now changing) but the results have been proven in a number of regional studies that extending back to the early 1980s. There is still a lot of conservation to procure, and the economics are considerably more favorable than the economics of wind, especially when real utilization factors are employed. (That is, turbines even in very windy places only generate usable electricity about 40% of the time; most turbines have much lower utilization rates.) I urge EFSEC to consider these issues seriously when ruling on the siting application. [LTR 153, CMT 2]*

**Response**: Please see response to Comment LTR 33, CMT 6 above.

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**Comment**: *I also request that EFSEC and BPA extend the comment period in order to allow the public sufficient time to review and comment on the 1,578 pages of material contained in the DE IS and appendices. Please extend the comment period by 45 days. [LTR 154, CMT 2]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *The DEIS erred in its analysis of the regional need for new sources of renewable energy. The DEIS cites the Draft Sixth Northwest Power Plan released in September 2009 by the Northwest Power and Conservation Council. What the DEIS fails to quantify is that this 20-year energy plan for our region concluded that, although population and energy demands will continue to grow in the Pacific Northwest, we can meet more than 80 percent of expected future energy demands through conservation efforts and improved energy efficiency. Conservation efforts not only have less environmental impact than building new energy sources, they are also considerably less expensive. Less than 20 percent of future needs must come from new sources of energy, according to the Council. And shown above, with 40 wind projects already constructed or proposed for this region, there are plenty of new sources to meet these needs. There is no demonstrated need for Whistling Ridge. The dirty little secret of wind power in the Columbia Plateau Ecoregion is that most of the electricity being generated here by wind turbines is not needed or used in the Pacific Northwest. Instead it is sold to utilities in California. There is no regional need for new power sources; there is simply a California demand for electricity generated in Washington and Oregon. On page 3-91 of the DEIS, the applicant claims that the Klickitat County Energy Overlay Zone Final EIS "recently evaluated the projected energy*

*demand in Klickitat County, Washington, the county immediately adjacent to Skamania County." (In fact, this evaluation is already more than six years old). The DEIS then mentions the EIS projection that "four wind power projects with total generating capacity of 1,000 MW" will be developed in Klickitat County by 2024. In fact, Klickitat County has already approved more than a dozen projects, with a total generating capacity of almost 2,000 megawatts. Rather than suggesting that more energy is needed regionally, this rapid development of wind power in Klickitat County indicates that more than enough wind power is already under development to meet the region's energy needs. Existing wind projects in this region are already producing so much surplus power that there are times when these projects must be turned off to protect the regional grid. For example, see these recent articles on the surpluses in the Columbia River corridor: http://green.blogs.nytimes.com/2010/07/07/sudden-surplus-calls-for-quick -thinking/, and http://www.oregonlive.comlbusiness/index.ssf/2010/06/swollen_columbia_river_chums_html. [LTR 161, CMT 10]*

**Response**: Please see response to Comment LTR 36, CMT 9 above.

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**Comment**: *The DEIS overwhelms the public with quantity but not quality. I am grateful for the extended comment period. Nevertheless, it is not reasonable to expect members of the general public to be able to digest and respond intelligently within just a few weeks to a record that is thousands of pages long and years in the making. Despite this huge volume of material, there is very little scientific literature cited in the DEIS, and even less that is peer-reviewed science. The applicant has cherry-picked a few statistics and extrapolations from industry-sponsored reports and ignored the independent science and actual mortality studies that suggest major cumulative impacts are likely for wildlife given the pace and scope of wind power development in this region. Thank you for the opportunity to comment on this project. [LTR 161, CMT 14]*

**Response**: Please see response to Comment LTR 60, CMT 1 above.

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**Comment**: *Joint EFSEC/BPA preparation. As the DEIS introduction at paragraph 1.1 clearly states, both the Energy Facility Site Evaluation Council (EFSEC) and the Bonneville Power Administration (BPA) have jointly prepared the DEIS to be consistent with the requirements of both the Washington State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA). Although the document is consistent with SEPA requirements, its form has been modified, adjusted and expanded where appropriate to ensure compliance with NEPA as well. Accordingly, the DEIS is now a federal NEPA document and not just an EIS generated by the project applicant. [LTR 162, CMT 8]*

**Response**: The lead agencies believe that they have produced a reasonably thorough analysis of the proposed Project that adequately considers all points of view. BPA and EFSEC staff actively and extensively participated in the preparation of the EIS, as required by SEPA and NEPA. Both SEPA and NEPA allow for the use of environmental information, in whatever

form, from the Applicant for use in the preparation of an EIS. In fact, SEPA allows for an applicant to prepare the EIS. Nonetheless, where the lead agencies used information provided by the Applicant or its consultants, this information was thoroughly reviewed and independently evaluated by the agencies to ensure its competency and accuracy. This approach is consistent with the intent of SEPA and NEPA that acceptable environment work not be redone, but that it instead simply be verified by the lead agency. The lead agencies have taken full responsibility for the scope and content of the EIS, and have fulfilled their respective responsibilities for EIS preparation under SEPA and NEPA.

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**Comment**: *In addition, the DEIS has been prepared in direct collaboration with a sufficiently wide range of state and federal wildlife agencies and tribal governments (8), including: the Washington Dept. of Archeology and Historic Preservation, Washington Department of Fish and Wildlife, Washington State Department of Natural Resources, Washington State Department of Transportation, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and the Yakama Nation. The pre-development biological survey work was done in collaboration with the Washington and U.S. Fish and Wildlife Departments. [LTR 162, CMT 8]*

**Response**: Please see response to Comment LTR 74, CMT 4 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS and issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 163, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS and issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 165, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS and issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 167, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS and issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 169, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Based on the foregoing, SOSA still believes that the correct procedure to be followed, and one authorized by the rules under both SEPA and NEPA, is to issue a supplemental DEIS (SDEIS) correcting basic errors in the issued DEIS. The SDEIS would be subject to comment by interested agencies and members of the public. [LTR 176, CMT 4]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Third, the DEIS cites numerous public documents that the project will supposedly comply with, including the Fifth Northwest Electric Power and Conservation Plan (DEIS at 1-4), the draft Sixth Northwest Electric Power Plan ("NPCC 2009", DEIS at 1-5), the "establishment of Renewable Portfolio Standards (RPS) at the state level" (DEIS at 1-5), the requirement for "qualified alternative energy products" pursuant to state law (DEIS at 1-5). Each of these regulations and policies is substantially similar to the relationship between Pierce County and the developer in the Weyerhaeuser case. The DEIS touts the current proposal as meeting public needs and legislative mandates. WRE cannot promote the project "public" for one purpose, but claim it is "private" for another, especially where careful review of alternatives is required by SEPA and NEPA. [LTR 176, CMT 8]*

**Response**: The public documents referenced by the commenter are not identified as documents that the Project will comply with; rather, as indicated on page 1-4 of the EIS, these documents have been identified by the Applicant as sources that the Applicant believes point to the regional need for renewable resources such as the proposed Project.

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**Comment**: *The current EIS should be withdrawn and a supplemental EIS complying with NEPA/SEPA rules and guidelines must be circulated for comment. [LTR 176, CMT 8]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *The failure of the BPA and EFSEC to consider alternatives, including alternate locations and different configurations are fatal flaws in the DEIS. [LTR 176, CMT 8]*

**Response**: The lead agencies believe that the EIS considers a reasonable range of alternatives and adequately describes these alternatives, consistent with the requirements of both SEPA and NEPA. Issues raised in these comments specific to alternatives considered but eliminated from detailed study in the EIS are addressed in other response to comments in this section.

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**Comment**: *Fourth, there is considerable discussion of the need for the project's resources on a regional basis. See DEIS at 1-4 and 1-5. However, there are real questions as to need for this variable energy facility. At the outset, it appears that most wind energy is not, as indicated at page 1-4 of the DEIS, used or useful in the Northwest. As indicated in the April 12, 2010 submission of BPA to the Federal Energy Regulatory Commission (FERC) on their docket Docket No. RM1 0-11-000 regarding regulation of "variable energy resources" (VER) at page 2: The need to clearly define balancing authority roles and responsibilities is especially important to BPA, because approximately 80 percent of the almost 2,800 MW of wind generation currently on BPA's system is exported to other balancing authorities, and BPA's preference customers should not bear costs of integrating wind generation that is exported to serve load outside of BPA's balancing authority. Thus the EIS must consider whether the WR project or other wind projects actually meet loads in the Northwest. In addition, as the BPA submission to FERC makes clear, it is necessary for balancing power to be available to meet loads when the wind does not blow. As noted by BPA in their comments on Docket No. RM1 0-11-000, at page 5, there are additional problems with balancing loads when wind energy resources are exported to California or to other sink authorities. These facilities might include increased reliance on hydro resources or peaking facilities such as gas turbine plants. The EIS should consider whether additions of a VER like WR will result in the need for other peaking facilities to balance loads and whether the addition of a VER like WR is consistent with meeting demand. [LTR 176, CMT 9]*

**Response**: Please see response to Comment LTR 36, CMT 9 above.

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**Comment**: *[In reference to DEIS Section] 1.4, ALTERNATIVES ANALYSIS, [t]he Alternatives Analysis is limited to a No Action alternative. While the DEIS states that other locations, project sizes and project configurations were considered, it fails to identify these alternative locations or configurations, or adequately explain why they were not worthy of additional analysis. As described in more detail below, the off-site and on-site alternative analyses should be expanded to include in-depth descriptions of the criteria used to select the proposed site and the proposed project configuration, as well as a focused discussion about why other sites and project configurations were excluded from further review. [LTR 177, CMT 2]*

**Response:** The lead agencies believe that the DEIS presented a reasonably thorough discussion of the consideration of alternatives for the proposed action, including why alternative locations were not being further studied. The reasons that the Applicant proposed its wind project at this particular location is explained in Sections 1.4.1 and 2.3 of the EIS. As discussed in these sections, a variety of factors were considered in evaluating whether alternative locations might be feasible. To further clarify turbine string site selection, six suitability requirements

were considered. They are as follows: lands owned by the Applicant or Broughton Lumber; within three miles of BPA transmission lines; outside of CRGNSA boundary; suitable terrain; road access; and contains at least 1,000 "suitable" land. Furthermore, "suitability" is described as follows:

- Low suitability properties: These are parcels that are within 3 miles of transmission lines, are outside the NSA boundary, have a terrain difference of between 200 and 500 feet, and have road access. These parcels are designated in yellow on the "Tract Suitability Analysis" map (see Figure G-1).
- Potentially suitable properties: These are parcels that are within 3 miles of transmission lines, are outside the NSA boundary, have a terrain difference of between 500 and 1,000 feet, and have road access. It should be noted that these parcels could be ruled out as being unsuitable based on other factors not assessed in this analysis, such as slope direction or parcel size. These parcels are designated in brown on the "Tract Suitability Analysis" map (see Figure G-1).
- Suitable properties: These are parcels that are within 3 miles of transmission lines, are outside the NSA boundary, have a terrain difference of between 500 and 1,000 feet, and has what appear to be better road access than properties identified as "potentially suitable". These parcels are designated in dark pink on the "Tract Suitability Analysis" map (see Figure G-1).
- Highly suitable properties: These are parcels that are within 3 miles of transmission lines, are outside the NSA boundary, have terrain differences between 1000 and 2000 feet above surrounding terrain and contain the highest hills/ridgelines within the study area, and have good road access. These are the best possible locations within the study area for wind facility development. Of the analyzed parcels, only 1 parcel fell into this category. These parcels are designated in blue on the "Tract Suitability Analysis" map (see Figure G-1).

The proposed Whistling Ridge Energy Project site was identified by the Applicant for its location within the "highly suitable properties". This site was then forwarded for further environmental analysis including wildlife surveys. Issues raised concerning alternative configurations for the proposed Project are addressed in other response to comments in this section.

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**Comment**: *[In reference to DEIS Section] 1.4.1, Proposed Action, [t]he second bulleted factor in this section indicates that the site must be large enough to accommodate enough wind turbines to produce a minimum of 70 MW of electricity. Because the wind does not blow at a constant rate, wind turbines rarely operate at 100% percent capacity. Accordingly, references to wind generating capacity should be expressed in nameplate generation capacity. [LTR 177, CMT 3]*

**Response**: The second bullet in Section 1.4.1 has been edited to reflect that the 70-MW reflects the minimum nameplate capacity generation.

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**Comment**: *The fourth bulleted factor in this section states: "The site has a long history of commercial logging and associated absence of native habitat, reducing or eliminating the need to clear additional forest land." This and similar statements regarding the "absence of native habitat" are made in several places in the document (e.g., [DEIS Section] 3.4.1.1), and the statement is misleading. With the exception of the weeds identified at the site and disclosed elsewhere in the document, grass, forb, shrub, and tree species at the site are predominantly native. A more accurate statement would be that the site is heavily managed and manipulated and is not in a natural state, being maintained in a state of disclaimed and with monotypic forest stands. The affected environment description provided in Chapter 3 ([DEIS Sections] 3.4.1.1 and 3.4.1.2) is far more accurate. [LTR 177, CMT 4]*

**Response**: The text in Section 1.4.1 (DEIS page 1-9) has been modified to reflect the fact that native species still occur in the Project Area even though it is heavily managed for timber production. The fourth bullet on page 1-9 of the DEIS has been revised to delete the phrase "and associated absence of native habitat" and now reads: "The site has a long history of commercial logging, reducing or eliminating the needs to clear additional forest land. Native species remain; however, the native habitat has been disturbed through commercial forestry activities."

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**Comment**: *The final paragraph in this section states that the project would have a total nameplate capacity of "up to 75 MW." The second bulleted factor in this section states that project's minimum nameplate capacity is 70 MW. It is unclear how these two figures relate to one another. The project's maximum and minimum nameplate generating capacity levels should be clearly identified and described in a single location. [LTR 177, CMT 5]*

**Response**: Please see response to Comment LTR 177, CMT 3 above. Additionally, for more clarification, the 75-MW figure is the size of the Project that has been proposed by the Applicant. The 70-MW figure is the minimum capacity that the Applicant believes is necessary to have a financially viable project.

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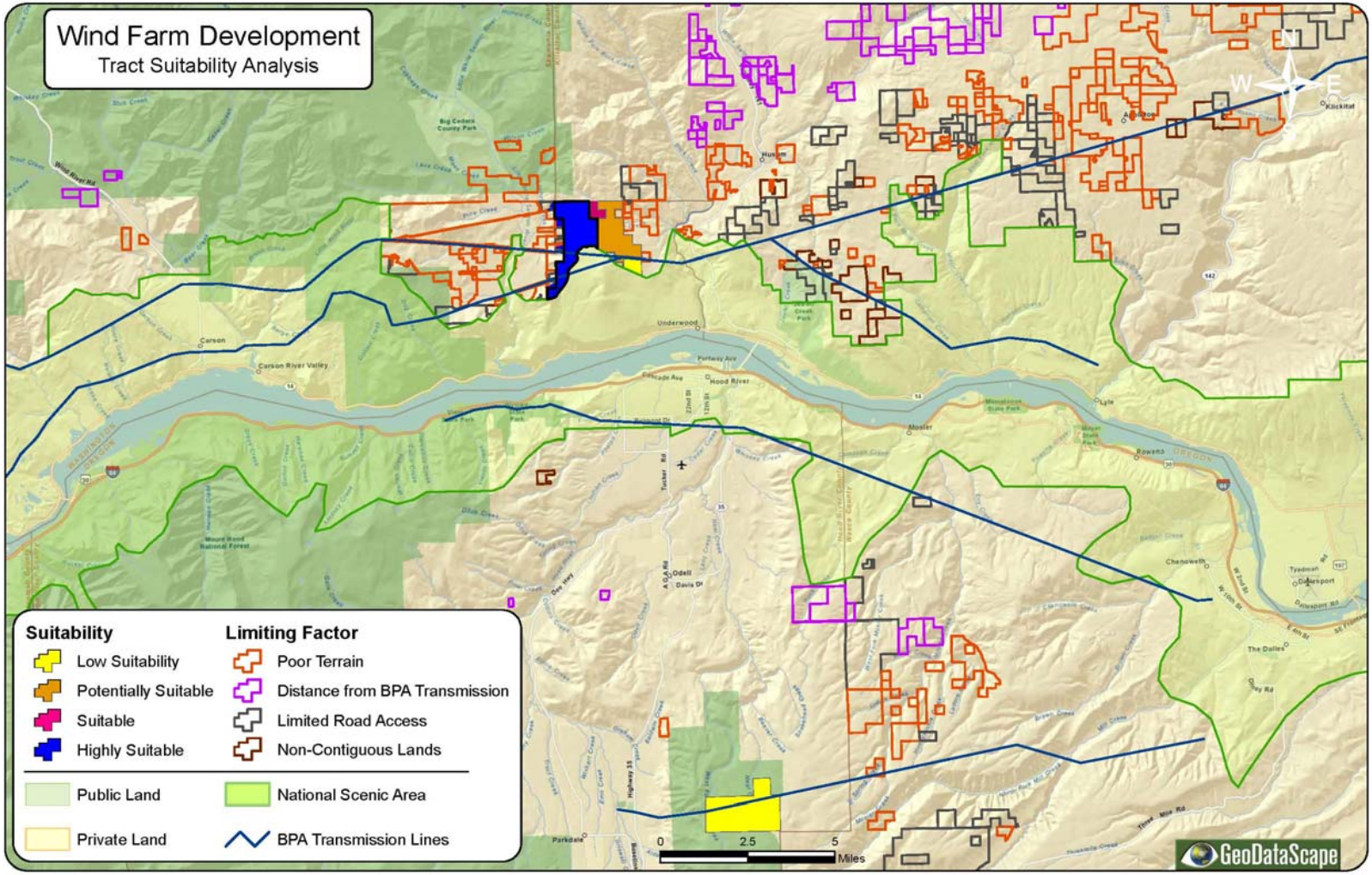


**Figure G1.** Project Siting for the Whistling Ridge Energy Project using Tract Suitability Analysis.

**Comment**: *[In reference to DEIS Section] 1.4.1.1, Wind Turbines, [t]he generating capacity should be referenced as nameplate capacity. This section should also clarify whether the size of the turbines will be consistent throughout the project or whether the size will vary from tower to tower. [LTR 177, CMT 6]*

**Response**: The text in Sections 1.4.1.1 and 2.1.3.1 regarding wind turbines has been updated to reflect the nameplate generating capacity of the wind turbine models and the correlation between output and turbine size. The turbines throughout the Project would all be the same model, although height may vary in response to terrain. These clarifications have been incorporated into Section 2.1.3.1.

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**Comment**: *[In reference to Section] 1.4.2, No Action Alternative, [t]his section states that the only circumstance the project will not be built is if the responsible agencies (BPA or EFSEC) withhold their authorization. There are a multitude of reasons why a proposed project may not be built. This statement is not accurate and should be removed from the FEIS. [LTR 177, CMT 7]*

**Response**: It is acknowledged that many factors could result in the Project not being built, and nothing in the EIS is intended to indicate that project disapproval by the lead agencies - EFSEC and BPA - would be the only reason the Project may not be built. Nonetheless, for the purposes of defining the No Action alternative in the EIS, the key consideration is what the result would be if either or both of the lead agencies decide not to approve the proposed Project. Thus, the EIS references the No Action alternative in this manner.

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**Comment**: *[In reference to DEIS Section] 1.4.3, Alternatives Considered But Eliminated From Detailed Study, [t]his section explains why the no action alternative was the only alternative analyzed. In doing so, it references a set of technical and economic requirements that purportedly eliminated all other potential project sites from consideration. None of the eliminated off-site locations, however, are identified, and the DEIS does not contain the underlying technical and economic data the Applicant used to eliminate the undisclosed sites from further consideration. At a minimum, the FEIS should include detailed information regarding the economic and technical data underlying the site selection criteria, as well as the locations of all potential alternative sites considered so that the decision to limit review to the No Action alternative can be independently verified. [LTR 177, CMT 8]*

**Response**: Please see response to Comment LTR 22, CMT 2 above.

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**Comment**: *[In reference to Section] 1.4.3.1, Alternative Project Locations, [t]he DEIS states that the Applicant applied the following criteria to determine whether alternative project locations were available for EIS review: adequate wind supply, applicant ownership of land, ability to operate wind turbines without impacting commercial timber operations, and proximity*

*to high voltage transmission lines. The DEIS analysis and discussion of the alternative location selection process is set forth in a single sentence: No other sites were identified that are under the ownership of the Applicant or as close to transmission infrastructure facilities. DEIS at p. 1-14. This summary analysis should be expanded to include a detailed description of the criteria used to select the project site, the location of the alternative sites that were considered, and discussion regarding why these alternative sites were ultimately eliminated from further consideration. [Footnote: Ideally, this discussion would include information sufficient to independently verify the decision to eliminate these alternative sites from further consideration. This would include the location of SDS holdings in Southern Washington and Northern Oregon, wind resources available in those areas, the location of transmission lines, economic parameters for the project, as well as economic information regarding the project's interrelationship with timber harvesting activities.] [LTR 177, CMT 9]*

**Response**: Please see response to Comment LTR 22, CMT 2 above.

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**Comment**: *[In reference to Section] 1.4.3.2, Larger or Smaller Generation Facility Size, [t]he FEIS should be expanded to address on-site alternatives that reduce the number of turbines and/or reconfigure the turbine strings. The purpose of the alternatives analysis is to explore whether the needs of the project can be accomplished through less environmentally impactful means. During the scoping hearings, the public and National Parks Service raised concerns regarding the project's visual impacts, particularly regarding the location of Turbine String A. [Footnote: Turbine String A is also unique in that it contains the turbines in closest proximity to residential dwellings and is located on a parcel of land that is zoned FOR/ AG 20, which would require issuance of a conditional use permit under Skamania County's land use laws. See DEIS at p. 3-153.] This section asserts that the project must be reviewed as an "integrated whole" from which no piece may be eliminated and that if turbines are removed from the project design, "other locations must be found to replace those turbines to maintain the minimum necessary capacity." These assertions are unsupported by analysis and appear to be inconsistent with the project description in both the Site Certification Application (SCA) and the DEIS. Both the SCA and the DEIS state that the project will have a total nameplate generating capacity of approximately 75 MW and will be comprised of up to 50 towers equipped with turbines with nameplate generating capacities ranging from 1.2 to 2.5 MW. [Footnote: The SCA at Section 2.3.3.1, for example, states that "[t]he project would consist of up to 50 wind turbines" and that each turbine would have a nameplate generating power of somewhere between 1.2- to 2.5 MW. (Emphasis added). The DEIS contains an identical description? See DEIS at § 1.4.1.1. Both the SCA and DEIS also state that the project must have a generating capacity of "up to 75 MW." See SCA at §2.3.2 (Project Overview – "up to 75 MW"); DEIS at §l4.l ("minimum of 70 MW;" "up to 75 MW").] Assuming that a 2 MW turbine is selected, the maximum generating capacity of 75 MW could be satisfied with the installation of 38 turbines (resulting in a reduction of 12 turbines). [Footnote: Recently permitted projects appear to be installing turbines with nameplate generation capacities of 2.0 MW or larger. The Desert Claim Wind Power Project, for example, will be installing 2 MW turbines. See Desert Claim Wind Power Project Final Supplemental EIS at 2-13. The recent expansion to the Wild Horse Wind Power Project also used 2.0 MW turbines.] If a 2.5 MW turbine is selected, the number of towers could be reduced to 30. Reducing the number of turbines without sacrificing nameplate generating capacity is not*

*merely hypothetical. The Kittitas Valley Wind Power Project recently reduced its total number of turbines from a maximum of 65 to a maximum of 52 turbines without any change in nameplate generating capacity. The FEIS should include a discussion regarding how the project may be reconfigured through the use of turbines with larger generating capacities. The FEIS should include information regarding the strength and viability of wind resources found throughout the site. This would include information gathered from the on-site meteorological tower regarding the strength, quality, direction and location of on-site wind resources. [LTR 177, CMT 10]*

**Response**: Please see response to Comment LTR 22, CMT 5 above.

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**Comment**: *[In reference to Section] 1.4.3.6, Alternative Access Roads, [p]rivate logging road CG 2930 should be subject to detailed review as an alternative access road. The original Site Certification Application proposed accessing the site using this route. On October 12, 2009, the Applicant submitted an amended application that abandoned the CG 2930 route in favor of the West Pit Road with the stated purpose of removing the entire project outside the CRGNSA boundary. See October 12, 2009 Letter from Whistling Ridge Energy Project to EFSEC re: Submittal of Amended Application 2009-01. Although removing this route from the project plan may dispose of certain regulatory hurdles, the West Pit Road is a longer route that traverses steeper terrain and will likely have a higher environmental impact than the CG 2930.5 [Footnote 5: Long sections of West Pit Road crosses land designated as a Class II landslide hazard area. See DEIS Figures 3.1-1, 3.1-4 and 3.11-2]. Accordingly, this CG 2930 should be evaluated as an alternative. 1.6 SUMMARY OF POTENTIAL PROJECT IMPACTS AND MITIGATION MEASURES Earth - p. 1-22 -Impact of Proposed Project: Much of the West Pit Road is located in a Class II Landslide Hazard Area. This section should summarize and address anticipated impacts, if any, related to Class II Landslide Hazard Areas. [LTR 177, CMT 12]*

**Response**: Use of CG 2930 was evaluated in the original Application for Site Certification as "Route 2." This route would have connected the site to Cook-Underwood Road via Kollock-Knapp Road, Scoggins Road and CG2930. CG2930 is a private logging road that crosses property owned by the Applicant and is currently used for commercial timber production and harvest. As described in Section 2.3.6 on Page 2-23 of the DEIS, use of Route 2 would require minor roadway improvements that would not directly impact any non-Project landowners. However, these roadway improvements would require construction within the National Scenic Area. Therefore, Route 2 was eliminated as a construction roadway access alternative purpose and need for proposed action, or clearly greater environmental impacts.

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**Comment**: *[In reference to Table 1-1 on Page 1-22 of the DEIS under "Air Quality: Impact of No Action Alternative"], [t]his section identifies impacts from construction of fossil fuel power plants as a potential impact under the no action alternative. There is nothing in the record establishing that proposed project is being built in lieu of fossil fuel powered plant or that its construction will reduce the number of fossil fuel powered generation facilities in the future. Indeed, intermittent nature of wind generated power may require the construction of fossil fuel facilities to provide a backup power source. [Footnote: The No Action Alternative analysis*

*appearing on p. 3-92 and in other section of the DEIS contains a more accurate description of the possible impacts if no action is taken: It is likely that the region's power needs would be met through energy efficiency and conservation measures, existing power generation, or the development of new power generation. Base load demands would likely be filled through expansion of existing, or development of new thermal generation such as gas-fired combustion turbine technology. The impacts would depend on the type, location, and size of the facility proposed.] [LTR 177, CMT 13]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Table 1-1 on Page 1-23 of the DEIS under "Biological Resources: Impact of No Action Alternative"], this section states that there "would likely be some mortality to birds and bats due to turbine collision and displacement." This should be revised to state that operation of project "will result in mortality to some birds and bats..." [In reference to Table 1-1 on Page 1-24 of the DEIS under "Biological Resources: Design and Mitigation Measures], remove qualifier "extensive" from pre-project assessment of wildlife habitat conducted under WDFW Wind Power Guidelines. [In reference to Table 1-1 on Page 1-24 of the DEIS under "Biological Resources: Design and Mitigation Measures], a Technical Advisory Committee (TAC) is described, including a description of the stakeholders comprising this group. Because the overarching concern for biological resources is bird and bat mortality, a representative of the Audubon Society should be specified and included in the TAC. [Footnote: The TAC should also be expanded to include representatives from local public interest groups, including interveners Friends of the Columbia Gorge and Save Our Scenic Area.] [In reference to Table 1-1 on Page 1-25 of the DEIS under "Biological Resources: Design and Mitigation Measures], the post-construction avian mortality monitoring should include bat mortality monitoring as so little is known about bat species' composition and mortality risk at the site. The monitoring program should also analyze the accuracy of the pre-construction risk and mortality predictions. Because the project is being proposed in a new habitat type (forested) for Washington wind energy projects, and because so little is known about bat use of the site, bird and bat monitoring should be conducted for five (5) years, rather than the proposed two (2) years. [LTR 177, CMT 14]*

**Response**: The text in Table 1-1 on DEIS page 1-24 has been revised to indicate that the proposed Project "would result in mortality to some birds and bats." Additionally, the formation and membership of the TAC is subject to the Washington Department of Fish and Wildlife Wind Power Guidelines and would be governed by that agency. Both post-construction monitoring and the convening of a TAC to evaluate the mitigation and monitoring program were included as mitigation measures in the DEIS. See Section 3.4.3 Mitigation Measures.

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**Comment**: *[In reference to Section 1.6, Table 1-1], Visual Resources - p. 1-28 - Impact of Proposed Project: This section should clearly state that as proposed the project will have low to moderate visual impacts from key viewpoints, including key viewpoints within the CRGNSA. 1.7 SUMMARY OF UNAVOIDABLE ADVERSE IMPACTS This section should plainly identify and*

*summarize unavoidable adverse impacts. References to beneficial impacts should be removed. The description of unavoidable visual impacts (Table 1-2, p. 1-35) should be re-drafted to read as follows: This project will have unavoidable adverse visual impacts on the surrounding area. Visual impact analysis establishes that the project will have low to moderate visual impacts from key viewpoints, including viewpoints within the CRGNSA. [LTR 177, CMT 15]*

**Response**: Table 1-2 references Section 3.9.5, which states that there would be some visual impact to surrounding areas where turbines were visible, but that these impacts would not be higher than low to moderate for most of the viewpoints examined.

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**Comment**: *[In reference to Section] 1.8, CUMULATIVE IMPACTS, [t]he discussions of existing development in section 1.8.1.1 and reasonably foreseeable future development in section 1.8.1.2 appear to be inconsistent. In section 1.8.1.1, the authors considered wind projects located 35 to 70 miles from the proposed project in their cumulative analysis. In section 1.8.1.2, however, the authors chose to disregard two proposed wind power projects (Juniper Canyon and Summit Ridge) because they are "too far away (generally more than 20 miles) from the Whistling Ridge Energy Project site to result in cumulative impacts." Given that the cumulative analysis of existing impacts considered projects that were located 70 miles away, the analysis of cumulative impacts relating to reasonably foreseeable future development should apply similar criteria or include an explanation as to why different criteria were applied. [In reference to Section] 1.8.1, Projects Considered, [t]he cumulative impact section should discuss the intermittent nature of wind energy generation and the need for easily dispatchable hydro-electric or fossil fuel generating plants to meet demand when the wind is not blowing. [LTR 177, CMT 16]*

**Response**: The cumulative impact analysis in Section 3.14 f the EIS considered the impacts on the environment from the Whistling Ridge Energy Project when added to both existing and reasonably foreseeable future projects. Section 3.14 of the EIS has been revised to reflect that the cumulative impact analysis includes existing and reasonably foreseeable future development generally within approximately 20 miles of the Project Area, but also existing and reasonably foreseeable wind projects that are farther than 20 miles from the Project Area for the purpose of assessing cumulative impacts to visual resources. In reference to the commenter's concern regarding the intermittent nature of wind energy generation, please see Section 3.14.3.5, Fish Species in the Cumulative Impacts section of the DEIS. Currently, the Columbia River hydrosystem has sufficient reserve capacity to provide for fluctuations in wind generation.

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**Comment**: *We find that, in many areas, the present DEIS is completely insufficient and we urge that the NEPA/SEPA responsible officials prepare a supplemental DEIS. The following pages of written and charted comments, plus Exhibits, are intended to address some, but not all, of the deficiencies noted in the particular sections within the WRE DEIS that address Bats. In all cases, the deficiencies are explained. In most cases, particular remedies are suggested. Because no remedy is proposed by SOSA does not mean there should not be one implemented by the NEPA/SEPA responsible officials. [LTR 178, CMT 2]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Thank you for this opportunity to comment on the DEIS. SOSA trusts that the DFEIS and FEIS will provide facts and analysis on the issues raised herein. Science based studies require a statement of all assumptions made to design a study and collect, analyze, and interpret data. This is completely nonexistent in the DEIS and Appendices. [LTR 178, CMT 8]*

**Response**: Please see response to Comment LTR 60, CMT 1 above.

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**Comment**: *[In reference to DEIS] Section 1.1.1 ...and there is a proven wind resource at the site. The use of the word "proven" should require substantiation. A review of government websites, like the National Renewable Energy Labs (NREL), found at windpowermaps.org, shows a wind rating for the WRE site as Marginal to Fair. They should provide met tower data, and the location of such. The only currently observed tower, from a public vantage point, is located on the highest predicted wind power location within the site, so additional met tower data should be provided at the lowest predicted locations as well. Given the Federal Investment Tax Credit, it is imperative that the public grants are used up on the best potential wind resources first, which this site is NOT (according to government predicted models). The Applicant should justify with supportably detail data to demonstrate otherwise. [see also comment at 1-9 (1.4.1)] Remedy - Wind Resource must be quantified by met tower data in multiple locations, and with wind direction in all THREE axes. Then these data must be compared to the alternative of wind resources in the Eastern portion of WA State. Wind power versus wind speeds must be discussed and compared. [LTR 178, CMT 32]*

**Response**: The purpose of Section 1.1 of the EIS is to provide a brief introduction to Purpose and Need for the Action being proposed and is not intended to provide a comprehensive evaluation of the proposed Project details. There were several criteria applied to determine whether the Whistling Ridge Project or other alternatives were technically and economically feasible, and these criteria are discussed in Section 1.4.3 of the EIS. The criteria included the need for a "steady supply of robust wind power, and on a site on which construction can reasonably occur," that "the Project must be located on land the Applicant owns and controls...," and that "the Project must be located in proximity to existing high-voltage transmission lines." While both Washington EFSEC and BPA need to respond to the applicable Applicant requests for authorizations and approvals regarding the proposed Project, neither have the jurisdictional authority to determine or require that the Applicant justify that the proposed Project is one of the "best potential wind resources."

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**Comment**: *[In reference to DEIS] Section 1.3.2, [t]hose agencies may use this EIS in order to fulfill their NEPA or SEPA responsibilities. Providing that the final EIS is a fair, accurate, clear, and truthful document of the issues. Remedy - Issue a complete and accurate final EIS as the document used by Decision-makers in the Adjudicative process. [LTR 178, CMT 34]*

**Response**: Consistent with SEPA and NEPA requirements, the lead agencies fully intend to produce an objective and reasonably thorough Final EIS for the proposed Project.

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**Comment**: *[In reference to] Section 1.4, [t]wo alternatives are evaluated in this EIS: the Proposed Action (authorizing construction and operation of the proposed Whistling Ridge Energy Project and associated components) and the No Action alternative. Proposed Action and No Action alone does not satisfy SEPA or NEPA requirements. The extent of available lands in the analysis should be determined by partnerships or contracts between Applicant and other parties/investors. Remedy - Reference SOSA comment letter addressing the topic specifically, in detail [LTR 178, CMT 35]*

**Response**: The lead agencies believe that the EIS considers a reasonable range of alternatives and adequately describes these alternatives, consistent with the requirements of both SEPA and NEPA. Issues raised in these comments specific to alternatives considered but eliminated from detailed study in the EIS are addressed in other response to comments in this section.

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**Comment**: *[In reference to] Section 1.4.1, [t]he site has a proven, robust wind resource - No legal data exists for A1-7, South of South BPA line, due to no conditional use permits issued by Skamania County, confirmed by Public Information Request, Drach to Skamania County Planning Dept. July 2010. Any Met tower Data in the Appendices? NREL wind power maps show the WRE site ranging from Marginal to Fair, as compared to typical Eastern WA projects listed as Fair to Good (www.windpowermaps.org) see also comment at 1-7 (1.3.1) Remedy - Wind Resource must be quantified by met tower data in multiple locations, and with wind direction in all THREE axes. Then these data must be compared to the alternative of wind resources in the Eastern portion of WA State. Wind power versus wind speeds must be discussed and compared. [LTR 178, CMT 36]*

**Response**: A quantified comparison of the wind resource to other sites in the state with reasonably foreseeable wind development is not required by Washington EFSEC as a condition of the evaluation of the proposal, which is discussed in Section 1.2.1 of the EIS. Similarly, under BPA's tariff, BPA offers transmission interconnection to the FCRTS on a first-come, first-served basis, as discussed in Section 1.2.2 of the EIS. It is the Applicant's responsibility to determine the technical and financial feasibility of the proposed Project, with the most important consideration likely being the quality of the wind resource at the site.

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**Comment**: *[In reference to] Section 1.4.1.3, [t]he Underwood Tap to Bonneville Powerhouse 1-North Camas 115-kV line adjacent to North Bonneville-Midway 230-kV transmission line would require a new steel lattice structure to raise the conductors such that the 230-kV line can cross underneath for this interconnection. The explanation of this requirement is unclear. Remedy - Provide a graphic of the substation site and locations of extra towers required. Identify if this is related to both potential substation locations. [LTR 178, CMT 37]*

**Response**: The existing transmission lines that traverse the Project Area, the Underwood Tap to Bonneville Powerhouse 1-North Camas 115-kV and the North Bonneville-Midway 230-kV transmission lines, will have to be raised if this Project is approved. The reason being that the appropriate clearance will be needed to in order to make the interconnection loop-in to these lines from the proposed BPA substation that would be required for this proposed Project. The raising of the existing transmission lines would be needed only for the proposed BPA substation.

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**Comment**: *[In reference to Section 1.4.1.5], less than 5,000 gallons per day is anticipated for kitchen and bathroom use. No mention of quantity of water used to wash/clean Wind Turbine Blades and Towers. No mention of detergents involved in cleaning operation, nor potential release of chemicals into ground water from Turbine cleaning operations. Remedy - All uses of water at the site must be discussed, and the impacts of ALL water releases into the environment must be identified and addressed. i.e. washing the exterior of the Industrial Equipment. [LTR 178, CMT 38]*

**Response**: It is not anticipated that washing or cleaning of the turbine blades or towers will be required due to the high level of precipitation in the area.

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**Comment**: *[In reference to] Section 1.4.2, [t]his [No Action] alternative would not help the state of Washington in achieving the renewable energy goals mandated by the state's RPS. This is true for the ALL Alternatives, Action or No Action. There is no control over which state gets credit for the Renewable Energy from WRE, the power is sold to the highest bidder. EFSEC would need to condition WRE's permit to sell its power only to Washington State entities, resulting in possible legal complications. Remedy - The EIS cannot claim that WARPS are benefitted as a result of this Project as proposed. This must be removed as a discussed Benefit of the Project, unless an approved permit conditions the sale of WRE power ONLY to Washington State CONSUMERS, via utility contracts. [LTR 178, 39]*

**Response**: Section 1.2.3.1 of the EIS discusses the Washington RPS primarily as an example of RPS legislation recently enacted by several western U.S. States, and since it is possible that a Washington state utility may seek in-state resources to fulfill RPS requirements. However, there is no certainty at this point as to what utility may purchase the output of the proposed facility.

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**Comment**: *[In reference to] Section 1.4.3.1, [l]and in proximity to existing high voltage transmission lines Proximity simply translates to a financial impact, which would be covered as a potential negative in a proposed alternative. Simply not including an alternative due to cost is not complying with SEPA and NEPA. It is up to the decision-makers to determine if those potential extra costs outweigh any potential benefits of the alternate location. Remedy - The DEIS should identify viable Alternatives by including projects in lower impact areas. In the case of a location distant from the GRID, presumably a larger MW capacity would be contemplated*

*to justify the extra cost, and these analyses should be made available to all to understand. [LTR 178, CMT 41]*

**Response**: Please see response to Comment LTR 22, CMT 2 above.

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**Comment**: *[In reference to DEIS] Section 1.4.3.2, [t]hese objectives include providing a minimum level of generation to be attractive to utilities seeking to fulfill their RPS requirements… Documentation should support these claims as to the minimum level power generation, as well as the Entities (presumed Buyers) which have conditioned future potential agreements upon said minimum level of power generation, and the service area of said Entities. (i.e.. WA, CA, AZ, etc.) Remedy - The EIS should include written statements from prospective Utilities which might purchase power from WRE, stating whatever conditions should exist for a Purchase Agreement to be negotiated at some future date. [LTR 178, CMT 42]*

**Response**: The Applicant's objectives reflect their analysis of their business case for the proposed Project. The minimum level of generation for utilities looking to fulfill RPS requirements is based on the Applicant's assessment of other wind projects that have successfully entered purchase agreements with utilities seeking to meet RPS requirements. Information concerning the Applicant's expected return on investment is considered confidential business data by the Applicant. Contrary to the commenter's assertion, this proposed Project is a private project that, while it may have some incidental public benefits in the sense of helping develop renewables, is not being developed as a public project.

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**Comment**: *[In reference to] Section 1.4.3.2, [i]n order to provide this return, the Applicant has determined that the project must be capable of producing a minimum of 70 MW. Unsubstantiated claim, this is a private project operated for the public good, therefore financial analysis and justification is NOT exempt from review. (i.e. for WA RPS mandates) Remedy - The EIS should include written statements from prospective Utilities which might purchase power from WRE, stating whatever conditions should exist for a Purchase Agreement to be negotiated at some future date. [LTR 178, CMT 43]*

**Response**: Please see response to Comment LTR 178, CMT 42 above.

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**Comment**: *[In reference to DEIS] Sections 1.4.3.6 2 and 2.3.6, Alternative Access Roads, Route 1: Ausplund Road to a private logging road vacated by Skamania County in 1987, which crosses private property (not owned by the Applicant) that is currently used for residential, agricultural orchards, and commercial timber production and harvest There is at least a 500' portion of the old Ausplund Road that does not exist, it is overgrown with trees. (Picture attached) The portions of Ausplund Road Private are not available to the Applicant. Road building and improvements within the CRGNSA have been acknowledged by the Applicant as not allowed. This is simply NOT a viable Alternative, and therefore does not satisfy the SEPA*

*requirements. Applicant failed to include viable alternatives, like Little Buck Creek Road, which publicly connects with their land, and would reduce traffic congestion on Cook-Underwood Road, since it turns off early in the proposed route. Remedy - The EIS must remove Ausplund Road from consideration, and replace it with a known viable alternative, namely Little Buck Creek Road, or other real, existing route. [LTR 178, CMT 45]*

**Response**: As explained in Section 2.3.6 (pages 2-22 and 2-23 of the DEIS), the use of Asplund Road (Route 1) has been eliminated from further consideration because use of this route would have required road improvements on private property not owned by the Applicant.

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**Comment**: *[In reference to] Sections 1.4.3.6 2 and 2.3.6, Alternative Access Roads, Route 2: Kollock-Knapp Road to Scoggins Road to a private logging road called the CG2930 road on County Assessor's maps, which crosses property owned by the Applicant that is currently used for commercial timber production and harvest Kollack-Knapp Road was officially retracted by the Applicant in its Amended Application submitted around October 2009. By the Applicants own statements, it is NOT a viable Alternative, and therefore does not satisfy the SEPA requirements. Applicant failed to include viable alternatives, like Lacock-Kelchner Road, via Little Buck Creek Road, which publicly connects with their land, and would also reduce traffic congestion on Cook-Underwood Road, since it turns off early in the proposed route. Remedy - The EIS must remove Kollack-Knapp Road from consideration, and replace it with a known viable alternative, namely Lacock-Kelchner Road, or other real, existing route. [LTR 178, CMT 46]*

**Response**: As stated in Section 2.3.6 (pages 2-22 and 2-23 of the DEIS), the use of Kollack-Knapp Road (Route 2) has been eliminated from further consideration. Therefore, no improvements to County roads within the Scenic Area would be required. See Section 1.4.1.6 for a description of the proposed haul route.

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**Comment**: *[In Table 1-1 on Page 1-22 of the DEIS under "Earth: Construction"], a detailed geotechnical investigation would be performed to identify any subsurface conditions. This is yet another example of a deficiency in the DEIS - no one can assess the environmental impact of massive recontouring, excavating and road building on steep slopes, until the geotechnical assessment is completed and included in the DEIS. This Study must be done, and included in the FEIS. Moderate to Severe changes to topography are likely, given the steep terrain and soil types. Prevailing winds would place the Turbines on the steepest Western slopes of the Ridge, and/or risk loss of critical performance if set too far to the leeward side of the Ridge. Economic viability could be at risk if geotechnical report finds problems. Please note that the economics appear marginal, so the risk level could be high. Remedy - The steep ridges of the proposed WRE project present significant geotechnical challenges that do not exist for projects placed in farming area. The EIS must include real and likely ground-displacing activities, the volumes of material to be moved, the locations of displaced material, the depths needed to secure*

*foundations, etc. if for no other reason than to ensure the Applicant that realistic construction costs do not render the project economically unviable. [LTR 178, CMT 47]*

**Response**: As discussed in Section 2.1.2 of the EIS, final siting of the wind turbines and associated facilities would be done following completion of the EFSEC Site Certificate. Prior to this final siting process, as a condition of the Site Certificate and as discussed in Section 3.1.3, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted. If this investigation indicates the potential for slope instability at turbine sites or other project facilities such as access roads (including improvements to West Pit Road), these facilities will be redesigned or relocated to avoid this risk. As discussed in Section 2.1.3.7, all road improvements required for the proposed Project would be designed and constructed under the direction of a licensed engineer, in accordance with the Skamania County Private Road Guidelines and Development Assistance Manual. All county roads requiring improvements would be designed and constructed in accordance with the WSDOT Design Manual.

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**Comment**: *[In reference to Table 1-1 on page 1-23 of the DEIS under "Biological Resources: Impact of No Action Alternative"], [p]otential Impacts from construction of fossil fuel power plants. Please clarify the language, as SOSA's interpretation is that the Applicant would thus potentially pursue a fossil fuel (natural gas) plant at this site, if No Action on the Wind Plant was followed. One may already be being planned even if the Wind plant is permitted. Remedy - Clarify the statement by indicating if this is a general statement, or specific to the vicinity of the proposed WRE project. (i.e. within 10 mile radius) [LTR 178, CMT 48]*

**Response**: There are no proposed plans for any fossil-fuel generation at the Project Area. The referenced comment above related to Table 1-1 has been modified to say "Other power generation facilities could be constructed and operated in the region to meet long-term needs for power, including other wind projects or generation using fossil fuels." Additionally, see Section 3.4.2.2 for a discussion of the impacts of the No Action Alternative on Biological Resources. As stated on DEIS page 3-81, "Other power generation facilities could be constructed and operated in the region to meet long-term needs for power, including other wind projects or generation using fossil fuels."

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**Comment**: *[In reference to Table 1-1 on page 1-23 of the DEIS under "Construction"], [m]icrositing of turbines and associated facilities would allow sensitive resources discovered during construction to be avoided. Applicant states in DEIS that the micrositing corridor is very narrow along the ridge line due to steep slopes on both sides. Any discovery of sensitive resources, or even geologic hazards, could disrupt or preclude a major portion of the entire Project, thus placing it in financial jeopardy. Compared to Facilities cited in farm lands and grass/shrub/steppe topography, this site has almost no flexibility to adjust to problems discovered during construction. Remedy - No concrete remedy to suggest, and no pun intended. [LTR 178, CMT 49]*

**Response**: The 650-foot width of the turbine corridor allows sufficient flexibility in siting individual wind turbines and access roads to avoid sensitive resources that may be discovered during construction.

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**Comment**: *[In reference to Table 1-1 on page 1-24 of the DEIS under "Operation"], [t]here would likely be some mortality to birds and bats, though not in sufficient quantities to affect population viability. This is a sweeping and dangerous generalization. PLUS, what constitutes a given species' viability has NOT been defined anywhere in this DEIS. Such a subjective assertion does injustice to the scientific principles and integrity required in any EIS. The data is sufficient to clearly show greatly elevated bird and bat numbers compared to recent wind projects in Klickitat County, WA. And the actual mortalities far exceeded predicted mortalities at those sites. One should assume a similar trend for these Projects in close proximity. It is a great leap to go from predicting mortality to predicting a species' viability. In this Project site, how many Goshawks can society loose? How many Townsend Big Eared Bats can society loose before they are non-viable? It really depends on who you ask. Rather than forcing the issue, society should first choose and deplete the sites for Wind Turbines where man has already developed – meaning – use up the nation's farmland for wind energy before clear cutting the forest to do so. Remedy - The EIS should remand the Bat studies for completion again, using the mature technology of the Anabat 2 hardware, and Analook software, which is capable of identifying species of Bats, not just a threshold 35KHz between big and small bats. A significant discrepancy between the WEST 2008 and 2009 studies is the duplicative sensors and the filtered noise percentages, confirming the underlying assumptions between the two studies changed dramatically, but were not discussed. [LTR 178, CMT 50]*

**Response**: Section 3.4.4, Unavoidable Adverse Impacts, has been revised to change the language regarding population viability (DEIS page 3-83). The second paragraph has been revised to read: "No population impacts are expected to birds through turbine collisions. Adequate information is not known on bat population sizes to determine whether population response would be anticipated."

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**Comment**: *[In reference to DEIS] Section 1.6, Table 1-1, "Operation," [t]urbine fires are possible, however…are extremely rare. This issue is serious, because even if the potential occurrence is low, the risk to ALL residents of Underwood's lives and properties is extremely high. Any standardized risk assessment model uses the product of "occurrence" and "severity of occurrence" to assess risk. (for example - FMEA - Failure Modes Effects Analysis) It appears the Applicant wants to oversimplify this issue by not considering the issue in a proper manner. This Project is proposed in a Forest environment: an ignitable fuel source in close proximity to the Turbines. There are areas in the Project site that cannot be clearcut to reduce the fire risk - namely the western slopes where identified slide hazards exist, and there are unlogged lands on the western slopes owned by Washington state DNR. (between North BPA line and South BPA line ~1 mile?) The statement about being extremely rare is based upon typical wind farm topography and elevation. The steep terrain, and unconfirmed meteorological data, combined with elevated fuel loads compared to the norm, may likely result in a catastrophic wildfire event.*

*Without comparable scenarios, existing data should not be relied on. In the alternative, the Applicant could continue its current site condition by maintaining the massive clearcutting already undertaken throughout most of the Project area. This, however, would result in the effective "permanent" removal of the "forest" ecosystem, and those environmental impacts would then need to be addressed, and presumably mitigated. Again, cost is a major part of the equation, and this Applicant has already said they are on the edge of viability. One can insure property, but not lives. Remedy - The DEIS should consider the Environmental Impacts of the project, as if the entire site were removed from Forestry altogether, and the ground maintained with minimal fuel loads.* [*LTR 178, CMT 52]*

**Response**: Section 3.6 of the EIS describes the Project Area and the potential fire impacts from the proposed Project but does not specifically describe response measures for each possible scenario. There are numerous precautions that will be included in the Fire Protection and Prevention Plan that would be developed by the Applicant for EFSEC approval, as mentioned in Section 3.6.3, but this plan would not be prepared unless the decision is made to build the proposed Project. The Certificate Holder will be required to develop and implement an operations phase Fire Control Plan in coordination with state and local agencies to minimize risk of accidental fire during operation and to ensure effective response to any fire that does occur. The Site Certification Agreement will include a provision that no later than sixty (60) days prior to the beginning of Commercial Operation, the Certificate Holder shall submit the Fire Control Plan to EFSEC for review and approval. The fire protection plan and implementation of additional fire precautions will also be coordinated with the Skamania County Fire Marshall and DNR in response to fire conditions in the Project Area.

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**Comment**: *[In reference to DEIS Section] 1.6, Table 1-1, Visual Resources: Operation. At a distance beyond 2500 feet, shadow flicker is considered. Even if shadow flicker were a proven impact, none of the planned turbines are within 2500 feet of existing residences. The statement fails to identify a permitted residential structure, applied well prior to WRE's Application, that is within 2000 feet of the proposed Facility. Remedy - Consider adding the following language to the end of the existing sentence: "… and the permitted residence at 2000 feet could be mitigated by appropriate vegetative screening placed by the Applicant on its land, adjacent to the affected residence." Since this 80 acres of land, in the Project Site, was just logged in June/July 2010, new vegetation will need to be planted if this measure is deemed appropriate. [LTR 178, CMT 53]*

**Response**: Section 3.6.2.1 discusses the use of operational controls that could be implemented to reduce shadow flicker. This includes controlling turbine speed or orientation during specific periods.

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**Comment**: *[In reference to DEIS] Section 1.6, Table 1-1, "Operation," EMF from the project will be lower than those of many common household appliances and would have no health or safety impacts. Please provide/include data to support this assertion. Not only Electromagnetic Fields (EMF) should be included, but also stray electrical voltage produced during normal operations, during lightning storms, and especially power must be dumped into*

*the ground during temporary grid overload conditions. One of SOSA's members, Tom Drach, and his family live at a residence roughly 2500 feet from proposed Turbines. There is strong evidence to suggest such stray electricity would pose a safety impact, due to potential failure of Electrical services and systems dependent upon such. For example, Ground-Fault Electrical Devices required by WA Code. The geology of this area is known to contain faults and fractures, which would tend to carry electrical energy much, much further than in an homogenous isotropic type soils, which is likely assumed in the Applicant's analysis. Remedy - Any proposed permit should include provisions for nearby residents to fully remedy issues related to stray voltage and stray electro-magnetic energy, with the entire cost burden placed on the Applicant.* [*LTR 178, CMT 54]*

**Response**: EMF readings for transmission lines and common household appliances are shown in Table 3.6.4. Readings for transmission and distribution lines are shown to be lower than some common household appliances. The source of this information is the National Institute of Environmental Health Sciences. If the proposed Project were to be approved, EFSEC would provide plan review and inspection of construction activities for all Project buildings, structures, underground and overhead electrical lines, sanitary waste water discharge systems, and other Project facilities to ensure compliance with the Site Certificate Agreement. Construction would be in accordance with the approved design and construction plans, the IBC (International Building Code) and UBC (Uniform Building Code of 1997) and other relevant regulations. EFSEC may contract with Skamania County to provide these services. If Skamania County is unable to provide timely review and inspection services, EFSEC would coordinate with the County on the selection of other appropriate agency or firms to provide such services. Any additional information regarding EMF and BPA's transmission lines can be found on BPA's website at: *http://transmission.bpa.gov/LanCom/Safety_Around_Power_Lines/emf.cfm*.

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**Comment**: *[In reference to DEIS Section] 1.6, Table 1-1, Visual Resources: Operation. The turbines would be visible from some viewpoints, including some within the CRGNSA. This project has the potential to create low to moderate levels of visual impact at key viewpoints. The statements made here should be quantified, or terminology defined more precisely. The wording tends to minimize the issue, and "low to moderate" should have some reference scale for decision-makers to know how to gage severity on a commonly understood basis. Such subjectivity, especially in a summary, can lead to erroneous interpretations. (Decision makers with limited time to review may rely on the Summary to inform them as to the critical issues involved) Remedy - Quantify the visual impacts in table format for each Key Viewing Area within the CRGNSA, as well as other noteworthy points in view of the proposed project. Remove subjectivity by implementing an intuitive, commonly understood reference scheme. [LTR 178, CMT 55]*

**Response**: "Low" and "moderate" impacts were defined in Section 3.9.3.1 on DEIS page 3-175. Additional discussion on the definition of these terms in the summary would not add clarity to the document, but would be repetitious.

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**Comment**: *[In reference to DEIS] Section 1.6, Table 1-1, Public Services and Utilities: Operation, [t]he project's assessed value could be as much as $87.5 million, and this would generate approximately $800,000 per year in tax distributions….. AND Table 1.1 Socioeconomics: Operation, [t]he proposed project would have an estimated value of $87.5 million, which would represent an increase of 6.5% in assessed value in the County. At current tax rates, the increase in property tax revenue to the County would be $731,500 annually. The statement in Table 1.1 must accurately reflect the likely financial benefit, rather than the theoretical maximum, so the decision makers can weigh the true benefit appropriately. WRE's number grossly exaggerates the tax benefit to municipal, County, and local jurisdictions. The SEPA responsible official should contact Mr. Gabe Spencer, Skamania County Assessor, to confirm these numbers are not accurate. A member of SOSA had a conversation with Mr. Spencer on June 24, 2010, and left with the following understanding: Scenario 1, Project remains privately owned during operation then Assessed Value will be a negotiated 10 year average value which will remain constant for the first 10 years to offer more uniform cash flow for the County Budget versus Straight Line or MACRS depreciation methods. (ref Klickitat County model) Furthermore, by complex Budget laws, residents in the Underwood District would otherwise be potentially subject to the shortfall in revenue as depreciation mounted from the Project. (Surely this would be a strong negative for Underwood Community) So, under the 10 year average scenario, WRE's tax payments would be closer to $350,000 per year, NOT $800,000. Scenario 2, The Project is acquired by a WA state recognized public utility, like PSE. The tax for this is not determined by local real tax law, but by a complex formula within the State Dept. of Revenue (WDOR). According to Ms. Chris Miller, Columbia County, WA Assessor, their Projects which have fallen under WDOR jurisdiction have only provided their County with approximately one-third (33%) of the revenue claimed by the Applicant using the same assumptions as WRE has here. So this value would be ~$266,000, NOT $800,000 per year. Remedy - The SEPA Responsible Official should consult with the Skamania County Assessor to determine the potential financial outcomes, and report as such in the EIS. The only data provided in the EIS is clearly based on the Applicants information to the SEPA responsible official, and does not reflect the two MOST likely scenarios. If the present DEIS scenario is maintained, it should reflect a declining tax payment based on equipment depreciation, and the real, long-term burden on the Underwood residents thru increased levy rates. [LTR 178, CMT 56]*

**Response**: Table 1-1 serves only as a summation of the environmental consequences that are expected to occur from the Proposed Action. Section 3.13, Socioeconomics, gives more information pertaining to the expected economic benefits to Skamania County. Specifically, Section 3.13.1.4, Public Finance and Fiscal Conditions, discusses expected tax revenue benefits to Skamania County in more detail. Furthermore, the expected economic impacts to Skamania County are discussed in Section 3.13.2, Impacts.

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**Comment**: *[In reference to DEIS] Section 1.6, Table 1-1, "Public Services and Utilities," "Operation: Fire Protection," [f]or the Operation phase of the project, nowhere is there listed an intent to construct and maintain a water reservoir or storage capacity for on-site fire suppression of the Project site if a Turbine fire failed to be contained. Given the fuel loads present, and lack of water, any Fire Protection and Prevention Plan should be required to*

*include a storage reservoir suitable for use by both land-based equipment and fire-suppression helicopters. Due to steep terrain, the turbulent updrafts present along the ridgeline would limit the ability of fixed-wing aircraft to assist in fire suppression at key areas of the Project site. Simply complying with existing DNR regulations, as the Applicant suggests, does not suffice, for the DNR statues could not have contemplated the operation of Industrial-grade mechanical and electrical equipment of this magnitude operating in a forested environment, and 24 hours a day, a good portion of which without human observation. Remedy - Include the requirement for, and analyze the impacts of, establishing a fire suppression reservoir, or holding tanks to combat runaway fires.* [*LTR 178, CMT 57]*

**Response**: Please see response to Comment LTR 178, CMT 52 above.

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**Comment**: *[In reference to DEIS] Section 1.6, Table 1-1, Public Services and Utilities: Operation, [t]he project would employ eight to nine employees; most would be hired from the local area. Please also include the number of Full-Time Equivalences (FTE's) that these eight to nine employees would provide. This is the best way to clarify for the decision-makers how much benefit is realized thru Project operation. Remedy - Include Full-Time Equivalents (FTE's) as part of the description of Operations Personnel. [LTR 178, CMT 58]*

**Response**: Full-time equivalent (FTE) is utilized to measure a worker's involvement in a project. An FTE of 1.0 means that the person is equivalent to a full-time worker; while an FTE of 0.5 means that the worker is only employed half-time. Typically, different scales are used to calibrate this number, depending on the type of institution (schools, industry, research) and scope of the report (personnel cost, productivity). Furthermore, the Government Accountability Office (GAO) defines FTE as the number of total hours worked divided by the maximum number of compensable hours in a work year as defined by law. For example, if the work year is defined as 2,080 hours, then one worker occupying a paid full time job all year would consume 1.0 FTE. Two employees working for 1,040 hours each would consume 1.0 FTE between the two of them (where each worker would be working only half-time). Section 3.13.2.1, Impacts of the Proposed Action, presents this information in yet another way. The estimated annual labor cost of these 8-9 workers is expected to range from $167,000 to $188,000 per employee. Further discussion of these estimations and methodologies for predicting labor costs can be seen in Section 3.12.3 Mitigation Measures.

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**Comment**: *[In Section 1-6, Table 1-1, under] "Socioeconomics: Operation," [b]ased on a review of available studies, operation of the project is not expected to create adverse impact to property values. Data on this subject is limited for a number of reasons. Significant differences in underlying assumptions hold for the WRE project. As such, "... a Property Value Guarantee (PVG) should be required of the developer. A State[-]controlled fund or developer bond should be required to guarantee no undue delay in PVG payment(s) to legitimately affected homeowners, and/or to buy out homeowners located within 2-miles of any turbines if they elect to relocate away from the turbine project(s) and cannot sell for the pre-project market value of their properties. Such a guarantee is nominal in cost, relative to total project costs, and are used*

*to condition high impact land use approvals such as landfills and even limestone quarries, as well as other wind energy developments." References - Exhibit 2F, attached as separate PDF file due to size. Citation from McCann Appraisal LLC Property Value Report to Adams County Board, IL, June 8, 2010, copy included in Appendix [website added here: http://nowindfarms.com/blog/testimony-of-michael-mccann-on-property-value-impacts-in-adams-county-il/#]. This report includes several other recommendations, appropriate for conditioning the WRE Application, to protect residents if Developer claims are later determined to be incorrect. Remedy - The EIS should include, in the Appendix, a reference Template on a Property Value Guarantee, which generally outlines the structure and authority of such a Guaranteed by the Applicant. Decision-makers should have a clear idea of the likely protections which would be result, in the event they choose to implement such, as part of any conditioning of a project permit. [LTR 178, CMT 59]*

**Response**: RCW 80.50.100 mentions the following: "The council shall include conditions in the draft certification agreement to implement the provisions of this chapter, including, but not limited to, conditions to protect state or local governmental or community interests affected by the construction or operation of the energy facility, and conditions designed to recognize the purpose of laws or ordinances, or rules or regulations promulgated thereunder, that are preempted or superseded pursuant to RCW 80.50.110 as now or hereafter amended. However, RCW 80.50.100 only addresses "community interests" which does not include personal property values. Therefore, discussions related to Property Value Guarantees are not handled by EFSEC or BPA and are outside the scope of this EIS.

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**Comment**: *[In reference to DEIS] Section 1.7, Table 1-2, Public Health and Safety, [u]navoidable adverse impacts to environmental health are anticipated to be minimal. Please amend or clarify this statement, as it OMITS any reference to Public Safety. (The Element of the Environment heading is: Public Health and Safety) Plus, should one assume that the word "environmental" used in the DEIS is synonymous with "Public"? Remedy - Please correct the wording to address Public Health and Safety, rather than environmental health.* [*LTR 178, CMT 60]*

**Response**: The text in Table 1-2 of the DEIS, Public Health and Safety, has been updated to clarify the impacts of the potential Project to Public Health and Safety. Similarly, the heading for the row in Table 1-1 on page 1-25 of the DEIS has been changed from "Environmental Health" to "Public Health and Safety" for consistency. No changes to the description of impacts in the second column of Table 1-1 of the DEIS have been made because each of the impacts described are understood to be potential impacts to "Public Health and Safety," and are described in more detail in Section 3.6 of the EIS.

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**Comment**: *[In reference to] Table 1-2, Noise: …and operation noise is predicted to be less than the nighttime threshold of 50 dBA Leq, per Washington State and Skamania County regulations. Short-term noise impacts during construction is exempt so long as it occurs during daytime hours, and operation noise is predicted to be less than the nighttime threshold of 50 dBA*

*Leq per Washington State and Skamania County regulations. Even though Oregon has much more progressive laws on noise and setbacks, the minimum legal standard in WA is the (woefully inadequate) Washington Administrative Code (WAC 173-60). WA noise standards. The public welfare is better served by, and EFSEC is encouraged to so condition, the Environmental Protection Agency Guidelines: In April 1973, the local EPA Region X office published a document titled, "Environmental Impact Statement Guidelines." This document discusses potential impacts from noise increases in terms of expected community response to the introduced noise source. This regional EPA guideline document suggests the following potential community responses to ranges of noise increases: Up to 5 dBA increase – few complaints if gradual increase; 5 to 10 dBA increase – more complaints, especially if conflict with sleeping hours; Over 10 dBA increase – substantial number of complaints According to the EPA Region X document, generally no mitigation is required if the increase is less than 5 dBA. Some mitigation should be considered for increases of 5 to 10 dBA. Increases greater than 10 dBA would be considered serious and would warrant close attention. Reference - Kittitas Desert Claim 2004 FEIS at 3-192 : Environmental Protection Agency Guidelines All Verbal and Written comments submitted by Keith Brown and/or Teresa Robbins for the WRE DEIS, are incorporated by reference here by SOSA. Remedy - Consider requiring the Applicant to follow the document titled, "Environmental Impact Statement Guidelines," which would limit noise to 10 dBA over typical background levels (25 dBA nighttime, 35 dBA daytime, typ. for rural areas) Thus making the condition for noise not to exceed 35 dBA at night, and 45 dBA during the day. The WAC code did not contemplate noise sources from Wind Turbines, and their proximity to residential use. Furthermore, SOSA incorporates the recommendations of Keith Brown and Teresa Robbins by reference, regarding all the aspects of the noise subject. [LTR 178, CMT 61]*

**Response**: In the absence of statutory noise limits, such as regulations and ordinances, for a project vicinity or jurisdiction, the acoustical expert would draw from practical experience, refer to appropriate standards, and use professional judgment or opinion to develop appropriate acoustical guidance criteria that may be used to assess noise impacts. However, for this Project vicinity, there is existing State and County regulation regarding acceptable noise levels, and they are clearly defined as absolute criteria. The mentioned EPA guidelines are only guidance, and their suggested relative-type criteria can be complicated to implement for determining impact assessment due to the nature of ambient environmental noise: it is subject to variance from a number of factors including seasonal presence of noisy wildlife (frogs, insects, migratory birds, etc.), climate (temperature, humidity), ground wind speed, levels of outdoor human activities (within a community or at an individual property), surface traffic, aviation over-flights, seasonal HVAC usage (air conditioners during the summer months) and precipitation (rainfall on roofs, road surfaces, etc.).

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**Comment**: *General Comment on DEIS - Certain claims by the Applicant can neither be substantiated with certainty or refuted with certainty. In these cases, the Council should neither consider a claim to be a benefit or a detriment to the proposed Project. For example, Global warming, reduction in CO2 emissions, as supported by several scientific papers concluding that the "jury is still out" on some of these issues. Remedy - The EFSEC Council should consider these types of claims as neither a significant benefit or a significant detriment to the proposed Project. [LTR 178, CMT 135]*

**Response**: EFSEC will consider the reasonableness of expected Project benefits and detriments in conjunction with the broad interests of the public as part of its recommendation to the Governor concerning the proposed Project.

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**Comment**: *General Comment on DEIS - Applicant must provide met data and "wind power" analysis (confidentially if needed) to EFSEC Council to justify why this site is sooooo much better that others, that it could justify or warrant consideration in light of all the issues against. Wind Power is defined as the integral of wind "energy" with time. This is commonly approximated as a function of average wind speed spanned out over a long time period. One must note that the calculated wind speeds (or power) just north of the north BPA line are a maximum for the project site, and the average for the site, as a whole, would be considerably less. Remedy - Financial justification for the Project needs to be disclosed and verified. [LTR 178, CMT 139]*

**Response**: The purpose of the EIS that has been prepared is to evaluate the potential environmental impacts that could occur from the lead agencies' actions concerning the proposed Project, not to require financial or resource justification for the proposed Project itself. In other words, neither SEPA nor NEPA require that an EIS prove or validate the applicant's business case for its proposal.

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**Comment**: *General Comment on DEIS - It appears that many general and specific issues raised in the Scoping Report are not addressed, or not adequately addressed. To ensure the integrity of the Scoping Process, SOSA recommends the DEIS or "FDEIS" include a "Response Matrix" which would indicate the location (s) within the DEIS where the response, rebuttal, or otherwise answer to EACH scoping comment can be found. Remedy - Close the loop with the public comments by indicating responses in a "Response Matrix" as described to the left. [LTR 178, CMT 140]*

**Response**: Please see response to Comment LTR 119, CMT 2 above.

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**Comment**: *General Comment on DEIS - Issues raised in the Scoping Process, under the Category of "Documents" (Issue Code "DX"), are not broken down in any detail. Lack of categorization of the individual documents, and subjects within, could have led to an important issue not being addressed. As part of the "Results Matrix" comment above, any matter raised in the "DX" issue code should be re categorized separably into the other Categories, and likewise noted where these issues are addressed in the DEIS. [LTR 178, CMT 141]*

**Response**: Please see response to Comment LTR 119, CMT 2 above.

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**Comment**: *Furthermore, a supplementary DEIS or a new DEIS should be issued and public comment provided. [LTR 178, CMT 141]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *In reference to Exhibit 21, Page 1 - Pink Color Routes are the non-viable Alternate Routes identified in the DEIS.(at 1-16) Ausplund Road is NOT a possible alternative, given new road building within the NSA would be required, which the Applicant has acknowledged is not allowed for this use within the NSA. Pictures of the now overgrown portion of Ausplund road is shown on following pages. DEIS states in 1.4.3.6 (at 1-16) that both Alternatives have been eliminated as an alternative due to road construction requirements within the NSA. As such, the DEIS is deficient in that no Construction Roadway alternatives are identified or considered. SOSA has identified two alternatives - namely Schoolhouse to Little Buck Creek Road, and Lalock-Kelchner Roads, both of which will take traffic out of the NSA and allow the Applicant to build roads on property which it ALREADY owns, all the way to the proposed Project site. [LTR 178, CMT 143]*

**Response**: The Applicant has evaluated numerous alternative access roads and believes that the currently proposed access route described in Section 1.4.1.6 is the best option.

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**Comment**: *We find that, in many areas, the present DEIS is completely insufficient and we urge that the NEPA/SEPA responsible officials prepare a supplemental DEIS. [LTR 178, CMT 146]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *The DEIS is so deficient that it cannot be used as the basis for a decision on the project. The proposed project should be denied outright, but if it is to be given further consideration, a supplemental or revised DEIS is required. [LTR 179, CMT 5]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Unfortunately, this Draft Environmental Impact Statement fails to take the hard look required by NEPA and SEPA. The DEIS is fundamentally flawed because it improperly narrows the scope of study, ignores and trivializes the impacts of the project, ignores or summarily dismisses detailed comments from the public and expert agencies, and was largely drafted and/or influenced by the applicant and the applicant's consultants behind closed doors and is therefore extremely biased in favor of the project. [LTR 179, CMT 5]*

**Response**: Please see response to Comment LTR 60, CMT 1 above.

**Comment**: *The National Environmental Policy Act. A major purpose of the National Environmental Policy Act ("NEPA") is to ensure that federal agencies conduct fully informed environmental decision-making. NEPA promotes its sweeping commitment to "prevent or eliminate damage to the environment and biosphere" by focusing the attention of federal decision makers and the public on the environmental and other impacts of proposed agency action. 42 U.S.C. § 4321. By focusing agency attention on the environmental and socioeconomic impacts of a proposed action, NEPA ensures that the agency will not act on incomplete information, only to regret its decision once finalized. See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). To that end, "[t]he sweep of NEPA is extraordinarily broad, compelling consideration of any and all types of environmental impacts of federal action." Calvert Cliffs' Coordinating Comm. v. U.S. Atomic Energy Comm'n, 449 F.2d 1109, 1122 (D.C. Cir. 1971). An agency must "take the initiative of considering environmental values at every distinctive and comprehensive stage of the process." Id. at 1111. [LTR 179, CMT 11]*

**Response**: The objectives and requirements of NEPA and SEPA are noted. The lead agencies believe that all applicable NEPA and SEPA requirements have been met.

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**Comment**: *The State Environmental Policy Act. The Washington State Environmental Policy Act ("SEPA") applies to state and local governmental actions and decisions. SEPA's general purpose is to require consideration of environmental factors at the earliest possible stage in order to allow decisions to be based on a complete disclosure of environmental consequences. See Stempel v. Dept. of Water Resources v. City of Kirkland, 82 Wn. 2d. 109, 118 (1973). Agencies are required to engage in an open and public study of environmental impacts at the earliest possible time. RCW § 43.21C.030(b); see also WAC § 197-11-300. Agencies must assess the likely cumulative, direct, indirect, short-term, and long-term impacts to the environment. WAC 197-11-030(2)(b), (2)(g); see also State Environmental Policy Act Handbook (SEPA Handbook) at 2 (2003). Agencies must also evaluate alternatives and mitigation measures. WAC 197-11-055(2)(c); see also SEPA Handbook at 2. Agencies "shall not limit" consideration only to impacts within the boundaries of the agencies' jurisdiction. WAC 197-11-060(4). For projects with likely significant impacts, environmental impact statements are required to ensure that government agencies and interested citizens have an opportunity to thoroughly review environmental impacts of proposed actions at the earliest possible stage; the agency must use the EIS in planning actions and making decisions. WAC 197-11-400(4). "The primary purpose of an environmental impact statement is to ensure that SEPA's policies are an integral part of the ongoing programs and actions of state and local government." WAC 197-11-400(1). The EIS must be impartial and must inform decision makers of alternatives and mitigation measures that avoid or minimize impacts of a proposed action. WAC 197-11-400(2). The EIS must not merely rationalize a predetermined outcome. WAC 197-11-402(10). ("EISs shall serve as the means of assessing the environmental impact of proposed agency action, rather than justifying decisions already made.") Rather, the EIS must include sufficient objective analysis to actually inform the agency's decision making process. The EIS must be completed early enough to serve as a practical contribution to the decision making process. WAC 197-11-406 ("The statement shall be prepared early enough so it can serve practically as an important contribution to the decision making process and will not be used to rationalize or justify decisions already made."); see also King County v. Boundary Review Board, 122 Wn.2d 648, 666, 860 P.2d 1024 (1993); Barrie v.*

*Kitsap County, 93 Wn.2d 843, 854, 613 P.2d 1148 (1980); Mentor v. Kitsap County, 22 Wn.App. 285, 291, 588 P.2d 1226 (1978). For projects with potentially significant or serious impacts, SEPA requires the same hard look that NEPA does. "The level of detail shall be commensurate with the importance of the impact," and in the face of any scientific uncertainty, the EIS must disclose the uncertainty and analyze the worst case scenario and the likelihood of its occurrence. WAC 197-11-402(2) and 197-11-080(2). [LTR 179, CMT 12]*

**Response**: Please see response to Comment LTR 179, CMT 11 above.

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**Comment**: *The DEIS is Improperly Designed so that the Applicant's Private Economic Interests Unlawfully Dictate the Purpose, Need, Alternatives, and Eventual Outcome for the Proposed Action. A. The Purpose and Need Statement in the DEIS is Being Improperly Driven by the Applicant's Private Economic Interests. NEPA requires federal agencies to "rigorously explore and objectively evaluate all reasonable alternatives" to a proposed action. 40 C.F.R. § 1502.14(a). In order to do so, the agency must first reasonably and objectively define the purpose and need of a proposed action. See Simmons v. United States Army Corps of Eng'rs, 120 F.3d 664, 666 (7th Cir. 1997) (citing Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 195–96 (D.C. Cir. 1991)). The chosen statement of purpose and need effectively dictates the range of alternatives evaluate in an EIS. Id. "[A]n agency cannot define its objectives in unreasonably narrow terms." City of Carmel-By-The-Sea v. United States Dep't of Transp., 123 F. 3d 1142, 155 (9th Cir. 1997). "An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative... would accomplish the goals of the agency's action, and the EIS would become a foreordained formality. Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt., 606 F.3d 1058, 1070 (9th Cir. 2010). Moreover, an agency may not allow the economic needs and goals of a private applicant to define the purpose and need, and hence the inevitable outcome, of an EIS. Id. Unfortunately, that is exactly what is happening with this EIS. [LTR 179, CMT 13]*

**Response**: EFSEC and BPA have identified their respective need for action in a manner entirely consistent with SEPA and NEPA. As discussed in Section 1.2.1 of the EIS, EFSEC's need for action is to respond to an application by WRE for a site certificate. As discussed in Section 1.2.2 of the EIS, BPA's need for action is to respond to WRE's request for an interconnection of its proposed Project to the Federal Columbia River Transmission System (FCRTS). Each agency also has separate purposes (i.e., objectives) that it will bear in mind and attempt to meet in reviewing and making a decision on the Project. Given the agencies' need for action in this case (i.e., to approve or deny an application and request), the range of alternatives considered in detail in the EIS is not unreasonable. In addition, the agencies considered a number of other alternatives but eliminated those alternatives from detailed study in the EIS, as discussed in Section 2.3.

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**Comment**: *The DEIS lists the applicant's "needs," including the "business needs of the applicant" (such as "diversifying the holdings" of the Applicant) as stated needs for the project, and lists no agency-defined objectives or needs other than complying with applicable laws. The*

*DEIS fails to even acknowledge that the agencies have no obligation or responsibility whatsoever to meet the applicant's needs or desires. As a result, the Applicant-identified needs are defining and driving the characteristics of this project and the alternatives thereto. This approach is inappropriate and unlawful. [LTR 179, CMT 14]*

**Response**: Please see response to Comment LTR 179, CMT 13 above.

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**Comment**: *Interestingly, some of the Applicant-identified needs are suspect. For instance, the Applicant identifies a need for utilities in Washington State to provide more alternative energy to their customers. DEIS at 1-4–1-6. But nowhere has the Applicant specified or publicly committed to sell the electricity from this project within Washington State. As it stands, well over half of all the wind energy produced in Washington and Oregon is currently being sent to California. If a similar fate occurs with the electricity from the Whistling Ridge project, then the Washington state requirements for alternative energy are wholly irrelevant to the project. The applicant cannot have it both ways. It cannot assert that meeting Washington state renewable portfolio standards is a need for the project, and yet refuse to commit energy from this project to remain in Washington state. [LTR 179, CMT 15]*

**Response**: Please see response to Comment LTR 178, CMT 39 above.

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**Comment**: *The DEIS repeatedly states or implies that the project would reliably produce between 70 MW and 75 MW of energy. See, e.g., DEIS at [Pages] 1-9, 3-90, 3-271. The DEIS significantly overvalues the generating potential of the project. Wind energy facilities cannot continually generate energy at their rated capacity. Generally, wind energy facilities generate energy at 30% of capacity. So for this project, the actual energy output would be only 21 MW. Every assertion or implication in the DEIS that the Whistling Ridge project would produce 70 or 75 MW of energy must be corrected to reflect the likely actual production of the facility. This correction must also be reflected in the purported need to produce at least 70 MW of energy for the project to be marketable. In any event, the facility would likely deliver 21 MW of energy to the grid. [LTR 179, CMT 16]*

**Response**: The commenter is referring to the distinction between the total capacity of a generator (expressed in terms of megawatts, or "MW"), and the average capacity of a generator (expressed in terms of average MWs, or "aMW"). The EIS correctly uses these terms and accordingly does not overstate the generating capacity of the proposed Project.

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**Comment**: *Further, the Applicant's purpose and need statement appears to be defined only in terms of conveying power from a wind energy generation facility. This purpose and need is too narrowly limited, and avoids the question of whether there truly is a need for a wind energy project. As a result, the purpose and need statement improperly limits the alternatives considered by the agencies. [LTR 179, CMT 17]*

**Response**: The Applicant-identified needs contained in Section 1.2.3 of the EIS are not only defined in terms of conveying power. These needs also involve developing renewable resources and diversifying the Applicant's business. However, it is true that the Applicant has specifically proposed a wind generation project, and that is what is evaluated in the EIS. Regardless, no matter how the Applicant defines its needs, it is the agency's need for action that defines the range of alternatives to be considered in an EIS.

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**Comment**: *The Stated Purposes Fail to Acknowledge EFSEC's Duty to Protect State or Local Governmental or Community Interests. One of EFSEC's mandates is to "protect state or local governmental or community interests affected by the construction or operation of the energy facility." WAC 463-64-020. Any site certification agreement must contain conditions to meet this mandate. Id. The DEIS fails to even mention this mandate, let alone apply it. This mandate should be expressly included in the stated purpose and need for action on page 1-3 of the EIS, and should be applied and reflected throughout the DEIS. [LTR 179, CMT 19]*

**Response**: EFSEC SEPA rules provide the option for the Applicant to prepare EIS documents, with oversight from the EFSEC responsible official. The DEIS was prepared in this manner. EFSEC and its independent consultant reviewed all DEIS information including visual resources before the DEIS was issued by EFSEC and BPA. However, neither EFSEC nor its independent consultant performed the actual visual analysis.

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**Comment**: *Originally, the agencies stated that the Applicant and its consultants would be preparing the EIS. However, because the public objected to this arrangement and pointed out that it would violate NEPA, the agencies made the following announcement in the DEIS May 21, 2010 cover letter: While EFSEC and BPA are the entities that have prepared the Draft EIS, these agencies have worked collaboratively with Whistling Ridge Energy LLC to obtain necessary information about the project and its potential impacts for the EIS. Initially, EFSEC had intended to allow Whistling Ridge Energy LLC to prepare the EIS, as allowed by SEPA; however, after public concern was raised, EFSEC and BPA decided that the lead agencies would be directly responsible for preparing the EIS. Accordingly, we have used environmental information provided by Whistling Ridge Energy LLC and its consultants in the EIS as appropriate. All such information has been independently evaluated and reviewed for accuracy by the lead agencies, as well as by an independent, third party consultant retained by EFSEC. This statement invites more questions than it answers. What was the exact nature and extent of the involvement of WRE and its consultants in the preparation the DEIS? Did they simply supply environmental "information," as stated in the cover letter, or did they supply analysis, findings, and/or conclusions for the DEIS? [LTR 179, CMT 30]*

**Response**: The lead agencies believe that they have produced a reasonably thorough analysis of the proposed Project that adequately considers all points of view. BPA and EFSEC staff actively and extensively participated in the preparation of the EIS, as required by SEPA and NEPA. Both SEPA and NEPA allow for the use of environmental information, in whatever form, from the Applicant for use in the preparation of an EIS. In fact, SEPA allows for an

applicant to prepare the EIS. Nonetheless, where the lead agencies used information provided by the Applicant or its consultants, this information was thoroughly reviewed and independently evaluated by the agencies to ensure its competency and accuracy. This approach is consistent with the intent of SEPA and NEPA that acceptable environment work not be redone, but that it instead simply be verified by the lead agency. Accordingly, the lead agencies appropriately took full responsibility for the scope and content of the EIS, and have fulfilled their respective responsibilities for EIS preparation under SEPA and NEPA.

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**Comment**: *There is a major difference between the applicant's consultants supplying the agencies with information and data (such as species survey data, photographs, coordinates for turbine locations, etc.) and the applicant's consultants drafting analysis and conclusions to be inserted into the DEIS document. Unfortunately, the DEIS cover letter does not satisfactorily explain which scenario occurred, but the extremely biased nature of the DEIS in favor of the project strongly implies an active role by the Applicant's consultants in its preparation. [LTR 179, CMT 35]*

**Response**: Please see response to Comment LTR 179, CMT 30 above.

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**Comment**: *Although the agencies claim to have "prepared" the content of the DEIS and independently reviewed and verified any information from the applicant, by all outward appearances this did not occur—at least with major sections of the DEIS. Rather, it appears that the Applicant's consultants were allowed to write major portions of the DEIS. If so, then the Applicant has been allowed to exert undue influence over the content of the DEIS. The predictable outcome is a DEIS that, in effect, serves as an extremely biased and result-oriented prospectus for the proposed project exactly as proposed by the Applicant, instead of the searching and balanced decision-making document required by NEPA and SEPA. NEPA case law and guidance are clear that an applicant, such as Whistling Ridge Energy, should not be allowed to influence the analytical content of an EIS. See, e.g., Sierra Club v. Sigler, 695 F.2d 957, 962 n.3 (5th Cir. 1983) (expressing serious concern over role of private firm in preparation of EIS). An EIS must be an entirely objective analysis intended to aid the decision maker and the public in understanding the consequences of an agency decision. Thus, it is standard practice for action agencies to ensure that applicants for federal action are insulated from all aspects of EIS preparation other than providing information. Any arrangement that allows the very same consultants who drafted the application to also draft analytical content for the DEIS is improper and cannot be allowed to continue. If in fact the agencies have been relying on the Applicant's consultants (rather than agency employees) to draft analytical content for the DEIS, then the agencies should immediately withdraw the DEIS, and should either retain new consultants unaffiliated with the applicants to prepare a revised DEIS or should ensure that a revised DEIS is drafted by disinterested agency employees. The Applicant and its consultants must not be allowed to continue to play a direct and significant role in the preparation of factual and legal conclusions in the EIS. Such a role is improper and invalidates the DEIS as the basis for further decision-making. The agencies also state that they have hired a third-party consultant who has been charged with independently verifying the content of the DEIS. However, it is ultimately the*

*agencies' responsibility, and not that of any consultants, to independently verify the DEIS. [LTR 179, CMT 36]*

**Response**: Please see response to Comment LTR 179, CMT 30 above.

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**Comment**: *An attached May 28, 2010 email string further calls into question whether EFSEC and BPA staff actually wrote the content of the EIS, or allowed the applicant's consultants to write it. The emails show that a landscape architect with the U.S. Forest Service telephoned the EFSEC Site Manager "express[ing] concerns about the quality of the [visual resource] analysis." The Forest Service employee asked EFSEC "who did the analysis," "what their qualifications were," and "whether or not a Landscape Architect was consulted during development of this section." Apparently not knowing the answer to these questions, the EFSEC Site Manager appears to have referred the questions to the Project Manager with URS Corporation, the Applicant's lead consultants. As with the agencies' DEIS cover letter, this email string poses a number of questions. If EFSEC and BPA prepared the DEIS, why does it appear that EFSEC had to ask the Applicant's consultants who wrote it? If the agencies were directly responsible for the content of the EIS, why did they not know whether a landscape architect participated in its drafting? And as the Forest Service asked, who in fact "did the analysis," and what were their qualifications? On the face of the email and the DEIS itself, it certainly appears as if the same people who wrote the application (i.e., the Applicant's consultants) were also allowed to prepare the analysis reviewing the application. In fact, it appears that the entire scenic resources analysis section of the application, including all analysis, findings, and conclusions, was simply lifted from the application and inserted verbatim into the DEIS. [LTR 179, CMT 36]*

**Response**: The lead agencies believe that they have produced a reasonably thorough analysis of the proposed Project that adequately considers all points of view. BPA and EFSEC staff actively and extensively participated in the preparation of the EIS, as required by SEPA and NEPA. Both SEPA and NEPA allow for the use of environmental information, in whatever form, from the Applicant for use in the preparation of an EIS. In fact, SEPA allows for an applicant to prepare the EIS. Initial preparation of the DEIS was done by the Applicant's consultant, including the visual resource analysis. Nonetheless, where the lead agencies used information provided by the Applicant or its consultants, this information including the visual resource analysis was thoroughly reviewed and independently evaluated by the agencies to ensure its competency and accuracy. This approach is consistent with the intent of SEPA and NEPA that acceptable environment work not be redone, but that it instead simply be verified by the lead agency. Accordingly, the lead agencies appropriately took full responsibility for the scope and content of the EIS, and have fulfilled their respective responsibilities for EIS preparation under SEPA and NEPA. A list of preparers can be found in Chapter 6 of the EIS.

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**Comment**: *The applicant here, Whistling Ridge Energy, desires to construct an additional 35 turbines on DNR lands immediately adjacent to the north of this project. This project, known as "Saddleback" or "Whistling Ridge Phase II," has been placed on hold by the DNR, but that hold*

*could be removed at any time. The DEIS states that "use of these lands for project turbines was rejected from further consideration." DEIS at 1-14. However, recent public records requests have uncovered new evidence that the use of DNR lands is still contemplated by WRE. Specifically, the attached April 9, 2010, email shows that WRE was evaluating whether a temporary FAA moratorium on certain wind projects would prohibit expansion onto the DNR lands. The DEIS fails to sufficiently address the likelihood of Phase II of this project going forward, and fails to address the cumulative impacts of expanding the scope of this project onto the adjacent land. All phases and portions of a project must be evaluated at the outset during environmental review of the first phase. See Merkel v. Port of Brownsville, 8 Wn. App. 844, 850–51, 509 P. 2d 390, 395 (1973); Indian Trail Property Owner's Ass'n v. City of Spokane, 76 Wn. App. 430, 443, 886 P.2d 209 (Wn. App. 1994). [LTR 179, CMT 51]*

**Response**: For the proposed action, the EIS evaluates what has been proposed to the lead agencies by the Applicant, as required by SEPA and NEPA. What has been proposed does not include development of any additional turbines on adjacent DNR land, nor does it include the interconnection of any additional power to the FCRTS. In addition, as discussed in Section 2.3.2 of the EIS, DNR is not interested in allowing development of wind turbines on the adjacent DNR land, regardless of any previously expressed wishes by the applicant. Given this situation, not only is wind development of DNR land not part of the proposed action, it is also not considered reasonably foreseeable for the purposes of the cumulative impact analysis in the EIS.

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**Comment**: *I recommend that the DEIS for Whistling Ridge be withdrawn, and that a new one be prepared. [LTR 181, CMT 63]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *While we understand that the DEIS is being prepared by EFSEC and BPA, we have concerns as to the degree of input into the document that has been received from the applicant WRE. In the recent submission from WRE they indicate that they have participated in meetings with staff and Council consultants regarding the DEIS. [LTR 184, CMT 1]*

**Response**: Please see response to Comment LTR 179, CMT 30 above.

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**Comment**: *Based on our review, we have assigned a rating of LO (Lack of Objections) to the DEIS. This rating and a summary of our comments will be published in the Federal Register. A copy of the rating system used in conducting our review is enclosed for your reference. [LTR 189, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *The DRAFT states on page 1-35 – Summary of Unavoidable Adverse Impacts – Table 1-1 – Visual Resources; "The project would cause some visual impact to surrounding areas where turbines were visible, including some areas inside the Columbia River Gorge National Scenic Area. The visual impact analysis showed that the anticipated level of visual impact would not be higher than low to moderate at any of the viewpoints examined." Greg Neely Comment 6-16-10: To state, "the visual impact would not be higher than low to moderate" is extremely subjective, given the proximity to the Columbia Gorge National Scenic Area. It's my opinion that the most crucial viewpoints are: Hood River, Columbia River Waterway (adjacent to Hood River), Columbia River Shoreline Recreation Sites (Adjacent to Hood River and Mosier), I-84 Freeway (From Hood River to Mosier in both directions) [LTR 194, CMT 1]*

**Response**: The criteria used for selecting viewpoints are discussed in Section 3.9.2.3 (DEIS page 3-164). Locations were chosen based upon their representation relative to the Project Area, those that were most accessible to the public, and locations with the largest number of viewers. Viewpoints from within Hood River (8, 17, and 18) and between Hood River and Mosier (11 and 12) are considered in the impacts analysis. Please refer to Figure 3.9-1, Locations of Simulation Viewpoints, to reference where the viewpoints used in this analysis are located relative to the Project Area.

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**Comment**: *Specific Comments. 1. Independent Evaluation. In our scoping comments for this project, Seattle Audubon identified multiple issues in the application that needed thorough review to adequately evaluate the potential environmental impacts of this project. Unfortunately, the DEIS fails to address many of the issues we previously identified. In many instances, the DEIS simply repeats the information presented in the application with no new analysis or documentation. We urge your agencies to ensure that the Final Environmental Impact Statement (FEIS) fully addresses these inadequacies. [LTR 196, CMT 2]*

**Response**: Please see response to Comment LTR 119, CMT 2 above.

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**Comment**: *Distribution of Project Power: One of the applicant's stated objectives for this project is "to provide an additional renewable resource for electrical utilities in Washington." (DEIS p. 1-7) We welcome that intent and request that any certification for this project include a provision that the power from project be sold to Washington utility(s) as opposed to being sold into the California market. Because the potential adverse impacts of this project would be experienced locally, it makes sense to keep the project benefits local as well. In addition, such a provision would also help relieve some of the current pressure on the California intertie that is causing challenges for BPA in integrating wind resources into its transmission system. [LTR 196, CMT 12]*

**Response**: Please see response to Comment LTR 178, CMT 39 above.

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**Comment**: *Related Concerns: 1. A first Gorge Windmill project will set a precedent. Other proposals and very likely other windmill farms will follow. New companies (for example a conglomerate such as General Electric) will be much less concerned about the welfare of this area than our neighbors at SDS. [LTR 230, CMT 2]*

**Response**: Please see response to Comment LTR 119, CMT 11 above.

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**Comment**: *Huge steel towers with massive concrete bases would be with us a very long time. The costs of removing an obsolete windmill would be substantial. But how long would a wind tower be useful? [LTR 230, CMT 4]*

**Response**: As discussed in Section 2.1.7 of the EIS, the proposed Project, including the wind turbines, is expected to have a useful life of at least 30 years. However, it is possible (and generally likely) that in the future, aging project components would be replaced as needed, which could extend the useful life of the Project for years or even decades beyond the current expected project lifespan.

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**Comment**: *It is the Lead Agency's responsibility under the State Environmental Policy Act to fully consider the environmental impacts of the Proposed Action. As Lead Agencies, EFSEC and BPA need to weigh the proposal's limited environmental impacts against its relevant and consequential environmental benefits. Of the many EISs I've reviewed, I cannot think of a clearer example of where the significant positive regional and global environmental consequences outweigh the negligible, local adverse impacts. [LTR 231, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *Related Concerns: 1. A first Gorge Windmill project will set a precedent. Other proposals and very likely other windmill farms will follow. New companies (for example a conglomerate such as General Electric) will be much less concerned about the welfare of this area than our neighbors at SDS. [LTR 241, CMT 4]*

**Response**: Please see response to Comment LTR 119, CMT 11 above.

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**Comment**: *Huge steel towers with massive concrete bases would be with us a very long time. The costs of removing an obsolete windmill would be substantial. But how long would a wind tower be useful? [LTR 241, CMT 6]*

**Response**: Please see response to Comment LTR 230, CMT 4 above.

**Comment**: *The project is inappropriate in that it addresses only the fiduciary interests of a local company and not overall needs of the County, it's residents or the Nation. In a time of rapidly decreasing forested areas in the world and climate change removing forest forever, i.e., 9 feet of concrete to support windmills, destroying watershed, creating lanes to move power with towers, destroying wildlife habitat, makes little sense. [LTR 245, CMT 2]*

**Response**: Please see response to Comment LTR 179, CMT 13 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS and issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. [LTR 266, CMT 6]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Lastly, EFSEC and BP A need to fix the flaws in the DEIS and issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the hue environmental impacts of the project. If another DEIS is issued the 50- turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 270, CMT 7]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *For the following reasons, as well as those that others have taken the time to bring to your attention, I strongly feel that a completely revised document must be created to stand as an accurate and unbiased presentation of information that Council members can use to make an informed decision regarding this proposal. [LTR 272, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *The existing document shows a lack of professionalism in many important areas that is inappropriate to both the SEPA NEPA requirements and the process, as well as to the scale and potential impact of the proposal upon the region and its varied resources. [LTR 272, CMT 1]*

**Response**: EFSEC and BPA believe that they have produced an EIS that fairly and adequately analyzes the proposed Project, and that fully complies with both SEPA and NEPA. No decision has been made regarding whether or not to approve the proposed Project. That decision will come after completion of the EIS process.

**Comment**: *[In reference to DEIS] Section 1.1.1, Pg 1, Para. 2, Interconnection, and Section 1.2.2, Pg 4, BPA Purpose and Need for Action, I do not believe that BPA has yet responded to the request for interconnection. The nearby BPA transmission lines are at carrying capacity with a backlog of other requests for interconnection. Although the location is referred to in Section3, the precise location for the proposed Whistling Ridge Project interconnection is presently unknown, since no new transmission line has yet been constructed, nor has firm commitment from BPA to existing lines been granted. This renders the cumulative impacts assessment incomplete. It is also incomplete with respect to several other facets of this proposal as well. The BPA new line access corridor construction and interconnection costs, design and placement of any collector substation and interconnection structure, as well as an evaluation of the resulting environmental impacts of their construction and operation would be legitimate, mandatory elements for inclusion in this document. Since BPA is partially responsible for the DEIS document, it should not be problematic for the agency to include an open and clearly understandable discussion of the agency's present interconnection problems as they relate to the current proposal, thus clarifying this aspect of the EIS. There is discussion of possibilities that were considered but rejected, however, the option finally chosen appears to be questionable, especially since BPA has offered no firm commitment. [LTR 272, CMT 2]*

**Response**: BPA's transmission studies for the proposed Project have shown there is sufficient available transmission capacity on existing BPA transmission system to provide transmission service for the proposed Project. In other words, no upgrades of the BPA transmission system (other than the proposed interconnection substation already considered in the EIS) would be required, and there would be no detrimental effect on this system. In addition, Columbia River hydrosystem generally has sufficient reserve capacity to provide for fluctuations in wind generation, although BPA is currently investigating potential options to ensure capacity. The potential for natural gas plants to be developed is discussed in other responses in this section. The potential for wind projects such as the proposed Project to result in cumulative impacts to Columbia River fish species due to the interplay of these operations with hydrosystem operations during certain conditions is discussed in Section 3.14.3.5 of the EIS and in other responses in this section.

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**Comment**: *[In reference to DEIS] Section 1.2.3.2, Pg 6, "...it is critical to locate projects in areas where transmission lines currently exist. The applicant thus needs to locate near existing high-voltage transmission, such as the FCRTS." As noted above (in Section 1.2.2 notes), the currently existing BPA transmission line is running at capacity, with no possibility for the addition of large additional sources, such as this project's proposed output would comprise. The critical issue regarding wind facilities is indeed appropriate siting, but not for the reason of proximity to transmission lines. The applicant (I assume this is the author) misunderstands the basic premise and need for an environmental impact statement. The lack of transparency regarding this issue is disturbing, and should be clarified in the BPA discussion of the issue, rendering this claim invalid. It should be removed from the document; it appears repeatedly in all Sections. [LTR 272, CMT 2]*

**Response**: To clarify, the proposed Project would interconnect to an existing BPA transmission line that is not currently at capacity. In addition, transmission system

improvements currently being built by BPA, such as the under construction McNary-John Day 500-kV transmission line, will help further alleviate congestion on existing BPA lines in the area. The Applicant has closely coordinated with BPA staff to determine transmission capacity availability. As part of this coordination, BPA transmission planners have reviewed the proposed interconnection and found that it can be reliably interconnected, and that transmission service can be provided. The Applicant's objective of locating near the FCRTS thus is a legitimate consideration.

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**Comment**: *[In reference to DEIS] Section 1.2.3.3, Pg 6, Business Needs of the Applicant, [a]n EIS is not a branch of any chamber of commerce nor is an EIS a forum for advertisement. The history of the applicant/company is already included in the Appendices. [LTR 272, CMT 2]*

**Response**: Please see response to Comment LTR 76, CMT 2 above.

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**Comment**: *[In reference to DEIS] Section 1.3.2, Pg 1, "[t]he EIS will be used primarily to inform ...." As it stands, I do not feel this document yet contains the essential information needed for informed, responsible decision making, especially in the areas of wildlife impacts, soils/geology and cumulative impacts analysis. It must be improved significantly before it can serve its intended purpose. This may take more time, but it will certainly ensure that the final EIS is a more suitable document for unbiased decision-making, which at this point it is not. [LTR 272, CMT 3]*

**Response**: Please see response to Comment LTR 60, CMT 1 above.

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**Comment**: *[In reference to DEIS] Section 1.2.3.3, Pg 6, Business Needs of the Applicant. An EIS is not a branch of any chamber of commerce nor is an EIS a forum for advertisement. The history of the applicant/company is already included in the Appendices. Other local background information is included in Section 3.10.2.1, Historic Background, and this is where it belongs. Every company has business needs but this is not the arena for such discussion. This heading and its text should be removed. [LTR 272, CMT 3]*

**Response**: Please see response to Comment LTR 76, CMT 2 above.

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**Comment**: *[In reference to DEIS] Section 1.3.3 and 4, Pgs 8, 9, NEPA Section 102(2)(c) requires that alternatives to the proposed action be provided. There are no Action Alternatives offered in this document (the No Action Alternative is not considered a viable alternative.) Alternatives must be presented and discussed as real possibilities, not avoided by stating that alternatives were "considered but eliminated from detailed study" as is stated in Section 1.4.3. The Applicant cannot choose to avoid this requirement. Although it is stated several times that*

*the document "... is intended to fulfill the format and content requirements" of a joint SEPA/NEPA EIS, it falls well short in many areas. [LTR 272, CMT 4]*

**Response**: The lead agencies believe that the EIS considers a reasonable range of alternatives and adequately describes these alternatives, consistent with the requirements of both SEPA and NEPA. Issues raised in these comments specific to alternatives considered but eliminated from detailed study in the EIS are addressed in other response to comments in this section.

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**Comment**: [DEIS] *Section 1.4.1.2 states that a trench, approximately 8.5 miles long and 5 feet wide would be required to place collector cables. Will the removed soil be compacted as it is returned to the trench? Will the soil returned to the trench be returned in the same order that it was removed? What will the compaction guidelines entail? Who ensures that it is done properly? [LTR 272, CMT 6]*

**Response**: As discussed in Section 1.4.1.3, excavated soils will be used to backfill the trenches. Additional information on earth disturbing activities was presented in Section 3.1.2.1. Proposed clearing and grading activity will be consistent applicable codes and standard engineering practices. As mentioned in Section 3.3.1.3, test pits were conducted to assess both the near-surface soil and rock characteristics ranging in depth from 7-16 feet in depth. No groundwater was encountered at that time. It was also noted that these observations were made based on a one-time sampling event and that the actual groundwater levels may fluctuate significantly in response to seasonal effects, regional rainfall, and other factors. The Applicant will be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP), Erosion and Sedimentation Control Plan, and Environmental Protection Control Plan to lessen soil erosion and improve water quality of stormwater run-off through stabilization practices, structural practices, and stormwater management. These plans will be developed and approved by EFSEC prior to construction or modification of any roads or facilities. Additionally, EFSEC will require the Applicant to obtain coverage under Washington Department of Ecology's Construction Stormwater General Permit. The Stormwater General Permit (NPDES) will include BMPs to minimize erosion and runoff from the Project Area.

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**Comment**: [DEIS] *Section 1.4.1.2 states that a trench, approximately 8.5 miles long and 5 feet wide would be required to place collector cables. The DEIS mentions reseeding with of grasses and native plants, but does not mention what species, nor whether trees or shrubs that were removed would be replaced in-kind. If the plantings are to minimize noxious weed colonization would the reseeding areas be watered to ensure germination in time to counteract opportunistic germination of undesirable species? If so, the amounts used should appear in the Section 3 water use list and a watering regime presented. [LTR 272, CMT 6]*

**Response**: Much of the trench area for the cables would be placed within the Project roadways as shown in Figure 2-1, Project Elements. Vegetation clearing and replanting is described in Section 3.4.2.1 of the Biological Resources Section. On DEIS page 3-72, it was noted that some areas would be permanently cleared for turbine foundations and roadways.

Except for permanently cleared areas, cleared areas would be replanted with trees within one year following construction. Areas where trees are permanently removed (such as turbine blade clearance) would be replanted with appropriate native grasses and low-growing shrubs. Implementation of a noxious weed control program, in coordination with the Skamania County Noxious Weed Control Board, is included as a mitigation measure in Section 3.4.3. It is not anticipated that reseeding would require watering.

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**Comment**: *[In reference to DEIS] Section 1.4.2, Pg 12, No Action Alternative, [t]o state that the No Action Alternative "would not help the state of Washington in achieving the renewable energy goals mandated by the state's Renewable Portfolio Standard" is misleading. Washington State wishes to encourage renewable energy, but not to the exclusion of all else. Site selection is probably the most important way that negative environmental consequences can be avoided, especially with respect to wildlife. Moreover, BPA does not segregate power sources. Once it is produced and fed into the collection system, it is dealt with as any business commodity, in this case by bids. Much of the power we create here is used elsewhere, historically, to California. To imply that a rejection would flout state goals and policies is simplistic and a little misleading. "(The No Action Alternative) would help to meet the region's need for additional power in the coming years." If by "region", "local" is meant, our regions need is not great. The Columbia River and other water-driven power-generating dams continue to supply more than 3/4 of our power needs. The current trend is to improve efficiency and to encourage both business and the private sector to conservation. It has been estimated (Draft Sixth NPP, 2009) that almost 80% of our locality's future energy demands can be met in this way. Existing and newly approved wind facilities in the region, with a focus in Klickitat County, are more than adequate to make up the difference. It would be not only misleading but inaccurate to state or imply that there is a "need" for additional wind power in this portion of the Northwest. [LTR 272, CMT 7]*

**Response**: The likelihood that regional power needs likely would be addressed by some combination of energy efficiency and conservation measures, existing power generation sources, and/or the development of other new renewable and non-renewable generation sources under the No Action alternative was acknowledged in Section 2.2 of the EIS. The discussion of the likely implications of how the No Action alternative would relate to RPS and regional power needs identified by the Applicant is meant to provide a general description of this alternative's responsiveness to these needs. Simply put, not developing the Project would indeed not help achieve RPS goals, and also would not provide a source of additional power. To clarify information concerning the RPS, the discussion of this RPS in the No Action alternative has been revised to reflect that achievement of other states' RPS goals also would not be helped under this alternative.

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**Comment**: *[In reference to DEIS] Section 1.4.3, Pg 13, Alternatives Considered but Eliminated from Detailed Study, [t]he applicant's response is in violation of the guidelines by virtue of not complying with the requirement to supply Alternatives. As mentioned above, an EIS requires that alternatives be provided and considered, with accompanying data and analysis to match all of the other Action Alternatives presented. [LTR 272, CMT 7]*

**Response**: The lead agencies believe that the EIS considers a reasonable range of alternatives and adequately describes these alternatives, consistent with the requirements of both SEPA and NEPA. Issues raised in these comments specific to alternatives considered but eliminated from detailed study in the EIS are addressed in other response to comments in this section.

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**Comment**: *[In reference to DEIS] Section 1.4.3.1, Pg 13, Alternative Project Locations, [t]he contents of this portion are redundant. Again, it avoids the EIS requirement regarding Alternatives. The points made here have all been stated previously {Section 1, 4.1}, in the same bulleted form and with almost the same wording. [LTR 272, CMT 7]*

**Response**: Please see response to Comment LTR 22, CMT 2 above.

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**Comment**: *[In Table 1-1 on DEIS page 1-22 under "Earth: Construction, Design and Mitigation Measures"] All of the Design and Mitigation Measures listed are "would be" statements. They "should be" already part of the EIS! If, for instance there was a critical subsurface condition, it needs to be known and factored into the decision process, not "discovered" after approval. Only in this way can accurate and responsible evaluation occur. Because of the difficult terrain, there would appear to be very little possibility for adjustment, should geologic constraints be revealed initially. This could easily endanger the viability of the project, which underscores the importance of having data collected from rigorous studies, and analysis conducted by respected sources. Even with the added benefit of such information, the impacts of such radical alterations to a fragile topography can only be guessed. Stringent geologic study of the proposed site must be performed now and the results reported in another, hopefully improved Draft document. This information will be essential for the Council's evaluation. Without it, the process will have no merit. [LTR 272, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *As mentioned above [in LTR 272, CMT 6], there is no doubt that the proposed excavated and refilled trench will impact and redirect existing subsoil water flows for 8.5 or more miles and may potentially influence an area far greater than the area of the trench. It is also possible that drainage may be improved in the trench after refill, but the possibility that it will not, must be at least considered. [LTR 272, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *In [Table 1-1 on DEIS page 1-22 under "Earth: Construction and Operation"], the considerable alterations to the terrain that are proposed for this project - 8.5 miles of three to four foot deep, five foot wide trenches for cable burial, 30-foot deep turbine pads that will*

*require leveling with machinery and extensive blasting to excavate, the building of adequate access and delivery roadways on steep slopes - will certainly have more impacts, and ones that influence each other more closely, than those listed. The changes made to accommodate the towers will forever alter the ridge tops and they will not revert to their pre-construction profiles after the project is decommissioned. It is inaccurate as well as disingenuous to state that the project construction requirements would be "minor to moderate." [LTR 272, CMT 9]*

**Response**: Section 3.1.2.1 describes the types of earth disturbing activities that would occur on the site, including tree harvesting in areas not already cleared; constructing roads and turbine crane pads; constructing foundations for turbine and meteorological towers; trenching for underground utilities; clearing and grading for the substation placement; and clearing and excavating for the foundation for the Operations and Maintenance facility. While these activities would affect approximately 108 acres (56 acres of permanent disturbance and 52 acres of temporary disturbance) the resulting change in the ground surface elevation would be minimal in comparison to the varied topography on the site. In addition, most areas affected by ground disturbing activities would not be visible from lower elevation areas surrounding the site.

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**Comment**: *[In reference to Table 1-1 on DEIS page 1-22 under "Water: Construction and Operation], On-site development will certainly impact ground and surface water drainage patterns as indicated above. It is well- recognized that new roadbeds alter water flow significantly and are responsible for a good deal of continuing erosive runoff. The replacement of natural soil and rock drainage on the site with impervious concrete pads constitute large surface areas that will prohibit slow drainage. Water will be quickly released from these surfaces in large quantities at approximately the same time, limiting the remaining soil's ability to absorb and release it slowly. Some of the remaining soil may be additionally compacted from heavy construction machinery, limiting even more its ability to absorb rainfall and melting snow slowly. Section 3 down plays the impact these impervious surfaces may have upon soils, but this need to be seriously examined. Each of the 49 tower pads have a diameter of 60 feet, creating 2920 square feet of impervious surfaces at the top of steep ridges. , These conditions produce fast runoff accompanied by high erosion which, over time may lead to catastrophic geologic events, as well as degrade waterways used by fish, amphibians and invertebrates. Amend this inaccurate denial of the project's impacts to ground and surface waters. A discussion, or at the very least a mention of the runoff potential should be presented, as well as possible impacts to the larger streambeds below, with potential to impact fish, amphibians and invertebrates, upon which fish depend for food. Larger game and non-game animals may be impacted as well through water quality degradation and the possible inability to even reach water. The standard BMP guidelines will not be adequate for this anticipated situation. In recognition of this, an individual plan to accommodate the special runoff problems of the project could be developed as part of a mitigation plan, implemented and monitored by an agent other than the applicant/contractors, if the project is approved. The cumulative impacts discussion should deal with this possibility as well, but does not. [LTR 272, CMT 10]*

**Response**: As discussed in Section 3.1.3 and in other responses, EFSEC will require the Applicant to obtain coverage under Washington Department of Ecology's Construction

Stormwater General Permit. The Stormwater General Permit (NPDES) will include BMPs to minimize erosion and runoff from the Project Area.

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**Comment**: *[In reference to DEIS] Section 1, Table 1 Pg [1-]24 Biological Resources: Construction Soil compaction is an undesirable and irreversible impact that should be acknowledged since it affects soil drainage, the ability of certain plants to grow well and limits the species of plants that will grow. In addition to "loss of suitable habitat," abandonment of adjacent suitable habitat due to construction activity should be considered a likely possibility. Some bird, mammal and invertebrate species are known to be more sensitive to intrusive activities, including noise, than others. Several of these species are listed as being present in the project area. Add "abandonment of suitable habitat due to construction activity" to the list on page [1-]24. [LTR 272, CMT 11]*

**Response**: The potential loss of suitable habitat and disturbance and displacement from construction activities was listed on Page 1-24 of the DEIS in the "Impact" column for "Biological Resources."

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**Comment**: *[In reference to DEIS] Section 1, Table 1 Pg [1-]24 Biological Resources: Operation "There would be some mortality to birds and bats due to turbine collision and displacement, though not in sufficient numbers to affect population viability." I restrain myself when I say that this statement is offensively inaccurate. It also reveals the applicant's misunderstanding of the "cumulative impact" concept. As wind farms proliferate in our region, the cumulative mortalities become increasingly significant for individual populations, regardless of their population status. Just because there have been no studies addressing bird population declines in association with wind installations does not mean that one has a legitimate claim to deny that such a relationship may exist. The bat studies cited, employed equipment that was not capable of determining the bat species e present. How then, can an assessment of a particular population be made? Or, by extension, a statement regarding population viability? What authority provided the status information for each population? What is the source of data for western bat species population size? Eastern bat species are being threatened with mass extinctions from White Nose Syndrome, the etiology and causative organism of which is still unknown. The disease has not yet reached the western states; because of this, it is essential that ALL western bat populations be given added protection, regardless of their population status. The bat study data is inadequate in certain respects; the study plan assumptions were not adequately rigorous, there were discrepancies in data collection procedures from year to year, making comparisons and data merging ineffective; long-term sampling frequency was sparse. At the very least, a repeat survey should be conducted which would identify bat species. The Columbia River Flyway is a major East to West migration route that has likely been used longer than mankind has been here. Raptors are known to use mountain ridges for North/South travel as well as for hunting in this part of the Columbia River. People come from many places outside of this area specifically to see the variety of birds that congregate and fly through this river corridor, some stopping to feed for a few days or weeks before moving on. This site would be an unconscionable choice for a development of this kind, with this knowledge. "No impacts to*

*listed species" - is this a wish, or a promise from an unknown deity? How can it possibly be known ahead of time that a listed species will not be impacted; especially when inadequate studies have failed to identify what species use the area and with what frequency? And when only a two year start-up mortality study is planned? This is not enough time to obtain meaningful data much less to make any conclusions from the data. The project location would be an especially difficult one for such monitoring due to the terrain and planned forestry understory management activities. A recent eastern U. S. mortality study is employing dogs to find bat carcasses, because they are so difficult to locate by eye, even in dry flat grassland. There is no body of information available documenting how wild animals might respond to the sound of wind turbine propellers. This should be at least briefly discussed and dealt with as a possible impact. [LTR 272, CMT 12]*

**Response**: The Wildlife Society, in a landmark publication on wind energy and wildlife, concluded that fatalities of passerines from wind turbine strikes generally are not significant at the population level (Arnett et al. 2007). Also, the National Academy of Sciences (NAS 2008) recently reviewed wind energy impacts on birds, and came to the following conclusion: "At the current level of wind-energy development (approximately 11,600 MW of installed capacity in the United States at the end of 2006, including the older California turbines), the committee sees no evidence that fatalities caused by wind turbines result in measurable demographic changes to bird populations in the United States, with the possible exception of raptor fatalities in the Altamont Pass area." The available information suggests that the Project would be unlikely to have population impacts on birds. Additionally, the revised report "Analysis of Cumulative Impacts on Avian, Bat and Habitat Associated with Wind Energy Development in the Columbia Plateau Ecoregion of Eastern Washington and Oregon" (WEST 2010) prepared for Klickitat County does not suggest the possibility of cumulative population impacts on birds. Operational adjustments such as increasing turbine cut-in speeds during low wind speed nights can be used to mitigate bat mortality if it is found to be warranted.

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**Comment**: *[In reference to DEIS] Section 1, Table 1 Pg [1-]24 Biological Resources: Design and Mitigation Measures. "In order to avoid or minimize impacts to any raptors potentially nesting on or near the project site, a raptor nest survey would be conducted ..." Then what? A survey is not a mitigation measure. The composition of the proposed Technical Advisory Committee members is not well thought out. Entities or personages that have vested interests or have demonstrated no interest, cannot be relied upon to make responsible, nor to make informed mitigation recommendations. To include the developer on such a committee would be unwise as well as unfair to the resources. If this route is pursued, enforcement capabilities must be granted and there must be a preponderance of resource advocates as committee members. TAC groups are by reputation, generally ineffective when they have no powers. They are also rendered ineffective if members have conflicts in interest, as counties and developers often do. This would be a great opportunity to cast aside TACs, breaking out of the customary mold and devising a new and more effective way to resolve monitoring and mitigation issues associated with such a project. "For potential impacts to big game species (deer and elk) coordination with WDFW will occur if appropriate." Again, just to mention something does not comprise a mitigation measure. What about bears, and large cats? Who decides if a situation is "appropriate" warranting consultation? Under what circumstances would it be appropriate to coordinate?*

*The project location is a designated wintering area for elk. What plant species are present that elk might use for winter forage? Will these species be replanted and therefore present in adequate quantities to continue to serve as winter forage during construction and operation of the proposed project? These considerations must be treated responsibly Somewhere in the document. The quoted statement is vague and obtuse. It leaves the reader with no information about how big game species' use of the area will be approached, nor does it correct nor solve any problems big game species may have because of the project. [LTR 272, CMT 13]*

**Response**: Composition of the TAC will be based on the WDFW wind power guidelines. The TAC will develop appropriate mitigation measures as warranted.

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**Comment**: *[In reference to DEIS] Section 1, Table 1[-1], "Energy and Natural Resource: Operation," [t]he "Minor quantities of lubricating oils ....." should be specifically quantified, if only as an estimate, to be consistent with the remaining listed items. [LTR 272, CMT 14]*

**Response**: Table 1-1 has been modified to include "less than 5 50-gallon drums" after this bulleted item to correspond with what is also listed in Section 3.6.2.1.

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**Comment**: *[In reference to] Section 1, Table 1[-1], Pg 25, Environmental health: Construction, [t]he project is located at the southern end of a wide contiguous band of lands termed "Fire-prone Landscape Management Strategy Area" by a USFWS, 2008 Final Spotted Owl Recovery Plan map. This area runs from the Columbia River north to the Washington-Canada border. The increased risk of fire during the summer months must be seriously considered and aggressive prevention measures above the usual standards should be pursued and stipulated. Prohibitions on conducting potential spark and fire-generating activities during the driest fire danger periods of the year could be part of a plan keyed to this project and would demonstrate care and concern for nearby communities. A several month delay in certain construction activities and equipment use as a result of time-of-year prohibitions would be well justified and need not halt all building progress. There WILL be blasting activity in association with this project, if approved. Getting rid of the "may" and "could" in the bullet dealing with blasting would be a more honest way of stating the realities of the massive environmental reshaping that this project will engender. If "[b]lasting could also create a fire hazard during dry weather", then this activity should be curtailed during these periods. Likewise, an activities plan related to the regional weather patterns might suggest avoiding blasting during unusually wet times of the year to avoid problems similar to those encountered recently along Hwy 14. There is no doubt that the level of blasting activity alone has the potential to seriously destabilize this particular environment, which, as noted elsewhere, already has nearby unstable loci. Since there is no geologic assessment data provided, it is impossible to even guess what impacts such activity could produce. When the geologic assessment is conducted, it should address not only immediate impacts but the potential long term impacts of blasting, even although this would only be predictive. Road department records from Underwood and Hwy 14 should give the Council a good idea of the areas' historic instability. [LTR 272, CMT 15]*

**Response**: Fire prevention is discussed in Sections 3.6.1.2 and 3.6.2.1 of the DEIS. Additionally, as outlined in Section 3.6.3, a Fire Protection and Prevention Plan would be developed for EFSEC approval and would be implemented by the Skamania County Fire Marshall should to proposed Project be approved.

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**Comment**: *[In Section 1-6, Table 1-1, under] "Environmental health: Construction" (Column 4), [t]he second, bulleted statement in column 4 implies that a fossil-fuel- powered facility might supply fill-in power when a wind facility is unproductive (and that it would carry a higher risk of fire.) There is a federal requirement mandating that alternative power source facilities must accompany any new wind facility, based upon the amount of power generated. The proposed wind project would generate above the MW threshold, requiring the construction of an alternative power-generating facility to balance a wind farm's unproductive periods of no wind or too high wind. The construction cost of this requirement building, inter-tie costs, should certainly be included in the cost analysis for this project, but it does not appear. Since the alternative power facility is a requirement, its location should be identified and the associated environmental impacts need to be included in the EIS, including the cumulative impacts portion. [LTR 272, CMT 16]*

**Response**: BPA has several procedures in place to operate with wind facilities interconnected to BPA's transmission grid. BPA allocates some balancing capacity to wind facilities under the BPA Balancing Authority. Wind Facility Developers pay for this capacity through BPA transmission rates. In addition to BPA transmission rates, generators are subject to Generation Imbalance which is also used to balance the wind output. BPA currently manages imbalances using the Federal Columbia River Power System (through the use of federally-managed dams on the Columbia River). For the long term, BPA is also evaluating other possible alternatives including self supply. More information regarding BPA's Customer Supplied Generation Imbalance, please visit *http://transmission.bpa.gov/wind/gen_imbalance/*. For more information regarding BPA's Wind Integration Team, please visit *http://www.bpa.gov/corporate/WindPower/WIT.cfm*. Lastly, for more information regarding BPA's Wind Power initiatives, please visit *http://www.bpa.gov/corporate/windpower/index.cfm*. Furthermore, a discussion of energy balancing can be found in Section 3.14.3.5.

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**Comment**: *[In reference to] Section 1, Table 1[-1], " Environmental Health: Operation," [a]gain, with respect to fire potential, local ordinances and other regulations and standards are not directed to such a project, and are not adequate, because of the unusual situation. An individually tailored, aggressive fire prevention plan and response tactic needs to be developed for the construction and operation phases of this proposed project. Relying on existing regulations will not adequately address the specific potential hazards nor protect the nearby population and environment. "... none of the planned turbines are within 2,500 feet of existing residences." This is not correct; there is one residence. Mitigation measures should be included in the proper column. "EMF from the project ... would have no health and safety impacts." I do not see any information in the document to support this assertion. There is certainly study regarding the issue, but conclusions are not definitive at this time. Can a pronouncement be*

*made if there is inadequate documentation? Unless this can be produced, this statement needs to be removed or qualified in some manner in order to be objective. [LTR 272, CMT 17]*

**Response**: Fire mitigation measures are included in the proper column within Table 1-1; and Fire Protection and Prevention Plans are addressed several times in Section 3.6. Additionally, both "Fire and Explosion" and "Electromagnetic Fields" analysis during construction and operation of the proposed Project can be found in Section 3.6.2, Impacts, and the mitigation measures associated with both of these issues can be found in Section 3.6.3, Mitigation Measures, of the EIS.

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**Comment**: *[In reference to] Section 1[.6], Table 1[-1], "Noise: Construction," [t]his section down plays construction noise, which will carry well into the valleys and bounce off of adjacent hillsides. Although construction is stated to occur during daylight hours, it will likely begin very early and continue through dusk. The added noise of myriad transportation trucks will certainly impact local residents on a daily basis and should be included in the list. The noise from blasting will certainly be noticeable and will last for awhile. In thoroughness, it should also be mentioned. Section 1, Table 1 Pg 27 Noise: Operation An in-depth submission regarding wind turbine noise impacts upon humans has been submitted. Please consider it as a counter to the data presented in the EIS and take appropriate action to modify the table. [LTR 272, CMT 18]*

**Response**: As described in Section 3.7.2.2, construction related noise between 7:00 a.m. and 10:00 p.m. is exempt from noise regulations per 173-60-050 WAC.

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**Comment**: *[In Section 1-6, Table 1-1, under] "Socioeconomics: Operation," [t]here are several studies that identify undesirable affects of turbines upon humans {see K. Brown's testimony citations}. One would not unreasonably conclude that properties in close proximity to such turbine arrays might be less desirable for habitation, at least to a percentage of the population. Proponents of wind power have issued statements derived from studies indicating that property values are not adversely affected by nearby wind turbines. As such studies continue, depending on the analyses, certainly there is the possibility that property values may be affected one way or another, but for now either position can support and document its claims. [LTR 272, CMT 19]*

**Response**: Comment acknowledged.

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**Comment**: *[In Table 1-2 on DEIS page 1-34, "Summary of Unavoidable Adverse Impacts: Earth"], the enormously disruptive activity that will be required to complete this project, located in a geologically fragile environment that has already been subjected to considerable alteration, is very likely to respond with undesirable events. In potentially susceptible areas, no amount of "careful design" can prevent, nor can "mitigation measures" restore, areas where mass wasting has occurred. It should be added to the list of potential adverse impacts, especially since*

*evidence of such an event was documented during a previous survey. The severe re-contouring, blasting, large-scale trenching and creation of impervious surfaces all increase the likelihood of minor or major responses from the environment. The soil types in some areas are acknowledged to be susceptible to erosion and the proposed "A" array is located precisely along a Class II {High Landslide Hazard Area} ridgeline. To dismiss these and other known geologic concerns with the two brief dismissive statements presented is unacceptable. Until a reputable geologic assessment study is performed, there will remain a glaring gap in this arena. Without professional scientific data, any predictive statements can only be considered arbitrary and of dubious merit. [LTR 272, CMT 20]*

**Response**: As discussed in Section 2.1.2, final siting of the wind turbines and associated facilities would be done following completion of the EFSEC Site Certificate. Prior to this final siting process, as a condition of the Site Certificate and as discussed in Section 3.1.3, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted. If this investigation indicates the potential for slope instability at turbine sites or other Project facilities such as access roads (including improvements to West Pit Road), these facilities will be redesigned or relocated to avoid this risk. As discussed in Section 2.1.3.7, all road improvements required for the proposed Project would be designed and constructed under the direction of a licensed engineer, in accordance with the Skamania County Private Road Guidelines and Development Assistance Manual. All county roads requiring improvements would be designed and constructed in accordance with the WSDOT Design Manual.

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**Comment**: *[In reference to Table 1-1 on DEIS page 1-22 of the under "Air Quality], [c]onstruction activity would involve many more pieces of diesel-fueled machinery than any logging operation. It is absurd to think that the residents of the town of Underwood will not notice, nor be affected by, a continuing stream of diesel trucks heading up and down the roads every day for months. Peak morning hour numbers of trucks are estimated to be 210/hr for 3-5 months. Further, all major construction equipment is to be diesel-powered (Section3 Table 6-5, Pg 109 Fire and Explosion Risk Mitigation.) It is disingenuous to claim that this would be comparable to "existing logging operations", and equally so to state that "the project would contribute to a beneficial impact on overall air quality." Climatological data presented in the EIS indicates that the area is prone to air stagnation at all times of the year, but especially during the summer when pollutants from downriver may collect forming considerable haze. Even if this statement refers to the completed project, it is a bit of a stretch to claim "beneficial impacts on overall air quality" when the requirement to build alternative fuel power plants are a direct result of building wind powered facilities. With this in mind, it might be fairer to consider that project would lead to a decline in overall air quality. [LTR 272, CMT 21]*

**Response**: The temporary effects on air quality from construction activities are described in Section 3.2.2.1. Mitigation measures to address those effects are described in Section 3.2.3.

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**Comment**: *[In reference to DEIS] Section 1, 7 Pg [1-]34 Summary of Unavoidable Adverse Impacts: Biological Resources. See previous comments regarding bats and birds (Section 1,*

*Table 1 Biological Resources: Operation.) The Summary statement simply reiterates the document text statements, almost word for word, imparting the same inappropriate lack […] [LTR 272, CMT 22]*

**Response**: The summary table is intended to summarize information found elsewhere in the EIS. It does not provide new or additional information.

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**Comment**: *Precedent. We feel that if Whistling Ridge is allowed to move forward, the Governor of WA would be setting a dangerous precedent here in the Columbia River Gorge. What will stop other wind farms from being allowed just outside the geographical boundaries but visually impacting the NSA? We have already sacrificed the natural beauty of the Columbia Hills east of the NSA to hundreds and perhaps even thousands of wind turbines on both sides of the Columbia in the interest of this green energy that must be subsidized to make ANY economic sense. How far should we go with this philosophy of creating green energy? At what cost? As common sense tells us, if it sounds too good to be true, it probably is, as evidenced by the ethanol political boondoggle. [LTR 273, CMT 1]*

**Response**: Please see response to Comment LTR 119, CMT 11 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS and issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 275, CMT 5]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *In reading this DEIS, one thing stands out. Rather than being a decision making document, which DEISs are supposed to be, this appears to be a justification document, providing support for a decision that is already in the mind of the preparers. The failure to analyze more than two alternatives - the applicants desired outcome and the required do-nothing alternative - strengthens that impression. [LTR 276, CMT 1]*

**Response**: EFSEC and BPA believe that they have produced an EIS that fairly and adequately analyzes the proposed Project, and that fully complies with both SEPA and NEPA. No decision has been made regarding whether or not to approve the proposed Project. That decision will come after completion of the EIS process.

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**Comment**: *There should be a rationale, by the proponents, as to why they are proponing for this wind farm, and all the others in WA and OR and other areas. [LTR 279, CMT 11]*

**Response**: The reasons behind the Applicant's proposal for a wind generation project at the proposed site are provided in Section 1.2.3 of the EIS. The Applicant is not currently proposing any other wind projects in Oregon, Washington, or other states.

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**Comment**: *They should also explain why this proposed wind farm is needed, or if it really is needed, in the energy grid. [LTR 279, CMT 20]*

**Response**: Please see response to Comment LTR 279, CMT 11 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 287, CMT 6]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Indeed, the EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 288, CMT 6]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 289, CMT 7]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines. It is vital*

*that we develop alternate and renewable-energy sources, but it is just as vital that we do not repeat the same kinds of mistakes we have committed with dirty energy; namely, destroying the natural world, its ecosystems, and beauty in order to develop more energy. This project has not been well analyzed in the DEIS. Another more critical look is required. [LTR 290, CMT 1]*

**Response**: Please see response to Comment LTR 60, CMT 1 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the S0-turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 290, CMT 7]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 291, CMT 8]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 292, CMT 7]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 293, CMT 6]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

**Comment**: *Lastly, EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 294, CMT 7]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. [LTR 307, CMT 8]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. [LTR 308, CMT 8]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *EFSEC and BPA need to fix the flaws in the DEIS, issue a revised or supplemental DEIS, and make substantial revisions to the EIS to fully inform the public about the true environmental impacts of the project. If another DEIS is issued the 50-turbine layout should be rejected. [LTR 309, CMT 8]*

**Response**: Please see response to Comment LTR 66, CMT 4 above.

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**Comment**: *The DEIS is fatally flawed and incomplete because of their lack of technical input about the cumulative impacts and effects of this project on our environment and ecosystems. [LTR 311, CMT 16]*

**Response**: Please see response to Comment LTR 60, CMT 1 above.

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**Comment**: *BPA needs to be an active participant in this process and so far they have totally abrogated their regulatory obligations under NEPA. The Whistling Ridge wind farm DEIS is incomplete and should be redone with BPA's input. [LTR 311, CMT 16]*

**Response**: The lead agencies believe that they have produced a reasonably thorough analysis of the proposed Project that adequately considers all points of view. BPA and EFSEC staff actively and extensively participated in the preparation of the EIS, as required by SEPA and NEPA. Both SEPA and NEPA allow for the use of environmental information, in whatever form, from the Applicant for use in the preparation of an EIS. In fact, SEPA allows for an applicant to prepare the EIS. Nonetheless, where the lead agencies used information provided by the Applicant or its consultants, this information was thoroughly reviewed and independently evaluated by the agencies to ensure its competency and accuracy. This approach is consistent with the intent of SEPA and NEPA that acceptable environment work not be redone, but that it instead simply be verified by the lead agency. Accordingly, the lead agencies appropriately took full responsibility for the scope and content of the EIS, and have fulfilled their respective responsibilities for EIS preparation under SEPA and NEPA.

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**Comment**: *I support this project. The EIS for Whistling Ridge has properly analyzed the environmental impacts; therefore, the project should be approved. [LTR 317, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support this project. The Draft EIS is comprehensive and complete and no further analysis is needed. [LTR 317, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS needs to be revised to reflect that if the project isn't built our growing electricity needs will be met though conservation, efficiency, and new clean energy development. Whistling Ridge is not critical to meet the forecasted need for renewable energy resources. [LTR 318, CMT 27]*

**Response**: The likelihood that regional power needs likely would be addressed by some combination of energy efficiency and conservation measures, existing power generation sources, and/or the development of other new renewable and non-renewable generation sources under the No Action alternative was acknowledged in Section 2.2 of the EIS.

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**Comment**: *The 14th amendment is the due process clause…requires that interested parties be given reasonable notice and a reasonable opportunity to be heard. It is completely*

*unreasonable to expect the layman or even a trained professional to read a document of this magnitude and make informed comments in three weeks or even three months... I would like to formally object to these proceedings as we are denied reasonable notice and opportunity to be heard and are therefore being denied our constitutional rights. I would like an order extending the time for written comments for a* minimum of 90 to 120 days from the currently deadline. *[LTR 317, CMT 31]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *The DEIS is so deficient…A year ago we all presented comments, I didn't see anything about the comments I presented in the DEIS. [LTR 317, CMT 32]*

**Response**: Please see response to Comment LTR 119, CMT 2 above.

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**Comment**: *I commend the commissioning of an excellent document. It provides a rock solid foundation to perform your action. [LTR 317, CMT 42]*

**Response**: Comment acknowledged.

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**Comment**: *We have not received adequate time to review the document. We need another chance to speak after we have had time to read the document. [LTR 317, CMT 44]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *Why are other fed agencies not cooperating agencies? [LTR 317, CMT 84]*

**Response**: Please see response to Comment LTR 74, CMT 4 above.

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**Comment**: *I feel the DEIS is very incomplete and poorly done. [LTR 317, CMT 86]*

**Response**: Comment acknowledged. Please see response to Comment LTR 60, CMT 1 above.

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**Comment**: *The Yakama Nation would like a continuance of 30 days to review and comment on the project. The staff has not had a chance to meet on this important matter and would like to*

*provide input. Harry Smiskin and Lavina Washine want a written response from you on this 30-day consultation process. [LTR 318, CMT 19]*

**Response**: An extension was offered to The Confederated Tribes and Bands of the Yakama Nation in which comments from the Yakama Nation were expected by August 20, 2010. Additionally, please see response to Comment LTR 66, CMT 5 above.

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**Comment**: *The Park Service concluded that under NEPA they are required to consult. You solicited the Forest Services' comments, you need to take them into consideration. [LTR 318, CMT 28]*

**Response**: The commenter is incorrect that the National Park Service has stated that the lead agencies must conduct some sort of consultation with the Park Service. The Park Service did submit a comment letter on the DEIS, which is addressed in the responses to comments. Similarly, comments received by the U.S. Forest Service have been addressed.

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**Comment**: *Page 1-7 states that "No other Federal agencies have been identified as cooperating agencies for the EIS at this time." Is that because National Parks Service and the Forest Service have made concern negative comments about this proposal as it is now written? [LTR 318, CMT 34]*

**Response**: Please see response to Comment LTR 74, CMT 4 above.

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**Comment**: *Why have the Yakama Nation not been involved in the DEIS when they as a sovereign nation have legitimate cultural resource concerns? [LTR 318, CMT 35]*

**Response**: As described in Section 1 and Section 3.10 of the EIS, the lead agencies, along with the Applicant, are in the process of coordinating with members of the Confederated Tribes and Bands of the Yakama Nation concerning the proposed Project, and the Yakama Nation has been afforded numerous opportunities to be involved in the process. Both the Yakama Nation Cultural Resources Department and two local resident tribal members have been contacted to assist with the identification of potential sensitive, traditional, and/or sacred resources. In addition, consultation is occurring through the Section 106 process.

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**Comment**: *I do not feel this document is satisfactory in providing an objective document for public access to information and divide decision makers to their tasks as well. [LTR 318, CMT 38]*

**Response**: EFSEC and BPA believe that they have produced an EIS that fairly and adequately analyzes the proposed Project, and that fully complies with both SEPA and NEPA. No decision has been made regarding whether or not to approve the proposed Project. That decision will come after completion of the EIS process.

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**Comment**: *I do not feel that the discussion of business needs in Section 1.2.33 is appropriate. The only information relevant was the portion that mentioned the amount of construction jobs. [LTR 318, CMT 39]*

**Response**: Please see response to Comment LTR 76, CMT 2 above.

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**Comment**: *Please give us additional time to review the document. Three weeks is not enough. [LTR 318, CMT 49]*

**Response**: Please see response to Comment LTR 66, CMT 5 above.

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## G.2 PROPOSED ACTION AND ALTERNATIVES

**Comment**: *The Draft EIS is correct in its assessment of the Whistling Ridge Energy Project as an "'integrated whole,' as a single power plant, not pieces of a whole, where some turbines may be eliminated." The project, at 75 megawatts, is the smallest project proposed or operating in Washington State. No exception. The economic viability of the project hinges on SDS being able to complete the project as designed - at 75 megawatts. Those who suggest that they can support the project if "only" seven turbines are removed are, in effect, telling you that the project should not proceed. It reminds me of the used car dealer who claims that he's offering you a great deal while acknowledging that the auto lacks a small item: a transmission. In the interest of fair evaluation, the proposed project before you must be considered as an "integrated whole." Given the economies of scale and utility demand for renewable power, this project, if it is to proceed at all, cannot be downsized. [LTR 61, CMT 1]*

**Response**: As discussed in Section 2.3.2 of the EIS, the Applicant considers a 70-MW project as the minimum size required to make the proposed Project economically feasible. In addition, the Applicant believes this is the minimum size needed for utilities looking to fulfill RPS requirements, based on the Applicant's assessment of other wind projects that have successfully entered purchase agreements with utilities seeking to meet RPS requirements. The lead agencies believe these are reasonable requirements for the proposed Project.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), and other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 66, CMT 1]*

**Response**: The lead agencies believe that the EIS considers a reasonable range of alternatives and adequately describes these alternatives, consistent with the requirements of both SEPA and NEPA. Issues raised in these comments specific to alternatives considered but eliminated from detailed study in the EIS are addressed in other response to comments in this section.

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**Comment**: *This DEIS is insufficient in that an appropriate EIS has a list of alternatives. This one only lists one action item and mentions throughout the document that it is one of the alternatives. How can the proposed action also be an alternative? The only alternative stated is the No Action Alternative. [LTR 74, CMT 2]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I have never seen an EIS, especially for a project of this scope that has no other action alternatives. Although they are mentioned in the text, they must be dealt with as real possibilities, regardless of the fact that the proponent does not wish to spend the additional funds it is claimed they would require. [LTR 76, CMT 11]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The Whistling Ridge draft EIS is basically well organized and readable. Nevertheless, it is insufficiently thorough and contains specific inaccuracies and subjective conclusions. Some shortcomings we noted are: 1.) An appropriate EIS should list a range of alternatives. However, the draft lists only one action alternative. More alternatives could be developed by such means as relocating or eliminating problematical turbine sites. [LTR 79, CMT 1]*

**Response**: The concerns over turbine corridor A1-A7 are noted. As discussed in the EIS, however, the Project has been proposed as an "integrated whole", meaning essentially as a single power plant, not as a dissectible project where some turbines may be eliminated. An alternative that would eliminate turbine corridor A1-A7 therefore was considered and eliminated from further study. Nonetheless, in determining whether to issue a site certificate and enter a site

certificate agreement for a proposed generation project, it is within authority of the State of Washington to condition approval of the proposed Project, consistent with RCW 80.50 and other applicable state statutes. In the draft certification agreement, EFSEC is empowered to include "conditions to protect state or local governmental or community interests affected by the construction or operation of the energy facility." See RCW 80.50.100. These conditions essentially serve to mitigate potential environmental or social impacts of the proposed Project. Accordingly, certain conditions, such as limiting the location of proposed turbine corridors, could be considered as a condition for project approval (i.e., as a form of mitigation related to the Project's potential impacts).

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**Comment**: *Applicant SDS owns 70,000 acres of land; within this expanse, the draft claims that Whistling Ridge is best suited for a wind farm. But considering such large ownership, plus numerous valid concerns associated with Whistling Ridge, the draft should address in detail other potential wind power locations on SDS lands. [LTR 79, CMT 2]*

**Response**: The lead agencies believe that the DEIS presented a reasonably thorough discussion of the consideration of alternatives for the proposed action, including why alternative locations were not being further studied. The reasons that the Applicant proposed its wind project at this particular location is explained in Sections 1.4.1 and 2.3 of the EIS. As discussed in these sections, a variety of factors were considered in evaluating whether alternative locations might be feasible.

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**Comment**: *We therefore request that EFSEC and BPA carefully study and analyze all possible adverse effects of the Project in its proposed location and evaluate whether other locations would be more appropriate for this type of project. [LTR 119, CMT 3]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *Location of the Project. It would appear that there are much better places to site a project of this magnitude. There are thousands of acres of farmland in Eastern Washington that can (and do) support this type of development. The land to the East is vast, it's close to transmission lines, it is many miles away from homes, has limited recreational value, limited wildlife (as compared to a forest), limited renewable resource (as compared to the timber resources here), there is limited damage to the ecosystem due to installation and it would not detract from views of a National Scenic area. We request that the EIS fully evaluate all of these considerations. [LTR 119, CMT 10]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *Thank you for the opportunity to comment on the DEIS for Whistling Ridge. After reading though this document, I realized that there is a workable solution that could satisfy common ground that could satisfy many of the residents of Skamania County, and people Columbia Gorge National Scenic Area. The workable solution I recommend is to approve of the Whistling project with the exception of the A1-A7 turbine group. [LTR 124, CMT 1]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *Eliminating the A1-A7 turbines would make this project much more acceptable to the local population because the impact to the National Scenic area would be much less. I request that you review these comments each as if you lived here, please remember, this project is in everyone's back yard, it is a National Scenic Area and one of the most traveled tourist destinations in the Northwest. [LTR 124, CMT 10]*

**Response:** Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *Regarding "future developments", the "Middle Mountain Wind Project" should be updated to indicate that the Hood River County Commissioners have determined the project to be not feasible due to local discontent. Please also consider adding the decision regarding the Seven Mile project; impacts to the local community and the scenic area also could not be justified. [LTR 124, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. [LTR 127, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The EFSEC and BPA must consider other alternatives to the siting of the Whistling Ridge wind turbines to avoid marring the viewscape of the Gorge NSA! [LTR 130, CMT 1]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *We feel it is imperative that the final EIS include alternatives such as adjusted placement or outright removal of the proposed A-array or however many wind turbines might be necessary to prevent any negative aesthetic impact to the nationally and globally recognized scenic area and its view points in the Columbia River Gorge. People come here to heal their souls and to escape from, not be impressed by, industrial complexes. [LTR 139, CMT 24]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *The DEIS fails to address the potential expansion of the Whistling Ridge project onto Washington Department of Natural Resources public lands in Klickitat County. The applicant has previously indicated plans to expand the project into Klickitat County, and applied for a lease from DNR to do so. These plans should be evaluated as part of this project, rather than piecemealed for later consideration. [LTR 161, CMT 4]*

**Response**: For the proposed action, the EIS evaluates what has been proposed to the lead agencies by the Applicant, as required by SEPA and NEPA. What has been proposed does not include development of any additional turbines on adjacent DNR land, nor does it include the interconnection of any additional power to the FCRTS. In addition, as discussed in Section 2.3.2 of the EIS, DNR is not interested in allowing development of wind turbines on the adjacent DNR land, regardless of any previously expressed wishes by the Applicant. Given this situation, not only is wind development of DNR land not part of the proposed action, it is also not considered reasonably foreseeable for the purposes of the cumulative impact analysis in the EIS.

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**Comment**: *The DEIS failed to evaluate alternatives to the proposal. SEPA and NEPA require consideration of alternatives. The applicant owns tens of thousands of acres of land, including other sites that would be more appropriate for wind power development than Whistling Ridge. The DEIS must evaluate potential alternatives, including alternative sites as well as alternative turbine layout configurations. [LTR 161, CMT 13]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 163, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DE IS (the proposal and the no-action alternative). This is inadequate. [LTR 165, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 167, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 169, CMT 1]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *SOLAR ENERGY FACILITY. The DEIS discusses only the development of the site for wind energy facilities. The consideration of alternatives should be expanded to consider other alternate energy sources such as solar energy. Recently, a proposal for a 75 MW solar reserve has been made in Kittitas County (the Teamaway Solar Reserve, or "TSR"). The proposal will consist of approximately 145 acres for photovoltaic solar panels spread out over 900 acres. Such a proposal would reduce visual impacts and eliminate the noise impacts associated with wind turbine facilities, as well as eliminating the need for transportation of large towers and blades for wind turbines. This alternative should be fully considered in the DFEIS or FEIS. Thank you for this opportunity to comment on the DEIS. SOSA trusts that the FEIS will provide facts and analysis discussed herein. [LTR 175, CMT 7]*

**Response**: The Applicant has proposed a particular type of energy generation source - wind energy - for the proposed Project. More fundamentally for EIS purposes, the need for action by the lead agencies is to consider an application and request for siting and interconnecting a proposed wind project, not some other type of generation or just renewable energy in general. Consideration of the proposed Teanaway Solar Reserve Project, which is an entirely different project proposed by others, would not be responsive to this need, and therefore is not considered as an alternative in the EIS.

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**Comment**: *Though this project has been under development for some time, the applicant has identified only a range of wind turbine generators which "would likely range in size from 1.2 to 2.5 MW." DEIS at 1-9. However, the larger capacity turbines have larger diameter rotors (up to 100 meters), so it is unknown what the size of the machines would actually be. [LTR 176, CMT 2]*

**Response**: Identification of a range of possible sizes of wind turbines is typical in a siting application for a proposed wind project, since the actual size to be used is not usually identified until the site certificate is issued. In addition, due to the high variability in potential turbine availability and pricing, it is currently unknown what turbines would be available when the Project is ready to be constructed (assuming it is approved), and the specific manufacturer and type of turbine that would be used thus cannot be determined at this stage in the Project review process. The specific manufacturer, type, and size of turbine will be identified at the time the site certificate is issued. However, as indicated in the EIS, it is reasonably expected that the turbines likely would range in size from 1.2- to 2.5-MW each, and would be up to approximately 426 feet from the ground to the turbine blade tip at its highest point. Thus, the EIS includes this turbine size range in its description of the proposed Project. If the 1.2-MW turbine were used, then up to 50 turbines would be installed, while if the 2.5-MW turbine were used, up to 30 would be installed. As discussed in Section 3.9.1.3 of the EIS, the visual impact analysis assumes use of the largest size turbine (2.5 MW) along with the maximum number of turbines (50) in order to assess the maximum envelope of potential visual impacts.

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**Comment**: *A severe deficiency in the EIS is the failure to consider any alternative other than the applicant's minimum 70 MW proposal on its own property. Page 1-13 of the "Alternate*

*Project Locations" includes only sites within the ownership of SDS. On page 1-14, the EIS states that the applicant considered a lesser number of turbines, but rejected such an alternative because it did not fit within SDS's concept of "economic feasibility." The failure to consider either alternate locations or alternate site configurations (with fewer wind turbines) is a fundamental and fatal defect in the DEIS, as was previously pointed out at the public hearing on the document. The responsible official must prepare a supplemental DEIS to address and thoroughly consider reasonable alternatives. This supplemental DEIS should be circulated for comment in the same manner as any DEIS under NEPA/SEPA rules and regulations. [LTR 176, CMT 3]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *The starting point for analysis of the alternative requirement is SEPA itself. RCW 43.21 C.030(1)( c)(iii) makes clear that the "detailed statement" (which is now the environmental impact statement requirement) must consider "alternatives to the proposed action." Alternatives are so important under SEPA that each state agency, including EFSEC, has the responsibility to: Study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources. The details of consideration of alternatives in an EIS is found at WAC 197-11-440(5). Under NEPA Rules, the consideration of alternatives is considered the heart of the EIS: Sec. 1502.14 Alternatives including the proposed action. This section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment (Sec. 1502.15) and the Environmental Consequences (Sec. 1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. In this section agencies shall: (a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated. (b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits. (c) Include reasonable alternatives not within the jurisdiction of the lead agency. (d) Include the alternative of no action. (e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference. (f) Include appropriate mitigation measures not already included in the proposed action or alternatives. As noted above, based on the applicant's own opinion of financial feasibility, the DEIS has not considered other alternatives; a position which appears to be unquestioned by the drafters of the DEIS. However, the applicant has not provided any information on financial feasibility and cannot so stricture and limit its proposal to avoid alternatives. [LTR 176, CMT 5]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *It appears that the applicant asserts, and EFSEC and BPA concur, that the proposal is for a private project on private property. See 197-11-440(5)(d). This exemption*

*does not apply if the project includes a rezone or: if other locations for the type of proposed use have not been included or considered in existing planning or zoning documents. The portion of the DEIS addressing land use regulation does not disclose that wind turbines were ever included or considered in planning documents adopted in Skamania County. See DEIS at pages 3-140 to 3-155. [LTR 176, CMT 5]*

**Response**: A Private Project, as defined in the SEPA Rules WAC 197-11-780, means any proposal primarily initiated or sponsored by an individual or entity other than an agency. The proposed Whistling Ridge Project meets this definition and is being reviewed as a private project. EFSEC believes the Applicant adequately considered alternatives to the proposed action, including alternative project locations, larger or smaller generation facilities, alternative wind generation technologies, alternative project configurations, and alternative interconnections, in Section 2.3 of the DEIS.

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**Comment**: *The failure of the DEIS to consider alternatives is a fatal flaw for several reasons. First, there are serious issues as to whether the proposal is consistent with local zoning. While the DEIS seems to claim that the project is consistent with Skamania County's comprehensive plan and zoning code, there are many reasons to believe it is not. On May 6, 2009 SOSA filed a lengthy letter directed to both Skamania County and EFSEC challenging the consistency of the proposal with local zoning. Among other matters, that letter pointed out that wind turbines or wind farms are not listed as permitted uses in the Skamania County Zoning Ordinance or in the 2007 Skamania County Comprehensive plan. The latter conclusion is confirmed by decision of the Skamania County Hearing Examiner made in February 2009 in a SEPA challenge to a determination of non-significance for adoption of a new zoning ordinance for Skamania County, which ordinance proposed regulating wind turbine development. Questions arose during the course of that hearing regarding whether the 2007 Skamania County Comprehensive Plan actually permitted or considered wind energy facilities. In her decision, the Hearing Examiner found as follows: The 2007 Comprehensive Plan does not contemplate the type of energy facilities described in the Planning Commission Recommended Draft. See Findings and Decision, Finding 18 at page 8. The Hearing Examiner went on to rule that Skamania County was required to prepare an environmental impact statement prior to the adoption of its new zoning ordinance. Skamania County has never prepared the environmental impact statement ordered by the Examiner and the proposed zoning ordinance was not adopted. Since Skamania County has adopted a zoning ordinance that does not provide for wind energy facilities, and its comprehensive plan does not contemplate such facilities, the exception in the SEPA Rules does not apply. Either WRE must apply for a rezone (which it has not) or EFSEC must preempt local zoning. The preemption decision by EFSEC would be the functional equivalent of a rezone because it provides approval for a previously unpermitted use. In fact, EFSEC must make a determination of land use consistency and held a hearing on that subject on May 6, 2010. However, EFSEC did not make a decision on land use consistency at that time and has deferred such decision to be made in the course of the adjudicative hearings. The consistency of the proposed project with local zoning has yet to be determined. The responsible official under SEPA, the EFSEC manager, accordingly cannot determine whether the WRE project is consistent with local zoning. If it is not, the Council may preempt local zoning, which would be*

*the functional equivalent of a rezone for the project. Alternatives must accordingly be fully considered. [LTR 176, CMT 6]*

**Response**: Please see response to Comment LTR 176, CMT 5 above.

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**Comment**: *Second, the proposal is not a private project within the meaning of the SEPA Rules. This issue was previously considered in a Washington Supreme Court decision: Under the present statutes and administrative code, the question now before the court as to whether the EIS is adequate turns on whether the proposed project is a "public project" or a "private project." It is unnecessary in this case to determine whether the "public"/ "private" distinction drawn in the administrative code accords with SEPA policy. We recognize that one commentator has suggested that in certain cases, the distinction may be unsound. See Richard L. Settle, The Washington State Environmental Policy Act: A Legal and Policy Analysis § 14(b )(ii) (4th ed. 1993). WAC 197-11-440(5)(d) provides in relevant part: When a proposal is for a private project on a specific site, the lead agency shall be required to evaluate only the no action alternative plus other reasonable alternatives for achieving the proposal's objective on the same site… A "private project" is defined in WAC 197-11-780: "'Private project' means any proposal primarily initiated or sponsored by an individual or entity other than an agency." Weyerhaeuser v. Pierce County, 124 Wn. 2d 26, 38-39, 873 P.2d 498, 505 (1994). The project in Weyerhaeuser was a land fill proposed by a private applicant on private property. However, the court concluded it was a public project because of the close relationship between the county actions and the supposedly private project. The court went on to hold: We agree with the Weyerhaeusers that, as a matter of law, the proposed landfill is a public project, and the EIS must contain a sufficient discussion of offsite alternative proposals. Because it does not do so, it is inadequate as a matter of law. The WRE project is similarly public for several reasons. First, the DEIS contains extensive discussion as to need for electric power to meet public needs for the region. See DEIS pages 1-4 to 1-7. This is clear in the DEIS at page 1-4: "The Applicant's purpose in proposing the Whistling Ridge Energy Project is to help meet the future need for energy resources." SDS also seeks to provide an additional renewable resource for electric utilities in Washington. Second, this project has been referenced by its proponents as a "semi-public" facility under the Skamania County zoning ordinance. See DEIS at page 3-147 to 149. The WRE proposal is not exempt from alternatives analysis under SEPA or NEPA as it must be classified as a public facility. [LTR 176, CMT 7]*

**Response**: Please see response to Comment LTR 176, CMT 5 above.

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**Comment**: *Seventh, in examining alternatives, the draft needs to compare the impacts of developing the proposed project with other alternate sources of wind energy being developed within the jurisdiction of EFSEC. There are serious impacts related to the WRE proposal based largely on its location. The Underwood location will have serious visual and aesthetic impacts to extremely valuable and unique scenic resources found in the Columbia River Gorge, where because of its elevation the project will be seen by many persons over a broad area. Further, this forested location increases substantially the risks of bird and bat collisions with the turbine*

*blades. Other environmental impacts are of concern because of the location of the turbines on steep ridgelines, which may restrict options for micrositing and increase impacts due to road building. This location should be compared with other possible sites, especially in southeast Washington where wind turbines are located away from populated areas and have lesser risk for bird or bat collisions. [LTR 176, CMT 14]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *Eighth, the section on alternatives in SEPA explicitly calls for an analysis of the alternative of future development of the proposal under WAC 197-11-440(5)(c) where the alternatives section of the EIS includes obligation to: (vii) Discuss the benefits and disadvantages of reserving for some future time the implementation of the proposal, as compared with possible approval at this time. The agency perspective should be that each generation is, in effect, a trustee of the environment for succeeding generations. Particular attention should be given to the possibility of foreclosing future options by implementing the proposal. For the present application, the DE IS must discuss the alternative of delaying the implementation of the WR proposal. In light of visual impacts, bird and bat kills and other serious impacts of the WR proposal, the DEIS should discuss the option of reserving the WRE project until such time as projects with lesser impacts have been permitted and constructed. The DE IS should accordingly discuss potential wind turbine sites, including those permitted, those under application, and those in areas where new applications are likely, for example, where land commitments in the form of leases are made by property owners to wind turbine developers. [LTR 176, CMT 15]*

**Response**: Neither SEPA nor NEPA require that the option of merely delaying implementation of a proposed project be treated as an entirely separate and distinct alternative in an EIS. As noted in the comments, SEPA does require consideration of the benefits and disadvantages of delaying a proposed project in an EIS. Accordingly, this consideration has been included in Section 2.4 of the EIS. The lead agencies believe that this section provides a fair discussion of the benefits and disadvantages of delaying this proposed Project. Nonetheless, Section 2.4 of the EIS has been revised to better reflect that some of the identified disadvantages would be a delayed rather than entirely prevented.

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**Comment**: *Ninth, the proposed project requires an interconnection with the BPA transmission line together with the construction of a substation. That is clearly a public project, not a private project, and thus alternatives must be fully considered. As related to the substation it is understood that the BPA substation must be built with capacity to receive additional electric energy for interconnection with the FCRTS. Thus, the EIS must consider whether the BPA substation will act as an attraction for other energy projects to locate nearby. In this regard, SOSA notes that a natural gas pipeline traverses the north portion of the project area. See DEIS, Figure 2-3. In the recent past, the land owner SDS has promoted plans for a gas turbine for electrical generation in this area. The EIS must consider the possibility of a gas turbine project in the area, especially one that may have enhanced financial feasibility because of the*

*proximity to both a fuel source (the gas pipeline) and a substation to connect that energy to the FCRTS. Given the need for balancing resources for VERs like WR, location of such a facility nearby appears more likely. Accordingly, the EIS must consider the impacts of such a gas turbine facility, including air emissions, noise, wildlife impacts and other impacts common to these facilities. [LTR 176, CMT 16]*

**Response**: Please see response to Comment LTR 176, CMT 5 above.

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**Comment**: *Tenth, while SEPA contains the public v. private distinction, NEPA and the NEPA Guidelines contain no such exception. Since this DEIS is to meet NEPA requirements, there must be a full exploration of available alternatives under the terms of both NEPA and SEPA rules. As cited above, the NEPA Guidelines require consideration of alternatives even though they may not be within the agency's jurisdiction. Given the importance of alternatives analysis under both NEPA and SEPA, the failure of EFSEC and BPA to do this analysis now may mean that upcoming processes will have to be repeated should a court determine that the procedure adopted is illegal, resulting in a huge waste of time and resources of all involved. [LTR 176, CMT 18]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *In summary, the failure of the DEIS to discuss reasonable alternatives is a fatal flaw in that document. EFSEC and BPA should immediately withdraw the noncompliant DEIS and prepare a supplemental DEIS that considers all reasonable alternatives, not just those identified in this letter. The supplemental DEIS should be circulated for comment as required for any DEIS and no work on the final EIS should begin until all comments are in for the supplement. [LTR 176, CMT 19]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The FEIS should also be expanded to consider the Middle Mountain Project, which is only 12 miles from the proposed project site, as an alternative wind generation site. [LTR 177, CMT 9]*

**Response**: The EIS addresses the need for the lead agencies to respond to an application and request by the applicant for a proposed wind project to be developed by the Applicant. Consideration of the Middle Mountain Wind Project, which is an entirely different project that has been proposed by Hood River County, Oregon would not be responsive to this need, and therefore is not considered as an alternative in the EIS. While the Middle Mountain Wind Project was included in the DEIS cumulative impact analysis, Section 1.8.1.2 in the FEIS has been revised to explain that the Hood River County Commission decided to cease efforts to pursue the Middle Mountain project (around 10 MW) at its meeting on May 17, 2010.

**Comment**: *[In reference to DEIS Section] 2.0, Proposed Action and Alternatives, [Section] 2.1, PROPOSED ACTION, [Section] 2.1.2, Project Overview, Table 2-1: [p]ermanent disturbance areas should include the permanent parking areas adjacent to each turbine that will be necessary to conduct turbine repairs and maintenance. Also there appears to be some inconsistency in the road width used to determine the impact area outside the project. [In Section] 2.1.3.7, Access Roads, [n]either the Application nor the DEIS include a description of parking areas that will have to be maintained adjacent to each turbine for construction and maintenance purposes. The space consumed by these parking areas should also be included in the calculations for permanently disturbed environment. [LTR 177, CMT 17]*

**Response**: The areas of disturbance for maintenance vehicle parking and turnarounds is included in the temporary and permanent disturbance acreage for Turbine String Corridor listed in Table 2-1 on page 2-4 of the DEIS. Regarding the width of access roads outside the Project Area, page 2-8 and page 3-215 of the DEIS both state the existing width of West Pit Road is 20 to 26 feet. Portions of approximately 2.5 miles of West Pit Road would be widened to create a drivable surface of 25 feet with 5 feet of additional clearing on each side.

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**Comment**: *[In reference to DEIS Section] 2.3.6, Alternative Access Roads, [please refer to earlier] comments in response to Section 1.4.3.6, Alternative Access Roads. [LTR 177, CMT 17]*

**Response**: Use of CG 2930 was evaluated in the original Application for Site Certification as "Route 2." This route would have connected the site to Cook-Underwood Road via Kollock-Knapp Road, Scoggins Road and CG2930. CG2930 is a private logging road that crosses property owned by the Applicant and is currently used for commercial timber production and harvest. As described in Section 2.3.6 on DEIS page 2-23, use of Route 2 would require minor roadway improvements that would not directly impact any non-Project landowners. However, these roadway improvements would require construction within the National Scenic Area. Therefore, Route 2 was eliminated as a construction roadway access alternative purpose and need for proposed action, or clearly greater environmental impacts.

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**Comment**: *[In reference to DEIS Section] 2.1.4.1, Construction, [t]he size and location of proposed laydown areas should be disclosed and evaluated in the FEIS. The size and location of permanent parking lots next to each turbine should be included and evaluated in the FEIS. This section should include a discussion regarding how concrete will be transported to the construction site. If a concrete batch plant is going to be used, its size and location should be disclosed in the FEIS. If concrete is going to be transported to the site, information regarding the trucking route and potential environmental impacts (air pollution, traffic, etc.) should be disclosed and evaluated in the FEIS. [In reference to Section] 2.1.6, Forest Harvest, [d]uring Project Construction and Operation Mitigation measures for construction of the project should include off-site mitigation for permanently disturbed or cleared areas that would constitute "forest conversions." This would include turbine parking areas and any permanent laydown area at the site. [LTR 177, CMT 18]*

**Response**: The areas of disturbance for temporary laydown areas and maintenance vehicle parking and turnarounds was included in the temporary and permanent disturbance acreage for "Turbine String Corridor" listed in Table 2-1 on page 2-4 of the DEIS. These Project features would be located within the 650-foot wide micrositing corridor. As stated in Section 3.8.5 (DEIS, Page 3-155) the 1,152-acre Project Area would continue to be predominantly used for commercial forestry operations. A maximum of approximately 56 acres of forestry land (under 5 percent of the Project Area) would be converted to energy facility use for the life of the Project. This conversion would not constitute a substantial change to area land use patterns given the area of the Project retained for active forestry operations, and given the acreage surrounding the Project in both private and state ownership that will be maintained in commercial forestry operations. As described in Section 2.14.3 of the Application for Site Certification, the use of on-site batch plants are under consideration. However, if concrete needs to be transported to the site, concrete trucks would use the same haul routes used to transport the large turbine components. See Section 1.4.1.6 of the EIS for a description of the proposed haul route

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**Comment**: *[In reference to DEIS Section] 2.1.7, Project Decommissioning, [t]he Applicant has indicated that the life of the project is expected to be 30 years, at which time the project will either be upgraded ("re-powered") or decommissioned. If the current project receives EFSEC approval, any proposal to "re-power" the project or extend operation of the project beyond its anticipated life span should be reviewed by EFSEC as an amendment to the Site Certification Agreement. Such review should require an updated evaluation and assessment of the environmental impacts posed by the upgrade or extended life of the project. [LTR 177, CMT 19]*

**Response**: Section 2.1.7 of the EIS includes information concerning potential future decommissioning and site restoration that is reasonably foreseeable at this time. Given that these activities would occur 30 or more years into the future, it is not currently known what types of technologies or techniques would be available at that time to best accomplish decommissioning and site restoration. Any specific plan developed at this time thus would be not only speculative, but also could be viewed as limiting these activities to only currently available technologies and techniques. As discussed further in Section 2.1.7, any future decommissioning and site restoration would be conducted in accordance with applicable state laws, which would include an assessment of potential impacts from these activities. To the extent that EFSEC has authority over possible actions taken to "re-power" the Project in the future, these actions also would be subject to appropriate environmental review.

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**Comment**: *[In reference to DEIS Section] 2.4, BENEFITS AND DISADVANTAGES OF DELAYING PROJECT IMPLEMENTATION. This section summarizes the benefits and disadvantages that will result from delaying the project. It is drafted, however, in a way that minimizes the benefits and over-exaggerates the disadvantages of delay. For example, statements to the effect that a delay will prevent the creation of new construction jobs are simply not accurate. A delay in constructing the project will result in a delay in the creation of new construction jobs, just as a delay in constructing the project will delay visual impacts from the project. [LTR 177, CMT 22]*

**Response**: Please see response to Comment LTR 176, CMT 15 above.

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**Comment**: *[In reference to Section] 2.5, COMPARISON OF ALTERNATIVES. Government action or inaction is not the only possible reason that the project will not be built. For the reasons discussed earlier, assertions that the No Action Alternative will only arise if EFSEC or BPA deny approval of the project should be redacted. [LTR 177, CMT 23]*

**Response**: Comment noted. It is acknowledged that many factors could result in the Project not being built, and nothing in the EIS is intended to indicate that project disapproval by the lead agencies - EFSEC and BPA - would be the only reason the Project may not be built. Nonetheless, for the purposes of defining the No Action alternative in the EIS, the key consideration is what the result would be if the either or both of the lead agencies decide not to approve the proposed project. Thus, the EIS references the No Action alternative in this manner

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**Comment**: *As discussed above, the DEIS should be expanded to include off site and on site alternatives. Without these additional alternatives, the comparison of the limited alternatives set forth in Table 2-5 is of questionable value for purposes of conducting meaningful environmental impact analysis under NEPA and SEPA. [This expansion of off-site and on-site alternatives should be expanded to Section] 3.0, Affected Environment, Impacts and Mitigation, [where g]enerally, discussions in this section should be expanded to include off site and on site alternatives. [LTR 177, CMT 23]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *Applicant-owned land that contained high ridges on which to place wind turbines with little impact to the continued underlying use of the land for commercial forestry. Applicant states in DEIS that commercial forestry would cease for the life of the Project. Plus, why are high ridges mutually exclusive for wind, this is not true for most all Projects in Eastern WA and OR. Note: this citation is one of 3 KEY criteria for establishing a site. It is flawed in logic, and will bias the conclusion that only the proposed site is feasible. Remedy - The Alternatives analysis must be redone with the criteria removing the requirement of placement on a high ridge, as this artificially excludes viable lands. Remove the limitation of placement only in areas used for commercial forestry. [LTR 178, CMT 40]*

**Response**: The requirement for high ridges for the Project is a product of the topography in the Project Area and surrounding area. This topography generally consists of relatively sharp ridges and valleys, as compared to the more rolling hills and landscape of eastern Washington and Oregon. In general, wind blows more frequently and strongly at the top of the ridges in the Project vicinity, rather than in the valleys. Thus, in order to be able to utilize this wind resource, turbines would need to be location generally on the ridges. The discussion concerning

commercial forestry is intended to reflect the desire not to unduly interfere with land that is currently in that use.

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**Comment**: *[In reference to] Section 2.3, [t]he project must be located in an area with a steady supply of robust wind power, and on a site on which construction can reasonably occur (no significant geotechnical constraints). Both terms "steady" and "robust" have not been substantiated with independent data, or data from the Applicant. (i.e. met tower data in velocity, durations, 3-Dimensional directions). The DEIS does not even demonstrate that the "preferred" alternative meets these criteria. Remedy - 1) Quantify the terms "steady" and "robust." 2) Support the "preferred" alternative with data compared to item 1 above. 3) Evaluate other alternatives against the standards established in item 1 above. [LTR 178, CMT 63]*

**Response**: The purpose of the EIS that has been prepared is to evaluate the potential environmental impacts that could occur from the lead agencies' actions concerning the proposed Project, not to require financial or resource justification for the proposed Project itself. In other words, neither SEPA nor NEPA require that an EIS prove or validate the applicant's business case for its proposal.

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**Comment**: *[In reference to] Section 2.3, [t]he project must be located in an area with a steady supply of robust wind power, and on a site on which construction can reasonably occur (no significant geotechnical constraints). The micrositing corridor for proposed Turbines A1-7 averages ONLY 170 feet wide, before entering into Landslide Hazard Area (LHA) Class II. The URS report (DEIS at Appendix B) states no Turbines will be sited on LHA Class II (or I, implied) soils. With a Foundation diameter of 60 feet (typ.) there is very limited ability to site these machines. The Applicant's "preferred" alternative does not even qualify for consideration, according to their own standards. Remedy - Since no other alternatives have been offered, other than the No Action alternative, one or two other Alternatives must be added to compare the reasonableness of construction from a geotechnical perspective. [LTR 178, CMT 65]*

**Response**: The Applicant believes, and the lead agencies agree, that based on available geotechnical information, the Project as proposed can be sited to avoid significant geological hazards. Additional alternatives related to geotechnical constraints thus are not necessary.

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**Comment**: *[In reference to] Section 2.3, [t]o reduce startup costs, the project must be located on land the Applicant owns and controls, and land that can serve a dual purpose of commercial forestry and power production. Generally speaking, most Land Lease agreements are based more on output, than on fixed rates, and they may or may not include up front costs. These are an insignificantly low percentage of the construction costs (read "startup costs") that this argument can only speak to the marginal economic viability of this project. As for land that can serve a dual purpose of revenue generation over the life of the project, similar to wheat farming, this has NOTHING to do with STARTUP COSTS. These are self serving, self-imposed*

*constraints, designed to artificially restrict consideration of any other alternative. Remedy - Disclose financial justification of how these particular startup costs materially effects project viability, or remove that as a "constraint" in evaluating Alternatives. [LTR 187, CMT 66]*

**Response**: The purpose of the EIS that has been prepared is to evaluate the potential environmental impacts that could occur from the lead agencies' actions concerning the proposed Project, not to require financial or resource justification for the proposed Project itself. In other words, neither SEPA nor NEPA require that an EIS prove or validate the applicant's business case for its proposal.

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**Comment**: *[In reference to] Section 2.3, [in order t]o enable the power to reach urban markets and eliminate the cost and time required to construct new transmission lines, the project must be located in proximity to existing high-voltage transmission lines. Proximity to existing high-voltage transmission lines is PURELY a matter of economics, and has nothing to do with power reaching urban markets. Remedy - Restate the "constraint" to incorporate the additional costs, due to this factor, into the potential viability of other alternatives. Such that the economic viability of WRE has a certain savings over Alternative B, C, and D, for example. [LTR 178, CMT 67]*

**Response**: For further discussion of the Project's purpose and need and alternatives, see Section 1.2.3.

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**Comment**: *General Comment on DEIS. BPA yard size of 4+ acres invites and encourages future growth, which must be evaluated now. Remedy - BPA must, or the DEIS must, identify the minimum size of land needed to house a 75 Megawatt Substation, and only permit, purchase, and develop such a BPA Facility, if the proposed WRE project is approved. Any larger size of land or power capacity would trigger additional review requirements for WRE Application in the BPA NEPA process. [LTR 178, CMT 133]*

**Response**: The proposed BPA substation to interconnect the proposed Project is sized to accommodate only the interconnection of this Project. Interconnection of other generation projects at this substation is not envisioned or planned at this time. Nonetheless, if any proposal materializes at some future time for a potential generation interconnection at this substation, and if such a proposal appears feasible from a technical and operational standpoint, BPA would consider such a proposal and would conduct appropriate NEPA review of the proposal at that time.

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**Comment**: *As in the National Parks & Conservation Association case, the private economic interests of the Applicant are the driving force behind the purpose and need statement, and thus behind the entire DEIS. The narrowly drawn statement unreasonably constrains the possible range of alternatives, because it excludes alternatives that fail to meet the Applicant's specific private objectives, which are to build a wind energy project. The result of such a narrowly*

*driven statement led to only two alternatives to be considered: the proposed action (authorizing construction and operation of the proposed Whistling Ridge Entergy Project and associated components) and the No Action Alternative (not authorizing construction and operation of the proposed project). This extremely narrow range of alternatives is unreasonable, and thus, violates NEPA. [LTR 179, CMT 18]*

**Response**: EFSEC and BPA have identified their respective need for action in a manner entirely consistent with SEPA and NEPA. As discussed in Section 1.2.1 of the EIS, EFSEC's need for action is to respond to an application by WRE for a site certificate. As discussed in Section 1.2.2 of the EIS, BPA's need for action is to respond to WRE's request for an interconnection of its proposed Project to the Federal Columbia River Transmission System (FCRTS). Each agency also has separate purposes (i.e., objectives) that it will bear in mind and attempt to meet in reviewing and making a decision on the Project. Given the agencies' need for action in this case (i.e., to approve or deny an application and request), the range of alternatives considered in detail in the EIS is not unreasonable. In addition, the agencies considered a number of other alternatives but eliminated those alternatives from detailed study in the EIS, as discussed in Section 2.3.

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**Comment**: *The Range of Alternatives Considered is Inadequate. The DEIS discusses only the Proposed Action Alternative (the proposed project) and the No Action Alternative. Such a truncated alternatives analysis violates the agencies' duties under NEPA and SEPA to fully review all reasonable alternatives. "The purpose of NEPA is to require disclosure of relevant environmental considerations that were given a 'hard look' by the agency, and thereby to permit informed public comment on proposed action and any choices or alternatives that might be pursued with less environmental harm." Te-Moak Tribe of Western Shoshone of Nevada v. United States Dep't of the Interior, ---F.3d ---, 2010 WL 2431001 (9th Cir. 2010) (quoting Lands Council v. Powell, 395 F.3d 1019, 1027 (9th Cir.2005)); see also 42 U.S.C. § 4332(E) (requiring agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources"). Agencies are required to consider alternatives in an EIS and must give full and meaningful consideration to all reasonable alternatives. Id.; see also 40 C.F.R. § 1508.9(b). "The existence of a viable but unexamined alternative renders an environmental impact statement inadequate." Id. (citing Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir.1992) (quoting Citizens for a Better Henderson v. Hodel, 768 F.2d 1051, 1057 (9th Cir.1985)). SEPA also requires an EIS to evaluate alternatives. RCW 43.21C.030(2)(c)(i). The applicable guidelines are found at WAC 197-11-440(5). An alternative considered for purposes of an EIS need not be certain or uncontested, it must only be reasonable. King County v. Central Puget Sound Growth Management Hearings Bd. 138 Wn.2d 161, 184-85, 979 P.2d 374, 385 (1999). A reasonable alternative is one that could feasibly attain or approximate a proposal's objectives at a lower cost to the environment. Id.; see also WAC 197-11-440(5)(b). According to the applicable federal regulations, an EIS "shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1. CEQ clarified the meaning of this requirement in its "Forty Most Asked Questions" policy guidance by defining "reasonable alternatives" as including "those that are practical or feasible from the*

*technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026 (Mar. 23, 1981) (emphasis in original). When selecting alternatives, an agency may consider an applicant's desires, but is not by any means bound or limited by them. It is not appropriate for an agency to rely on the "self serving statements of the project applicants." Southern Utah Wilderness Alliance v. Norton, 237 F. Supp. 2d 48, 53 (D.D.C. 2002). Instead, the action agency must "to the fullest extent possible ... study, develop and describe appropriate alternatives to recommended courses of action in any proposal which includes unresolved conflicts concerning alternative uses of available resources." Id. at 54 (citing 42 U.S.C. § 4332(2)(E)). Moreover, "[o]ther factors [other than the applicant's desires] to be developed during the scoping process - comments received from the public, other government agencies and institutions, and development of the agency's own environmental data - should certainly be incorporated into the decision of which alternatives to seriously evaluate in the EIS." CEQ, Guidance Regarding NEPA Regulations, 48 Fed. Reg. 34,263, 34,267 (July 28, 1983). [LTR 179, CMT 20]*

**Response:** Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *Again, the DEIS analyzes the impacts of only two alternatives: 1) the proposed project, and 2) the no action alternative. These options advance the Applicant's goals, rather than the agencies' goals, to the exclusion of other reasonable alternatives. The DEIS is fatally flawed in its failure to consider an adequate range of reasonable alternatives. See Muckleshoot Indian Tribe v. USFS, 177 F.3d 800, 913 (9th Cir. 1999) (agency failed to consider an adequate range of alternatives when an EIS considered only a no action alternative along with two "virtually identical" action alternatives). [LTR 179, CMT 21]*

**Response:** Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *Various other alternatives should have been considered. First, at page 1-13 of the DEIS, the BPA did not consider any alternate locations for the wind turbine project other than those owned by the Applicant. Likewise, alternatives for interconnecting the wind project with transmission lines off of the project site were eliminated. Indeed, under NEPA, the EIS may even have to look at alternatives over which the applicant has no control. NRDC v. Morton, 458 F.2d 827, 835 (D.C. Cir. 1972); NWF v. NMFS, 235 F. Supp.2d 1143 (W.D. Wash. 2002). Further, it is irrelevant whether an applicant already owns alternative sites for the purposes of NEPA review: "The fact that this applicant does not now own an alternative site is only marginally relevant (if it is relevant at all) to whether feasible alternatives exist to the applicant's proposal." Van Abbema v. Fornell, 807 F.2d 633, 638 (7th Cir. 1986). As stated in the Van Abbema case, other alternatives for a project cannot be eliminated as non-feasible simply because the Applicant does not now own the site where an alternative location may exist. Here, SDS and Broughton Lumber own tens of thousands of acres of land in Oregon and Washington that could potentially be available for energy production purposes. The EIS fails to consider those lands, and fails to consider the possibility of applicant purchasing lands in other*

*locations, such as east of the National Scenic Area, for an energy facility. Similarly, SEPA also requires a discussion of alternate development sites for a proposed project in order to have an adequate discussion of reasonable alternatives. See Barrie v. Kitsap County, 93 Wn.2d 843, 855, 613 P.2d 11481155 (1980) (EIS was inadequate because it looked only at the use of the applicant's private property for siting a shopping center, and failed to discuss alternative development sites). Here, alternate locations could provide comparable energy output. This approach would be consistent with the BPA stated goals of acting consistently with its environmental and social responsibilities and providing for cost and administrative efficiency. Surely other sites with far less impacts could easily be located. Not far to the east of this project site, thousands of wind turbines have been constructed recently, the vast majority of which pose far less resource impacts than the Whistling Ridge site. [LTR 179, CMT 22]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *Another potential site is immediately north of the proposed project site, on DNR lands. In fact, this property has been designated by WRE as "Phase 2" of the Whistling Ridge project. Although DNR has indefinitely placed on hold consideration of WRE's request for a wind power lease of this property, that does not mean use of the property is forever out of the question. In fact, recent emails by WRE representatives, obtained by Skamania County residents Keith Brown and Teresa Robbins in response to a public records request, indicate that WRE still wishes to use the DNR property for wind energy. The DEIS fails to analyze the possibility of siting wind turbines on this property rather than on the SDS and Broughton Lumber land. Second, the BPA did not consider alternate configurations (with fewer wind turbines and/or in different locations) for the project. [LTR 179, CMT 23]*

**Response:** Please see response to Comment LTR 161, CMT 4 above.

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**Comment**: *On page 1-14, the DEIS states that "the project must be capable of producing a minimum of 70 MW" and that the project size "was selected to optimize . . . economic feasibility" (emphasis added). There are no financial data or projections provided to support this claim. Moreover, the agencies eliminated any alternatives that would have considered a smaller generation facility, for instance in order to address potential environmental impacts, solely in an effort to "optimize"2 [Footnote 2: The Webster's Dictionary definition of "optimize" is "to make as effective, perfect, or useful as possible."] the applicant's economic wishes. Nor did the agency consider alternative locations for individual turbines that would reduce their impacts. This approach is unlawful and violates the agencies' legal mandates. [LTR 179, CMT 24]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *Fourth, no conservation alternatives were considered to eliminate the stated "need" for this 70 MW of installed capacity. Conservation alternatives, such as demand response technologies, also should have been included in order to meet the agencies' goals of promoting their environmental and social responsibilities. [LTR 179, CMT 26]*

**Response**: Please see response to Comment LTR 33, CMT 6 above.

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**Comment**: *Fifth, another reasonable alternative is one that analyzes and considers the future development of the proposal. WAC 197-11-440(5)(c) states that the EIS shall: (vii) Discuss the benefits and disadvantages of reserving for some future time the implementation of the proposal, as compared with possible approval at this time. The agency perspective should be that each generation is, in effect, a trustee of the environment for succeeding generations. Particular attention should be given to the possibility of foreclosing future options by implementing the proposal. The DEIS fails to comply with this requirement, because it fails to consider the possibility of delaying the development of wind energy until a later date, perhaps at a time when the energy grid will be more equipped to handle the addition of new wind energy sources. [LTR 179, CMT 27]*

**Response**: Please see response to Comment LTR 176, CMT 15 above.

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**Comment**: *The above alternatives were either eliminated from the study, or not considered at all, because the Applicant's economic needs, rather than the stated goals of the agencies, dictated the results of this DEIS. In effect, the agencies are violating their duties to consider all reasonable alternatives. [LTR 179, CMT 28]*

**Response**: Please see response to Comment LTR 179, CMT 18 above.

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**Comment**: *Third, what turbines will be used and how large will they be? The scale of commercial turbines continues to increase year by year. Taller turbines than the ones depicted would be even more visible and higher contrast. [LTR 180, CMT 27]*

**Response**: Please see response to Comment LTR 176, CMT 2 above.

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**Comment**: *We respectfully request that the DEIS and the Final EIS include consideration of the following alternatives which are absent or rejected in the DEIS: 1. Resiting of the seven most southerly "A Towers" (A1-A7) to a location within the proposed site that mitigates negative impacts; 2. Use of towers across the project with greater megawatt per tower ratings that will allow for the elimination of Towers A1-A7 with minimal impact on the proponents total megawatt output target of 75 MW; 3. Use of low profile towers across the project, and in*

*particular at tower locations A1-7 to minimize negative impacts; 4. Elimination of towers A1-A7 through micro-siting across the project as a whole; 5. Elimination of towers A1-A7 to mitigate negative impacts. Such alternatives should be considered in the DEIS and the Final EIS to mitigate negative impacts based on the following five facts: 1. That tourism is the life blood of Skamania County and all communities throughout the Columbia River Gorge; 2. That Agri-Tourism is the present day driver of tourism in the famous Hood River Valley and that Underwood is well on its way to duplicating that economic success in Eastern Skamania County; 3. That Underwood's historic transformation from pear orchards to Agri-Tourism and to one of the premier wine producing regions in the world has enormous present-day socio-economic value; 4. That the very real present-day economic value of Underwood Agri-Tourism, as well as its future potential, would be severely impacted by the seven "A Towers" as currently sited; and finally 5. That this Council has the authority and responsibility to put the reins on this project by requiring the responsible re-siting or elimination of the seven "A Towers"; towers that will otherwise dominate the skyline and become Underwood's new "calling card." As we detail in our written comments, failure to re-site the seven "A Towers" would improperly force the blossoming Underwood Agri-Tourism industry to bear a disproportionate share of the negative environmental and socioeconomic impacts of this project in violation of WAC 463-60-085. Such a result is prohibited by WAC 463-47-110 which states that "[t]he overriding policy of the council is to avoid or mitigate adverse environmental impacts which may result from the council's decisions." [LTR 186, CMT 3]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *For the reasons set forth above, we respectfully request that the DEIS and the Final EIS include consideration of the following alternatives which are absent or rejected in the DEIS: 1. Resiting of the seven most southerly "A Towers" (A1-A7) to a location within the proposed site that mitigates negative impacts; 2. Use of towers across the project with greater megawatt per tower ratings that will allow for the elimination of Towers A1-A7 with minimal impact on the proponents total megawatt output target of 75 MW; 3. Use of low profile towers across the project, and in particular at tower locations A1-7 to minimize negative impacts; 4. Elimination of towers A1-A7 through micro-siting across the project as a whole; and 5. Elimination of towers A1-A7 to mitigate negative impacts. [LTR 186, CMT 18]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *The Meteorological Towers should neither be a basic design nor a lattice design. The Meteorological Towers should utitilize a Tubular towers; pursuant to the same justification for turbine towers. Construction of a Tubular Meteorological Tower may require a Custom design, in that the top of the tower would have to be adapted to support the equipment it supports. [LTR 193, CMT 3]*

**Response**: We believe that the commenter is assuming that there might be some avian issues associated with lattice met towers as there were associated with lattice turbines towers in the

past. This is not the case. First, the permanent lattice met towers are smaller in diameter than the lattice towers that historically were used for wind turbines. Second, these permanent lattice met towers in the vicinity of the Project would provide no greater perching potential for birds than existing trees in the vicinity of the Project. Industry standard practice is to use lattice met towers because they do not require multiple guy wires for support. Tubular towers are available for use, but they would require nine or more guy wires to support them from blowing down and require frequent tightening and maintenance. In the case of the forested Whistling Ridge site, if tubular towers were used with guy wires it will increase the amount of cleared area that would be required for the Project because trees cannot be allowed to grow in a large radius around the met tower. The cleared area is necessary to prevent tree interference with the guy wires. Lastly, permanent lattice met towers would be located in the Project vicinity but not immediately adjacent to the wind turbines or in a location where they can cause interference or cause an elevated risk of avian strikes.

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**Comment**: *Please reconsider other SDS properties to post wind towers. The ridges east of White Salmon are preferable, but frankly, all towers should be east of Lyle. Thank you for your time and consideration. [LTR 210, CMT 3]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *However, I do feel that if the project managers can make some minor modifications to number or exact location of the towers to accommodate specific complaints of the local residents, they should do their best. [LTR 212, CMT 4]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *If you allow these towers on the rim of the Gorge, you are setting a precedent in the Gorge. On what grounds could you deny any others near the Gorge? This will lead to all the rims of the Gorge, at least on the WA side, being lines with towers, since the wind is good everywhere. In turn, that may break down the objections to towers on the OR side. [LTR 262, CMT 1]*

**Response**: It is unclear at this time whether approval of the proposed Project would set a precedent for siting other wind projects in the area. Since all projects are evaluated on a case-by-case basis, approval of this Project does not dictate that any other Project that may be proposed in the future would also be approved. In addition, most developers are aware of the challenges of attempting to site wind projects in this general area. For the Applicant, proposing a wind project in this area may make sense, but other wind project developers may have differing opinions. Nonetheless, because there are no current proposals for other wind projects in the area; such future development is considered too speculative at this time.

**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 266, CMT 2]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 267, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I would add that coordination with the general public seems deficient, and this critical purpose of NEPA has thereby fallen short. Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 267, CMT 3]*

**Response**: BPA and EFSEC initially allowed a 45-day public review and comment period for the Draft EIS, which is consistent with NEPA and SEPA regulations for allowing adequate time for DEIS review and comment. In order to further facilitate public involvement however, the lead agencies agreed to extend the end of the original comment period (July 19, 2010) for an additional 39 days (to August 27, 2010), thereby allowing a total of 91 days for public review and comment on the DEIS. The lead agencies provided timely and broad distribution of the DEIS, wide noticing, web postings, and periodic updates to ensure sufficient public awareness of the DEIS and comment period. The lead agencies also posted the DEIS on the agencies' websites and held public meetings on the DEIS to ensure that the public was provided with opportunities for involvement.

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**Comment**: *This proposed project does not appear to have been adequately coordinated with the Yakima Indian tribes, and thereby places Native cultural resources at risk. [LTR 267, CMT 3]*

**Response**: As described in both Section 1.0 and Section 3.10 of the EIS, the lead agencies along with the Applicant have coordinated with the Confederated Tribes and Bands of the

Yakama Nation (including the Yakama Nation Cultural Resources Department) concerning the proposed Project. The Applicant also coordinated with two local resident tribal members to assist with the identification of potential sensitive, traditional, and/or sacred resources. In addition, BPA undertook consultation with the Yakama Nation through the NHPA Section 106 process to address effects of BPA's interconnection activities. While no resources of significance to the Tribe were identified within the APE of proposed interconnection, the Tribe provided information indicating that the Chemawa Hill area was culturally sensitive. Although the available information about the area was somewhat conflicting, the Applicant agreed to limit the number of turbines in that area in part to address the Tribe's concerns. In addition, the Applicant committed to continue to work with the Tribe to address siting of towers and other construction disturbances to address tribal cultural resource concerns where practicable to do so while maintaining the viability of the project.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. The DEIS has other flaws. [LTR 270, CMT 2]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a fair and balanced alternative analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. The DEIS has other flaws. [LTR 274, CMT 2]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The alternatives considered (briefly?) but eliminated from detailed study were given short shrift. [LTR 276, CMT 1]*

**Response**: Consistent with both SEPA and NEPA requirements, alternatives considered but eliminated from detailed study in the EIS are briefly discussed, and this discussion identifies the reasons why these alternatives were eliminated from further study. The lead agencies believe that these alternatives thus were sufficiently addressed. As discussed in other responses to

comments, additional information has been provided concerning alternative locations to further clarify this information.

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**Comment**: *The design of the proposed facility is fatally flawed for lack of statutorily required alternatives and insufficient mitigation analysis. [LTR 283, CMT 13]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *Is the proponent's staunch resistance to alternative designs related to a minimum output required for just such a sale? [LTR 283, CMT 18]*

**Response**: Please see response to Comment LTR 61, CMT 1 above.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 287, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am also concerned that the DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 288, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. The DEIS has other flaws. [LTR 289, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DE IS (the proposal and the no-action alternative). This is inadequate. The DEIS has other flaws. [LTR 290, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. The DEIS has other flaws. [LTR 291, CMT 4]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. The DEIS has other flaws. [LTR 292, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other ,sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. A holistic energy assessment should the first thing on the review*

*program for any proposed development - not just first cost and/or specific company investment return profit figures. The DEIS has other flaws. [LTR 293, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *I am concerned that the DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. The DEIS has other flaws. [LTR 294, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The proposal fails to provide a credible alternatives analysis. Additional time is required for proper review. The EFSEC and BPA need to consider other alternatives, as well as other sites for wind energy. Additional planning is required for other configurations, deleting turbines to reduce impacts. [LTR 297, CMT 4]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 307, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 308, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The DEIS is fundamentally flawed because it fails to provide a credible alternatives analysis. EFSEC and BPA need to consider other alternatives, including other means of providing electricity (including increasing efficiency and reducing consumption), other sites for wind energy, other configurations, deleting turbines to reduce impacts, alternative routes for hauling turbines to avoid traffic impacts to the National Scenic Area, etc. Only two alternatives are meaningfully considered in the DEIS (the proposal and the no-action alternative). This is inadequate. [LTR 309, CMT 3]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *Please define counterpoise and staging areas. [LTR 311, CMT 6]*

**Response**: Staging areas are temporary areas used assist in the installation of Project components during Project construction. These areas are used to prepare and store Project components and equipment as needed. Previously disturbed areas are used where possible, and any additional disturbance is restored and re-vegetated after construction. Counterpoise is wire connected to Project components that is installed underground to help dissipate any lightning strikes. Counterpoise typically consists of 3/8-inch diameter wire buried about 12 to 18 inches underground. Small trenches are dug for installation, with the disturbed area restored and re-vegetated after installation.

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**Comment**: *Why aren't all these "components" addressed by BPA in the Whistling Ridge DEIS? Towers, Conductors, Counterpoise, Fiber Optic Cable, Right-of-Way Clearing, Access Roads, Staging Areas, Gates, Substation Facilities. [LTR 311, CMT 7]*

**Response:** To the extent any of these components are proposed as part of the proposed Project, they are included and addressed in the EIS.

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**Comment**: *So, why doesn't the Whistling Ridge DEIS have a BPA analysis about the impacts of not building any new transmission lines, or using the old transmission line, or substations? Further, the I-5 EIS goes on to say that it "…will evaluate direct, indirect and cumulative impacts to: Land Use, Cultural Resources, Aesthetics, Sensitive Plants and Animals and their Habitats, Fish and Water Resources, Erosion and Soils, Socioeconomics and Public Services, Electric and Magnetic Fields, Noise, Public Health and Safety, Air Quality, Recreation, Environmental Justice." From the Whistling Ridge DEIS, it is very apparent that BPA did not address any of these issues as they pertain to transmission lines and substations, technology that BPA should know something about! [LTR 311, CMT 9]*

**Response**: The EIS for the proposed Project addresses both the direct and indirect impacts of the proposed Project itself, as well as the cumulative effect of the proposed Project in combination with other past, present, and reasonably foreseeable future projects. Since the scope of the proposed action is the wind Project and its proposed interconnection to the FCRTS, that is the focus of the analysis of direct and indirect impacts in the EIS. Other existing and proposed BPA transmission lines and other facilities in the general vicinity of the proposed Project were considered in the cumulative impact analysis (Section 3.14) of the EIS. This section has been revised to more clearly reflect that these facilities were considered in this analysis.

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**Comment**: *Why isn't the "No Action Alternative" addressed more fully and thoughtfully in the DEIS? [LTR 311, CMT 9]*

**Response**: In preparing the EIS, the lead agencies gave substantial treatment to the No Action alternative, commensurate with its potential level of impacts. Since the No Action alternative would involve the Project being denied by EFSEC and/or BPA (and thus not being built), inherently there is less to describe and analyze about this alternative. Nonetheless, this alternative is fully described in Chapter 2 of the EIS, and fully analyzed in Chapter 3 of the EIS.

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**Comment**: *One of the requirements of these environmental impact statements is that alternatives are presented. And while I didn't see much in alternatives, SDS, Whistling Ridge owns about 80,000 acres in the state of Washington, and they choose these few acres. Why can't they locate the project elsewhere so it won't impact the National Scenic Area, peoples backyards and tourism? [LTR 317, CMT 33]*

**Response**: Please see response to Comment LTR 79, CMT 2 above.

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**Comment**: *The applicant insists on 70-MW, why? What are the alternatives? If there are no alternatives we need to know why. [LTR 317, CMT 34]*

**Response**: Please see response to Comment LTR 61, CMT 1 above.

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**Comment**: *Whistling Ridge Energy Project will need to proceed as an integrated whole. You cannot remove pieces of the project and hope for its success. [LTR 317, CMT 39]*

**Response**: Please see response to Comment LTR 61, CMT 1 above.

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**Comment**: *We strongly recommend removing Turbine Corridors A-1 though A-7 from further project consideration. Visual impacts will seriously degrade core scenic and historic landscape values. [LTR 317, CMT 59]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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**Comment**: *Consider reasonable alternatives and look at the language from these federal agencies who are mandated to protect this area. [LTR 317, CMT 63]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The only alternative discussed is no action, so technically they are no alternative. [LTR 317, CMT 85]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The alternatives addressed are insufficient. It is said we need 70-MW or we cannot do the project, and there is no place else to do it and we have absolute every array that we've proposed. This is disingenuous to the process of SEPA to allow that to stand. I think there needs to be a hard look at the 70,000+ acres owned to come up with some viable alternatives to compare this to. [LTR 318, CMT 15]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *The EIS does not have an appropriate list of alternatives. It states only one action item and mentions throughout the document that it is one of the alternatives. How can the proposed action also be* an alternative? *The only alternative stated is the no-action alternative. [LTR 318, CMT 33]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *NEPA and SEPA require two major points with respect to alternatives. 1) there be a reasonable range of alternatives considered and 2) each reasonable alternative be rigorously explored and objectively evaluated. In this project we have two alternative: the project and no action. This is not in accordance with NEPA/SEPA requirements. [LTR 318, CMT 45]*

**Response**: Please see response to Comment LTR 66, CMT 1 above.

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**Comment**: *Please consider Hood River in your impact analysis. [LTR 318, CMT 51]*

**Response**: The community of Hood River was considered in the analysis of several environmental impact topics including land use, transportation, socioeconomic, and visual impacts.

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**Comment**: *The authors of the EIS should consider the reconfiguration of the project that was rejected. [LTR 318, CMT 58]*

**Response**: Please see response to Comment LTR 79, CMT 1 above.

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## G.3 AFFECTED ENVIRONMENT, IMPACTS AND MITIGATION

### G.3.1 EARTH

**Comment**: *The project would require substantial soil relocation. Spoils sites should therefore be approved by a qualified specialist and their locations identified in the EIS draft. [LTR 79, CMT 10]*

**Response**: As discussed in Section 3.1.3, a Stormwater Pollution Prevention Plan (SWPPP), an Erosion and Sedimentation Control Plan, and an Environmental Protection Control Plan will be submitted to EFSEC for approval. These plans will include BMPs to minimize erosion and runoff from areas such as spoils piles. EFSEC may require the Applicant to obtain coverage under Ecology's Construction Stormwater General Permit since it would disturb more than 1 acre of land. Placement of all spoils piles would be regulated by the conditions of this permit. At this time, the location of the spoils piles is not known because the final location of the wind turbines has not been completed.

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**Comment**: *[In reference to* soil *contamination] - The discussion regarding soils does not address possible presence of contaminants along the access road right of way or at the project site. The FEIS should include the results of a Phase I Environmental Site Assessment to determine if and where contaminated soils may exist. [LTR 177, CMT 26]*

**Response**: There are no past land use activities that would lead the Applicant to believe hazardous materials or contaminants are present along the access roads or within the Project Area. Additionally, no contaminants were found during recent access road improvements within the Project Area. Therefore, the Applicant will not conduct a Phase I Environmental Site Assessment. However, the construction management plan would include provisions to ensure worker safety as discussed in Section 4.2 and required by state and federal laws.

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**Comment**: *[In reference to DEIS Section 3.1.2.1] Landslide evaluation….without danger….to surrounding environment. No obvious recent mass wasting features were observed in the aerial photos or during sight reconnaissance. Class III LHAs were delineated adjacent to proposed wind turbines along the southern Tower Line A and along Tower Line C. Fails to show detailed topography, detailed topographical changes, and how it affects landslide danger. Attempts to depict turbines outside of slide area, but common knowledge dictates the pad and activities will be in the unstable slopes. [LTR 178, CMT 75]*

**Response**: As discussed in Section 2.1.2 and in other responses, final siting of the wind turbines and associated facilities would be done following completion of the EFSEC Site Certificate and a detailed geotechnical investigation. As part of the final siting process, grading/excavation plans would be developed.

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**Comment**: *[In reference to DEIS Section 3.1.2.1], the changes to topography would be minor to moderate depending on location "Changes in topography" denotes significant earth moving. Need detailed maps and grading/excavating plans to able to assess the extent of the topographical changes. Remedy - The extent of topographical changes should be identified in the DEIS test, as well as the photomontages. [LTR 178, CMT 74]*

**Response**: Please see response to Comment LTR 178, CMT 75 above.

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**Comment**: *[In reference to] Section 3.1.2.1, [the] entire section, [n]o information is given as to how cite decommissioning will occur so impacts cannot be assessed. [LTR 178, CMT 79]*

**Response**: Section 2.1.7 of the EIS includes information concerning potential future decommissioning and site restoration that is reasonably foreseeable at this time. Given that these activities would occur 30 or more years into the future, it is not currently known what types of technologies or techniques would be available at that time to best accomplish decommissioning and site restoration. Any specific plan developed at this time thus would be not only speculative, but also could be viewed as limiting these activities to only currently available technologies and techniques. As discussed further in Section 2.1.7, any future decommissioning and site restoration would be conducted in accordance with applicable state laws, which would include an assessment of potential impacts from these activities. To the extent that EFSEC has authority

over possible actions taken to "re-power" the Project in the future, these actions also would be subject to appropriate environmental review.

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**Comment**: *[In reference to DEIS Section 3.1.2.1], the primary impacts during construction would be potential for erosion, landslides, soil compaction and changes to topography Where these impacts will occur needs to be disclosed fully, particularly where changes to topography will occur. Remedy - Provide a supplemental DEIS that fully discloses where the topographical changes will occur and provide before and after contour maps for all locations. [LTR 178, CMT 131]*

**Response**: Please see response to Comment LTR 178, CMT 75 above.

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**Comment**: *[The Volcanic Activity] section should discuss how ash from a volcanic eruption may impact the operation of wind turbines, transmission lines, and other elements of the project. [LTR 177, CMT 27]*

**Response**: The potential for ash fall was discussed in DEIS Section 3.1.2.1. Ash fall would be a potential unavoidable impact resulting from a volcanic eruption and there are currently no mitigation options available for this type of geological event.

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**Comment**: *Why is volcanic ash deposition of such concern that it is mentioned here? Granted, several of the soils present do contain a volcanic ash component, but it is not clear to me why this appears, since there is no control over the possible event and, depending on the severity of an ash fall, no mitigation measures would be possible. Large amounts of ash could be physically removed, but would that be mitigation? [LTR 272, CMT 9]*

**Response**: Volcanic ash deposition is discussed as a possible geologic hazard within the Project Area. The commenter is correct in stating that there would be no mitigation measures that could be implemented to reduce ash deposition.

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**Comment**: *Does the statement regarding mass wasting "no obvious recent mass wasting features" imply that there is evidence of the phenomena having occurred on the site in the not-so-recent past? If so, then this is another reason why a more thorough geologic assessment be conducted, before the project is evaluated by the Council. Although the soil type present on part of the project site has low liquefaction potential, massive excavation and refill, as in the 8.5 mile trench, may disturb soil structure enough to render the possibility greater than in the undisturbed state. Although liquefaction of soils is generally associated with earthquake activity, a similar phenomenon may result when soils become oversaturated. [LTR 272, CMT 9]*

**Response**: As discussed in Section 2.1.2 and in other responses, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted. If this investigation indicates the potential for slope instability at turbine sites or other Project facilities such as access roads, these facilities will be redesigned or relocated to avoid this risk.

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**Comment**: *The [DEIS] shows that the soils on the proposed Whistling Ridge wind farm site, 1152 acres located in Sections 5, 6, 7, 8, and 18 of T3N, R10E, and on Section 13 of T3N, R9E, are unstable and should not be disturbed through the building of this project, a project that would involve thousands of tons of ground movement and disturbance, with the addition of thousands of tons of concrete and wind turbines on top of this unstable soil. [LTR 281, CMT 1]*

**Response**: As discussed in Section 3.1.2.1, the landslide evaluation concluded that the Project could be constructed without danger to human life or the surrounding environment due to landslide hazard. Further subsurface investigation in support of final tower foundation design would help determine if there are weak rock or soil layers that could contribute to more deep-seated failure of the ridges and provide information on the quality of the rock underlying the ridgelines.

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**Comment**: *Geologic and soils information is troubling for anyone the proposed project site which is pretty steep, and this project proposes to disturb a great deal of that. Blasting would disturb fragile habitats. The soil types present are unstable. [LTR 318, CMT 41]*

**Response**: Please see response to Comment LTR 281, CMT 1 above.

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**Comment**: *In reading the DEIS, it also came to my attention that the soil descriptions used by the proponent were not as complete and not as informative as the soil descriptions in the Soil Survey of Skamania County, Washington, done by the U.S. Department of Agriculture, Soil Conservation Service, dated October 1990. It is as if certain, very pertinent information was left out of the DEIS. I have attempted to put this information in this memo. [LTR 281, CMT 2]*

**Response**: Information regarding soil series relevant to the proposed Project was included in Section 3.1.1.3.

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**Comment**: *The soils on the proposed wind farm site can be found in the U.S. Department of Agriculture's Soil Conservation Service's Soil Survey of Skamania County Area, Washington, October 1990. The DEIS descriptions are in ITALICS; other descriptions and information for each soil type is from the Soil Survey book (I have copied freely!). The soil types are numbered, as follows: #66, McElroy Series (included in this unit are small areas of Chemawa, Timberhead, Underwood, and Undusk soils) gravelly loam, 5 – 15 percent slopes. "The McElroy series*

*consists of very deep soils (up to 5 feet) formed in colluvium and residuum from basalt with a mantle of volcanic ash that influences soils in the top 9 to 13 inches. The soils exist on the footslopes and backslopes of mountains on slopes from 5 to 90 percent at elevations from 400 to 2,600 feet in eastern Skamania County and western Klickitat County. McElroy Soils are well drained with medium to rapid runoff and moderate permeability. The series was established in 1981 following the introduction of volcanic ash from the eruption of Mt. St. Helens." The average annual precipitation is 55 inches, average air temperature is about 46 degrees Fahrenheit (F), and the average frost-free period is 105 – 125 days. Hazard of water erosion is moderate. This unit is used for woodland, hayland, pastureland, homesites, wildlife habitat, and recreation. Douglas fir, ponderosa pine, and grand fir are the main woodland species. Oregon white oak and bigleaf maple are trees of limited extent in this soil unit. Main limitation for harvesting timber is seasonal soil wetness…wheeled and tracked equipment produces ruts, compacts the soil, and damages the roots of trees…Unsurfaced roads and skid trails are soft and slippery and can be impassable when wet…Occasional snowpack hinders the use of equipment and limits access in winter. This unit is well suited to use as hayland and pastureland. The main limitation of this unit for use as homesites is the steepness of slop. Erosion is a hazard in the steeper areas. Capability sub-class IIIe. [LTR 281, CMT 7]*

**Response**: Please see response to Comment LTR 281, CMT 2 above.

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**Comment**: *#67, McElroy Series (included in this unit are small areas of Chemawa, Timberhead, Underwood, and Undusk soils), gravelly loam, 15 to 30 percent slopes. It formed in colluvium derived dominantly from basalt with a mantle of volcanic ash. The native vegetation is mixed conifers and shrubs. Elevation is from 400 to 2300 feet. [Note: the DEIS states that the McElroy Series is from 400 to 2600.] The average annual precipitation is 55 inches, average air temperature is about 46 degrees F, and the average frost-free period is 105 – 125 days. Runoff is medium and the hazard of water erosion is moderate. Most areas of this unit are used for woodland, pastureland, hayland, wildlife habitat, recreation, and watershed. A few areas are used as homesites. Douglas fir, ponderosa pine, and grand fir are the main woodland species on this unit. Limited extent trees are Oregon white oak and bigleaf maple. Main limitation for harvesting timber is seasonal soil wetness…wheeled and tracked equipment produces ruts, compacts the soil, and damages the roots of trees…Unsurfaced roads and skid trails are soft and slippery and can be impassable when wet… Occasional snowpack hinders the use of equipment and limits access in winter. This unit is well suited to use as hayland and pastureland. The main limitations are steepness of slope and the hazard of erosion. Main limitation for use as homesites is the steepness of slope and erosion. Restricted permeability and steepness of slope increase the possibility of failure of septic tank absorption fields. Access roads should be designed to provide adequate cut-slope grade, and drains are needed to control surface runoff and keep soil losses to a minimum. Capability subclass IVe. [LTR 281, CMT 8]*

**Response**: Please see response to Comment LTR 281, CMT 2 above.

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**Comment**: *#68, McElroy Series (included in this unit are small areas of Chemawa, Timberhead, Underwood, and Undusk soils), gravelly loam, 30 – 65 percent slopes. Very deep, well-drained soil is on the back slopes of mountains. It formed in colluvium derived dominantly from basalt with a mantle of volcanic ash. The native vegetation is mainly mixed conifers and shrubs. Elevation is 400 to 2300 feet. The average annual precipitation is 55 inches, average air temperature is about 46 degrees F, and the average frost-free period is 105 – 125 days. Runoff is rapid, and the hazard of water erosion is severe. This unit is used for woodland, wildlife habitat, recreation, and watershed. Douglas fir, ponderosa pine, and grand fir are the main woodland species on this unit. Oregon white oak and bigleaf maple are limited extent trees on the unit. Steep slopes restrict the use of wheeled and tracked equipment in skidding. Use of wheeled and tracked equipment when the soil is moist produces ruts, compacts the soil, and damages the roots of trees. Logging roads require suitable surfacing for year-round use. Occasional snowpack hinders the use of equipment and limits access in winter. Steep yarding paths, skid trails, and firebreaks are subject to rilling and gullying unless plant cover is maintained or adequate water bars are provided. Capability sub-class VIe. [LTR 281, CMT 10]*

**Response**: Please see response to Comment LTR 281, CMT 2 above.

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**Comment**: *#135, Timberhead Series, gravelly loam, 5 to 30 percent slopes. The Timberhead series consists of very deep soils (up to 5 feet) formed in residuum and colluvium from basalt mixed with volcanic ash. The soils exist on mountain ridges between 5 and 30 percent at elevations from 2,000 to 3,600 feet in Skamania County and western Klickitat County. Timberhead Series soils are well drained with medium to rapid runoff and moderately high to high permeability. [Note: The Soil Survey book states that this unit is at 2000 to 2800 feet elevation.] Average annual precipitation is about 60 inches, the average annual air temp is 44 degrees F, and the average frost-free period is 95 to 115 days. Included in this unit are small areas of McElroy, Underwood, and Undusk soils. Runoff is medium, and the hazard of water erosion is moderate. Most areas of this unit are used for woodland, recreation, wildlife habitat, and watershed. A few areas are used as grazeable woodland. Douglas fir, grand fir, and western hemlock are the main woodland species on this unit. [Would there be bats here, just like at the canopy crane, because of the hemlock?] Among the trees of limited extent is western redcedar. Areas on ridge tops that are subject to strong, persistent winds [how strong and how persistent?] are less productive than other areas of this unit. The main limitation of harvesting timber is seasonal soil wetness. Use of wheeled and tracked equipment when the soil is moist produces ruts, compacts the soil, and damages the roots of trees. Unsurfaced roads and skid trails are soft and slippery and can be impassable when wet. Occasional snowpack hinder the use of equipment and limits access in winter. This map unit is in capability subclass IVe. [LTR 281, CMT 11]*

**Response**: Please see response to Comment LTR 281, CMT 2 above.

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**Comment**: *#136, Timberhead Series, gravelly loam, 30 to 65 percent slopes. The Timberhead series consists of very deep soils (up to 5 feet) formed in residuum and colluvium*

*from basalt mixed with volcanic ash. The soils exist on mountain ridges between 5 and 30 percent at elevations from 2,000 to 3,600 feet in Skamania County and western Klickitat County. Timberhead Series soils are well drained with medium to rapid runoff and moderately high to high permeability. [Note: the Soil Survey book states that this soil unit is in the 2000 to 2800 foot elevation range.] Average annual precipitation is about 60 inches, the average annual air temp is 44 degrees F, and the average frost-free period is 95 to 115 days. Included in this unit are small areas of McElroy, Underwood, and Undusk soils. Also included are small areas of Rock outcrop and moderately deep soils over basalt. Available water capacity is moderately high. The hazard of water erosion is severe. Most areas of this unit are used for woodland, recreation, wildlife habitat, and watershed. Douglas fir, grand fir, and western hemlock are the main woodland species on this unit. Western redcedar is a tree of limited extent. The main limitation for harvesting timber is steepness of slope, which restricts the use of wheeled and tracked equipment. Use of wheeled and tracked equipment when the soil is moist produces ruts, compacts the soil, and damages the roots of trees. Occasional snowpack hinders the use of equipment and limits access in winter. Steep yarding paths, skid trails, and firebreaks, are subject to rilling and gullying unless plant cover is maintained or adequate water bars are provided. Capability subclass VIIe. [LTR 281, CMT 12]*

**Response**: Please see response to Comment LTR 281, CMT 2 above.

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**Comment**: *#144, Underwood loam, 2 to 15 percent slopes. The Underwood series consists of very deep soils (5 feet or more) formed in residuum and colluvium from basalt and andesite with a thin mantle of volcanic ash. The soils exist on benches, backslopes, and footslopes of mountains with slopes between 2 and 50 percent at elevations between 500 and 2,700 feet in southeast Skamania County and west Klickitat County. Underwood Series soils are well drained with slow to medium runoff and moderately high permeability. [Note: The Soil Survey book states that this unit is at 500 to 2000 feet elevation.] The native vegetation is mainly mixed conifers and shrubs. The average annual precipitation is about 50 inches, the average annual air temperature is about 46 degrees F, and the average frost-free period is 100 to 150 days. Included in this unit are small areas of Chemawa and McElroy soils on terraces and foot slopes and Timberhead and Undusk soils on ridgetops. Also included are small areas of soils that are more than 35 percent clay. Included areas make up about 10 percent of the total acreage. Permeability of this Underwood soil is moderately slow. Available water capacity is high. Runoff is medium, and the hazard of water erosion is moderate. This unit is used for woodland, hayland, pastureland, orchards, homesites, wildlife habitat, and recreation. Douglas fir, ponderosa pine, and grand fir are the main woodland species on this unit. Among the trees of limited extent are Oregon white oak and bigleaf maple. The main limitation for harvesting timber is seasonal soil wetness. Use of wheeled and tracked equipment when the soil is moist produces ruts, compacts the soil, and damages the roots of trees. Unsurfaced roads and skid trails are soft and can be impassable when wet. Logging roads require suitable surfacing for year-round use. Occasional snowpack hinders the use of equipment and limits access in winter. The main limitations of this unit for use as homesites are steepness of slope, shrink-swell potential, moderately slow permeability, and the hazard of erosion in the steeper areas. Use of sandy backfill for the trench and long absorption lines helps to compensate for the moderately slow permeability of the soil. During the rainy season, effluent from onsite sewage disposal*

*systems may seep at points downslope. If the density of housing is moderate to high, community sewage systems are needed to prevent contamination of water supplies as a result of seepage from onsite disposal systems. The effects of shrinking and swelling can be minimized by using proper engineering designs. Buildings and roads should be designed to offset the limited ability of the soil in this unit to support a load. This map unit is in capability subclass Ille. [LTR 281, CMT 13]*

**Response**: Please see response to Comment LTR 281, CMT 2 above.

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**Comment**: *#147, Undusk gravelly loam, 5 to 30 percent slopes. The Undusk series consists of very deep soils (5 feet or more) formed in residuum and colluvium from basalt and andesite with a thin mantle of volcanic ash. The soils exist on benches, backslopes, and footslopes of mountains with slopes between 5 and 65 percent at elevations between 2,000 and 2,800 feet in southeast Skamania County and west Klickitat County. Undusk Series soils are well drained with slow to medium runoff and moderately high permeability. Based on the current test pits and field observations, the site soil is best represented as Soil Site Class D (stiff soils). Rock with varying strength and weathering characteristics was encountered at depths ranging from 3 to 12 feet bgs. The average annual precipitation is about 55 inches, the average annual air temperature is about 44 degrees F, and the average frost-free period is 90 to 120 days. The subsoil to a depth of 60 inches or more is dark brown very gravelly loam and extremely gravelly loam. Included in this unit are small areas of Chemawa, McElroy, Timberhead, and Underwood soils on ridges and back slopes and St. Martin soils on landslides. Also included are small areas of soils that are less than 35 percent rock fragments and soils that are shallow to bedrock. Included areas make up about 12 percent of the total acreage. Permeability of this Undusk soil is moderate. Available water capacity is moderately high. Runoff is medium, and the hazard of water erosion is moderate. This unit is used for woodland, wildlife habitat, recreation, and watershed. Douglas fir, grand fir, and western hemlock are the main woodland species on this unit. Among the trees of limited extent are red alder and western red cedar. Areas on ridge tops that are subject to strong, persistent winds are less productive than other areas of this unit. The main limitation for harvesting timber is seasonal soil wetness. Use of wheeled and tracked equipment when the soil is moist produces ruts, compacts the soil, and damages the roots of trees. Unsurfaced roads and skid trails are soft and can be impassable when wet. Logging roads require suitable surfacing for year-round use. Occasional snowpack hinders the use of equipment and limits access in winter. Logging activities can readily displace the surface layer. This map unit is in capability subclass IVe. [LTR 281, CMT 14]*

**Response**: Please see response to Comment LTR 281, CMT 2 above.

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**Comment**: *#177, Undefined Soil Unit located west of wind turbine string C1-C4? These units sit next to the turbine strings? [LTR 281, CMT 15]*

**Response**: All soil series found within the Project Area are shown on Figure 3.1-3, including those located west of the "C" turbine string.

**Comment**: *Turbines are heavy, unwieldy machines. In my research, I came across the following information, several articles—one from Wind Watch, one from aweo.org, and one on transporting wind turbines--which provide insight on just how big and weighty wind turbines actually are, and I believe this information is very pertinent to the evaluation of weight effects on the soils located in the proposed area of the Whistling Ridge wind farm. [LTR 281, CMT 16]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section 3.1.2.1 Proposed Action; PDF pg. 11], [t]he initial site restoration plan and the decommissioning plan SHOULD be part of the DEIS and SHOULD also be included in the FEIS. We should all be able to evaluate all of SDS's and the BPA's plans for this proposal, NOW not later, especially if "the initial site restoration plan will…identify, evaluate, and resolve all major environmental and public health and safety issues…including potential changes to soils, topography, or erosion…impacts to earth…mitigation measure…". All of these issues should be addressed in the DEIS and these plans should be available for public comment and input NOW. [LTR 286, CMT 8]*

**Response**: Section 2.1.7 of the EIS includes information concerning potential future decommissioning and site restoration that is reasonably foreseeable at this time. Given that these activities would occur 30 or more years into the future, it is not currently known what types of technologies or techniques would be available at that time to best accomplish decommissioning and site restoration. Any specific plan developed at this time thus would be not only speculative, but also could be viewed as limiting these activities to only currently available technologies and techniques. As discussed in Section 2.1.7, any future decommissioning and site restoration would be conducted in accordance with applicable state laws, which would include an assessment of potential impacts from these activities. To the extent that EFSEC has authority over possible actions taken to "re-power" the Project in the future, these actions also would be subject to appropriate environmental review.

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**Comment**: *Regarding soil stability - Skamania County has failed to comply with the critical areas ordinance that has been mandated by the state upon this county, and it delayed that process. Therefore it is possible that particular areas of concern are not mentioned because they have not been legislatively acted on at a local basis. [LTR 318, CMT 13]*

**Response**: As discussed in Section 4.10, EFSEC will specify the conditions of construction and operation of the proposed project. This provision operates to supersede all state and local land use permitting related to energy facility sites that are under EFSEC's jurisdiction. However, a determination of consistency with local land use regulation is required. Skamania County has provided EFSEC with a letter and Resolution 2009-54 stating that proposed Project would comply with the land use policies and zoning regulations for the vicinity of the proposed Project. Furthermore, EFSEC believes that Section 3.1.1.4 in the DEIS, and the referenced geotechnical report (URS 2009), adequately analyzed the issue of soil stability in and near the Project Area. As discussed in Section 2.1.2 and in other responses, a detailed geotechnical

investigation of the specific locations of all wind project elements would be conducted prior to construction. If this investigation indicates the potential for slope instability at turbine sites or other Project facilities such as access roads, these facilities will be redesigned or relocated to avoid this risk.

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**Comment**: *There is a DNR FPA application that indicates the A-7 though 7 portion of the eastern slope is - unstable slopes, high erosion potential, and a high mass wasting potential, and there is a portion of the slope that is intentionally not logged due to concerns about stability. [LTR 318, CMT 14]*

**Response**: For a discussion of unstable slopes and mass wasting potential, please refer to Section 3.1.3, Mitigation Measures. The following mitigation measures were identified to avoid, minimize, and compensate for potential impacts of the proposed Project related to geology, soils, topography, and geologic hazards.

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**Comment**: *[In Section 3.1.1.4, Geologic Hazards], this section should be expanded to address geologic hazard issues related to the proposed access road (West Pit Road). That this road traverses lands identified as Class II Landslide Hazards is of particular concern. See Table 3.1-4.8 [Footnote 8: Table 3.1-4 should be revised so that the locations of the proposed access road, as well as other access road alternatives, are easily discernable.] The DEIS should also be revised to include a discussion regarding the extent to which Skamania County has assessed whether the project site or the area traversed by the proposed access road contains Class I landslide hazards (Severe).9 [Footnote 9: To qualify as a Class I landslide hazard, the location must be designated as such by the local legislative body, in this case Skamania County. See DEIS at § 3.1.1.4 Landslides.] If such an assessment has not been done, the discussion regarding landslide hazards should be expanded to determine whether there are affected areas that would otherwise meet the criteria for a Class I landslide hazards, even though they have not been formally designated as such by the County. [LTR 177, CMT 24]*

**Response**: As discussed in Section 2.1.2, final siting of the wind turbines and associated facilities would be done following completion of the EFSEC Site Certificate. Prior to this final siting process, as a condition of the Site Certificate and as discussed in Section 3.1.3, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted. If this investigation indicates the potential for slope instability at turbine sites or other project facilities such as access roads (including improvements to West Pit Road), these facilities will be redesigned or relocated to avoid this risk. As discussed in Section 2.1.3.7, all road improvements required for the proposed Project would be designed and constructed under the direction of a licensed engineer, in accordance with the Skamania County Private Road Guidelines and Development Assistance Manual. All county roads requiring improvements would be designed and constructed in accordance with the WSDOT Design Manual.

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**Comment**: *[In DEIS Section 3.1.2.1, Proposed Actions - Access Road], this section should be expanded to include a discussion of geologic hazards and their impact on the access road during both the construction and operation of the proposed project, including the environmental impacts that may arise from locating the access road in a Class II landslide area. [LTR 177, CMT 25]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *[DEIS Section 3.1.1.2, Regional Geology, of the DEIS] states "Regional geologic maps indicate the presence of Quaternary-age mass wasting landslide deposits located north of Underwood Mountain (Figure 3.1-2). These deposits are mapped as a large landslide, estimated to be approximately 1/3 square mile in area and almost a mile long. However, based on field work conducted in 2007, there is no obvious evidence to suggest the presence of a landslide as mapped on the 1:100,000 scale geologic map. If landslide deposits are present, they have been exposed long enough that most or all of the geomorphic evidence has been removed by erosion." (p. 3-3) This is not an acceptable analysis. See Reference A, at the end of this document [see letter 177 in Appendix H] for more information on mass wasting but, briefly, "Mass wasting, the downhill movement of soil and rock under the influence of gravity, encompasses a variety of physical processes by which mountain ranges are eroded. These processes include: Creep - slow, nearly continuous downslope movement that is induced by either freeze/thaw cycles or wet/dry cycles. Slides - sudden downhill movement of masses of rock or sediment. Debris flows- dense, fluid mixtures of rock, sand, mud, and water. There are other categories of mass wasting processes such as slumps, rock flows, rockfalls, block glides (etc...) that can be grouped together or separately with creep, slides, and debris flows depending on which characteristics that share in common. All of these processes share one thing in common, namely, that they are caused by the incessant downward pull of gravity, which moves loose slope material downwards." [LTR 281, CMT 3]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *"These deposits are mapped as a large landslide, estimated to be approximately 1/3 square mile in area and almost a mile long. However, based on field work conducted in 2007, there is no obvious evidence to suggest the presence of a landslide as mapped on the 1:100,000 scale geologic map. If landslide deposits are present, they have been exposed long enough that most or all of the geomorphic evidence has been removed by erosion." "No obvious evidence…If landslide deposits are present…they have been exposed long enough that most or all of the geomorphic evidence has been removed…"!!! These are astonishing statements, made without any type of real, geological evidence, i.e., a sub-surface hazard survey, drill holes, etc., in the DEIS. An in-depth geological study should be made of the entire proposed site—before the project is approved, not after. Geomorphic evidence of landslides does not just disappear—a near-surface hazard survey is a tool to find out just what is going on under the exposed, eroded surface. This has not, apparently, been done for this DEIS, and it should be. This proposed*

*wind farm would be situated on top of a unstable ridge line, subject to mass wasting. [LTR 281, CMT 4]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *[DEIS Section 3.1.1.4, Geologic Hazards, Earthquakes states that] earthquakes are the result of sudden releases of built-up stress within the tectonic plates that make up the earth's surface. Stress accumulates where movement between plates or on faults produces friction. No faults are mapped within the footprint of the proposed project area. However, faults are mapped approximately 1.5 miles to the southwest and northeast. (Pezzopane 1993 and Geomatrix 1995) Many of these faults are inferred, and shown as dotted lines buried by younger surficial deposits. While the activity of the area faults is unknown, a review of aerial photography showed no indication of recent movement along the trace of the inferred faults. There have been no surface-rupture earthquakes on any fault within northwestern Oregon or southwestern Washington in historic times, and investigations of the regional faults have been limited. According to the updated National Seismic Hazard Maps published by the US Geological Survey (USGS) in 2008 (Petersen et al. 2008 and USGS 2009), the peak ground acceleration estimated for the area of the Whistling Ridge site is 0.18g for a 475-year return period earthquake (i.e., ground motion with a 10 percent chance of being exceeded in 50 years) and 0.40g for a 2,475year return period earthquake (i.e., ground motion with a 2 percent chance of being exceeded in 50 years). Large earthquakes at more distant faults could cause prolonged ground movement at the project site. Information on historic large earthquakes can be found in the Application for Site Certification Section 3.1 (Appendix A). [LTR 281, CMT 5]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *[Additionally, DEIS Section 3.1.1.4, Geologic Hazards, Landslides states that] the landslide evaluation conducted for the Application for Site Certification concluded that the project could be constructed and operated without danger to human life or the surrounding environment due to landslide hazards. Although none of the proposed turbines are located within Class II LHAs, several of the towers along the western side of the project site (Tower Lines A and B) are located along ridgelines with descending slopes that are locally greater than 35 degrees (70 percent). Based on studies conducted for the Application for Site Certification, it appears that the primary concern for towers located adjacent to the Class II LHAs is the potential for headward erosion of the steep drainages by debris or earth flow processes. Erosion rates of these drainages are unknown, but no obvious recent mass wasting features were observed in the aerial photos or during the site reconnaissance. Further subsurface investigation in support of final tower foundation design would help determine if there are weak rock or soil layers that could contribute to more deep-seated failure of the ridges and provide information on the quality of the rock underlying the ridgelines. [LTR 281, CMT 6]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

**Comment**: *An in-depth geological study should be made of the entire proposed site—before the project is approved, not after. A near-surface seismic hazard survey and deep coring should be required before this project is approved. [LTR 281, CMT 17]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *The impacts of the turbines' weights on the mountain ridges in the DEIS has not been fully addressed. Could mass wasting result from ridges being flattened, heavy machinery being installed, deep anchors disturbing the soils, etc? [LTR 281, CMT 19]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *There are a lot of questions about the geology of the proposal area that have not been adequately answered in the DEIS. We need complete data in order to properly evaluate the DEIS. [LTR 281, CMT 24]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *[In reference to DEIS Section 3.1.1.2, Regional Geography] - Just because there is "no obvious evidence to suggest the presence of landslides" does not mean that the landslide does not exist or that mass wasting is not a definite possibility. What is mass wasting? A Wisconsin geology class syllabus defines mass wasting as follows: "Mass-wasting processes: Mass-wasting processes such as creep, landslides, and debris flows are distinguished from each other in part by whether they occur rapidly or slowly. Landslides are capable of transporting massive amounts of rock and soil downslope or miles in very short periods (e.g. minutes). Creep can also transport much material, but at rates of only millimeters per year. Both are important erosional processes. Rapid mass wasting events such as massive landslides or debris flows are typically triggered by events that destabilize material that resides on steep slopes. Such events include earthquakes volcanic eruptions, rain or melting snow, and poorly planned landscape alterations by humans (e.g. road cuts or developments that require the removal of material at the bases of slopes)." [Source: http://www.geology. wisc.edu!courseslgl12If1lass_wasting.html] Hmm, "landscape alterations"? I'm thinking that putting hundreds of tons of whirling propellers on top of impermeable surfaces in a steep-sloped area subject to wind and water erosion is probably not a well-thought out proposal. [LTR 286, CMT 1]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *[In reference to DEIS Section 3.1.1.4, Geologic Hazards, Earthquakes] - "A review of aerial photography' is NOT doing geology! This is a totally inadequate geologic*

*analysis. "Inferred" faults shown as dotted lines does not mean that there are NOT buried, sub-surface, wide-ranging faults. Ridges have fault lines. I will comment further on the soils issue in a separate memo. [LTR 286, CMT 2]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *[In reference to DEIS Section 3.1.2, Proposed Action] - So, are we to gather from the above statement that "further subsurface investigation: has NOT been done, there is NOT a "final tower foundation design that would help determine if there are weak rock or soil layers that could contribute to deep-seated failure of the ridge"?!? And, that this LACK of a final tower foundation design could "provide information on the quality of rock underlying the ridgelines"? Well, I'm confused. Isn't this DEIS supposed to provide all this information so that a thoughtful, science-based decision can be made by EFSEC and the involved public as to whether this project should even go on? This LACK of information is critical and should be provided in the DEIS. [LTR 286, CMT 3]*

**Response**: Please see response to Comment LTR 177, CMT 24 above.

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**Comment**: *[In reference to Section 3.1.1.2] - Above the basalts are a variety of younger volcanic rocks and sedimentary materials that range from… These are materials that contribute to instability on slopes. Need clear topo[graphic] maps that show where turbines are to be placed so the interaction between loose layers and steep slope can be identified. [LTR 178, CMT 78]*

**Response**: Site topography is shown in Figure 3.1-1. Additionally, site topography and geology are shown with the micrositing corridors in Figure 3.1-2.

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**Comment**: *[In reference to Section 3.1.2.1] "The steel tower is anchored in a platform of more than a thousand tons of concrete and steel rebar, 30 to 50 feet across and anywhere from 6 to 30 feet deep. Shafts are sometimes driven down farther to help anchor it. Mountain tops must be blasted to accommodate it. The platform is critical to stabilizing the immense weight of the turbine assembly." This statement is from the National Windwatch article. I really don't want to see mountain tops "blasted," and residents near the wind farm proposal probably don't want to see it, either! The proposed wind farm has 50 some turbines proposed. That is 50 x 1000 tons of concrete and steel rebar = to 50,000 tons of concrete and steel rebar weighing down on soils that are susceptible to erosion; one ton equals 2000 pounds, 2000 pounds x 50,000 tons = 50,000,000 pounds. What are the cumulative impacts of putting 50,000,000 pounds of stress on mountain ridges in Skamania County, and what are the cumulative effects of all the other wind farms' weights on all the lands and soils in BPA's area of interest? What does all this weight do to water tables? Any other effects? This issue of weight should be addressed more fully in the DEIS and its lack makes the DEIS inadequate and incomplete. [LTR 281, CMT 20]*

**Response**: As discussed in Section 3.14.3.1, the cumulative impacts of the proposed Project in combination with past, present, and reasonably foreseeable future actions have been analyzed. Reasonably foreseeable future projects do not include other wind facility projects located within Skamania County. The Applicant has no other information on additional reasonably foreseeable future actions in the Project Area. Therefore it is not possible to identify impacts to mountain ridges in Skamania County from possible future wind generation projects that are not reasonably foreseeable. Additionally, as discussed in Section 3.3.2.1, operation of the proposed Project would have minimal or no impacts to groundwater. As discussed above in another response, prior to the final siting process and as a condition of the Site Certificate, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted.

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**Comment**: *[In reference to DEIS Section 3.1.1.4, Geologic Hazards, Earthquakes] - What does "large earthquakes at more distant faults could cause prolonged ground movement at the project site" actually mean? Does that mean that there will be earth movement downhill? Mass wasting? Does this mean that people and wildlife will be affected? How will they be affected? Does this mean that people would have to leave their homes? Are there evacuation routes? Would there be loss of life and property involved in "prolonged ground movement"? These questions are not answered in the DEIS. [LTR 286, CMT 3]*

**Response**: The impact of earthquakes on the proposed Project is discussed in Section 3.1.2.1. Field investigations concluded that the potential for liquefaction is very low at this site and settlement and lateral spread induced by a seismic event would be minimal. Additionally, the potential for surface rupture within the proposed Project Area is small given that there are no mapped faults crossing the site. As discussed above in another response, prior to the final siting process and as a condition of the Site Certificate, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted.

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**Comment**: *Sand, silt, clay particles, and soil will damage aquatic habitat and are considered to be pollutants. Proper disposal of construction debris must be on land in such a manner that debris cannot enter buffers and waters of the state or cause water quality degradation of state waters. During construction, all releases of oils, hydraulic fluids, fuels, other petroleum products, paints, solvents, and other deleterious materials must be contained and removed in a manner that will prevent their discharge to waters and soils of the state. The cleanup of spills should take precedence over other work on the site. Clearing limits and/or any easements or required buffers should be identified and marked in the field, prior to the start of any clearing, grading, or construction. Some suggested methods are staking and flagging or high visibility fencing. A permanent vegetative cover should be established on denuded areas at final grade if they are not otherwise permanently stabilized. All temporary erosion control systems should be designed to contain the runoff from the developed two year, 24-hour design storm without eroding. Coverage under the National Pollution Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activities is required for construction sites which disturb an area of one acre or more and which*

*have or will have a discharge of stormwater to surface water or a storm sewer. [LTR 171, CMT 5]*

**Response**: As discussed in Section 3.1.3 and in other responses a Stormwater Pollution Prevention Plan (SWPPP), an Erosion and Sedimentation Control Plan, and an Environmental Protection Control Plan would be submitted to EFSEC for approval. These plans would include BMPs to minimize erosion and runoff from the Project Area. EFSEC may require the Applicant to obtain coverage under Ecology's Construction Stormwater General Permit since it would disturb more than 1 acre of land.

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**Comment**: *[Within T3N-R9E-S13], there are potential unstable slopes indicated. Applicable [Forest Practice] (FP) rules that may be relevant to the project. Most of these would come into play if there is logging or road building near any waters. 222-16-030, Water typing systems; 222-16-050, Classes of Forest Practices; 222-20-010, Applications and Notifications; 222-24-030, Road construction; 222-24-040, Water crossing structures; 222-24-052, Road maintenance; 222-30-020, Harvest unit planning and designs (wetland management zones); 222-30-022, Eastern Washington RMZs; 222-30-050, Felling and Bucking; 222-30-070, Ground based logging systems. [LTR 172, CMT 12]*

**Response**: Comment acknowledged.

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**Comment**: *Mass wasting is a real concern in the proposal area and it has not been adequately addressed in the DEIS. There are real consequences to area residents from erosion and mass wasting events. [LTR 281, CMT 22]*

**Response**: As discussed in Section 2.1.2, final siting of the wind turbines and associated facilities would be done following completion of the EFSEC Site Certificate. Prior to this final siting process, as a condition of the Site Certificate and as discussed in Section 3.1.3, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted. If this investigation indicates the potential for slope instability at turbine sites or other project facilities such as access roads (including improvements to West Pit Road), these facilities will be redesigned or relocated to avoid this risk. As discussed in Section 2.1.3.7, all road improvements required for the proposed Project would be designed and constructed under the direction of a licensed engineer, in accordance with the Skamania County Private Road Guidelines and Development Assistance Manual. All county roads requiring improvements would be designed and constructed in accordance with the WSDOT Design Manual.

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**Comment**: *[In reference to Section 3.1.2.1], "[t]he primary impacts during construction would be potential for erosion, landslides, soil compaction and changes to topography." IS THAT ALL?!? As the WA State Department of Transportation learned during its rock removal along Highway 14 during the summer of 2010, in Skamania County, when they started an*

*unintended landslide, there is always the very high potential that once you start moving earth, earth does what it wants to and moves where it wills! [LTR 286, CMT 5]*

**Response**: Please see response to Comment LTR 281, CMT 22 above.

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## G.3.2 AIR QUALITY

**Comment**: *Once the wind turbine is built, the energy it produces does not cause green house gases or other pollutants. [LTR 1, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Because all coal-fired power plants and some natural-gas-fired power plants produce greater emissions when they act as backup systems for wind power, thanks to inefficiencies associated with cycling on and off, the benefits of wind power in reducing carbon emissions are reduced. Contrary to what the DEIS states, there is no evidence that the Whistling Ridge project will have a beneficial impact on air quality in the Columbia Gorge vicinity. No fossil fuel-fired projects will be taken offline as a result. In fact, backup power from fossil-fuel fired projects may be required for those times when the wind is not blowing. Thank you for the opportunity to comment on this project. [LTR 36, CMT 11]*

**Response**: Wind powered generation is dependent on the variable and temporal nature of wind. Therefore, back-up power is indeed required to balance generation variability. BPA, however, has the luxury of an extensive hydro-electric resource which is currently 100% sufficient for balancing the variability of wind-generated power that enters onto BPA transmission lines. In short, 100% of wind power generation has back-up provided by the vast hydro-electric system located in the Pacific Northwest. BPA requires all generators to acquire an amount of reserves (i.e. hydro-electric power). This means that generators must have some potential generation on line that is not generating at that time but can be called upon in an emergency. Currently, BPA supplies that to the wind facilities with the hydro-electric system. Long term, when wind generation exceeds load and energy cannot be stored then alternative solutions are being explored such as hydro pump storage. Pump storage is where water is pumped into a reservoir while generation exceeds load and then power is generated from the stored water when load exceeds generation. Moreover, BPA has hourly schedules (estimates) for how much wind will be generated as well as how much load will be required. So, as load (power consumption) and generation of wind and other sources change, BPA alters the generation at the hydro electric dams. See the BPA fact sheet included at the end of this Response to Comment Section for additional information on this topic.

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**Comment**: *[DEIS Section 3.2.2 states that] there would be no emissions from the operation of the turbines. True, but backup would release emissions therefore the operation of the farm would result to increase net emissions in the region. Remedy - Include impacts due to firm power backup, and idling gas plants during wind power operations. [LTR 178, CMT 77]*

**Response**: Please see response to Comment LTR 36, CMT 11 above.

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**Comment**: *Gas is a hydrocarbon. Hydrocarbon use produces greenhouse gasses. Greenhouse gasses are known to cause global climate changes. Using "gas-fired reciprocating engines" will produce greenhouse gasses. What is the carbon footprint of these gas-fired reciprocating engines? How many of them would be needed to balance out the unpredictability of wind power generation? What is their cumulative impact on air and water quality? [LTR 279, CMT 17]*

**Response**: Please see response to Comment LTR 36, CMT 11 above.

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**Comment**: *[In reference to DEIS Section 3.2.1] - Although this proposed wind farm project itself does not, allegedly, have any "permanent sources of regulated air emission, and no backup generation," it goes not mean that there are no cumulative impacts on air emissions, because this project is included in BPA's energy production grid and BPA's energy production DOES have CUMULATIVE IMPACTS on REGIONAL AIR QUALITY. It is widely known that X amount of wind energy production requires Y amount of gas plant back-up capability because wind energy is notoriously unreliable and BPA cannot have unreliable sources of energy in the grid. It creates havoc among users and I'm pretty sure it negatively affects BPA's machinery. The effects of wind power on the grid and on the actual BPA hard infrastructure is not addressed in the DEIS and it should be. The public should be aware if there are any dangers associated with the influx of large amounts of energy from wind farms in the energy grid and if the grid and reliably balance this energy influx without hardware meltdowns. BPA should have addressed these issues in the DEIS and their failure to do so is just another fatal flaw in this fatally flawed DEIS. [LTR 286, CMT 11]*

**Response**: Please see response to Comment LTR 36, CMT 11 above.

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**Comment**: *[In reference to DEIS Section 3.2.1] - The statement "production of electricity from wind produces no direct emissions of greenhouse gasses or other air pollutant" is specious. The DEIS does not provide any details on what huge propeller-like blades do to the air and what if any, gasses are produced by the machinery that is used to run the wind towers. The DEIS does not provide any details on how many gas plants are used by BPA to manage the flexibility and balance of the influx of unreliable wind power generated by all the wind farms producing energy and trying to get it onto our energy grid. If the capability of the hydro system to incorporate wind power will be fully utilized in a couple of years, as the NW Energy Council has stated, then*

*the option to use existing gas-fired power plants, unidentified in the DEIS, would be used to integrate wind more fully into the energy grid. Where are these plants located? How much CO2 do they produce? What is their carbon footprint? What is global climate change negatively affects the winds that are not powering some of these wind farms, will more and more gas-fired plants have to be brought online, thus eliminating any benefits that may accrue to wind power? Where is BPA's Wind Integration documentation? If, as the NW Energy Council states, we can achieve 85% of load growth can be met, through the use of technologically proven efficiencies in our homes, commercial spaces, lighting, etc., then why do we need so many wind farms and gas plants that degrade our environment and our quality of life? These questions need to be answered in the DEIS. The NW Energy Council sees conservation and "improved efficiency of electric use" as the best choice for the region. See the Sixth NW Electric Power and Conservation Plan Overview, put out by the NW Energy Council. [LTR 286, CMT 13]*

**Response**: Please see response to Comment LTR 36, CMT 11 above. No emissions result from wind powered turbines and 100% of wind generation has back-up provided by the vast hydro-electric system within the Pacific Northwest. Therefore, no coal, gas, or any other new generation facility would be required as a result of the proposed Whistling Ridge Project. Although a significant percentage of future load growth may be achieved via various efficiencies, wind generation is a piece of the puzzle that collectively will meet electric load growth within the Pacific Northwest. Please refer to Section 1.4.2 for a discussion of the No Action Alternative.

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**Comment**: *[In reference to the Whistling Ridge Energy Project] - It also decreases the carbon footprint that a coal fired plant would use to produce 75 MW of power which our growing population state needs. [LTR 37, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *We have a short time in to impact our dire global situation, and we must replace other harmful polluting means of producing energy. [LTR 40, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS [misrepresents] the climate change and air quality impacts of the project and of the no-action alternative. The DEIS repeatedly asserts that if the Whistling Ridge Energy Project is not built, then adverse impacts to climate change and air quality would necessarily result. For example, the DEIS states that "[i]f the No Action Alternative is selected, the growing electricity needs of the region would continue to be met through a combination of other renewable development and a combination of additional fossil fuels." DEIS [on pages] 3-21 [through] 3-22. This completely false dilemma, in various forms, is repeated throughout the DEIS without any factual support. In fact, the regional energy system will reduce greenhouse*

*gas emissions and air pollutants regardless of whether this individual project is built, and primarily through conservation measures. The Northwest Power Planning Council's Sixth Power Plan, which will dictate the portfolio of energy production sources for the foreseeable future, has planned to meet 85% of new demand with conservation and efficiency measures over the next 20 years. Sixth Northwest Power Plan Overview at 1. The remaining 15% of new demand would be met with renewables. Notably, this would be achieved even while the Boardman coal-fired power plant is taken offline by 2020. The Bright Future Report also provides some broader context for the supply and demand aspects of the regional energy grid. Bright Future Report, NW Energy Coalitions, Original Edition, March 2009 – Update 1, July 2009. The Bright Future Report analyzes how the region will meet its energy needs through 2050, factoring in the loss of the Boardman coal-fired power plant, the removal or reduced use of hydropower projects on the lower Snake River, and picking up that lost energy supply through conservation, efficiency, and clean new sources of energy. The Report's bottom line conclusions are that "[t]he region has enough renewable potential to more than meet all current and future power needs" and that the potential for affordable clean energy "[d]warfs" the need. Bright Future Update at 14, 15. Thus, foregoing the 21 average MW of production capacity that would result if the Whistling Ridge project is not constructed would be essentially irrelevant to the overall supply of alternative energy. Furthermore, there is absolutely no evidence in the record showing that the alternative to this particular wind project is continued use of fossil-fuel generation sources or new fossil-fuel generation sources. The real choice is between this particular wind facility and siting other wind facilities in alternative locations with fewer environmental impacts. Thus, it is inappropriate for the DEIS to compare the likely impacts of a wind energy development to the impacts of fossil-fuel generation sources. The region's climate change goals and air quality goals will be achieved regardless of whether the Whistling Ridge project is constructed. Every statement asserting the false dichotomy between constructing the project and a future with higher carbon emissions and air quality problems must be removed from the DEIS. [LTR 179, CMT 81]*

**Response**: Please refer to Section 1.2 for a discussion of the purpose and need of the Project. Indeed the number 1 option described by The Northwest Power Planning Council's Sixth Power Plan is for cost-effective efficiencies. The number 2 option, however, is the development of renewable resources, namely wind power. Although, the integration of wind generation poses load management challenges, BPA has developed a diverse strategy to overcome such challenges and continues to support the transmission of clean, inexpensive power. Additionally, in order to accommodate increased demand for clean, renewable energy, BPA has instigated lofty efforts to bring over 6,000-MWs of wind power generation online by 2013. See the BPA fact sheet included at the end of this Response to Comment Section for additional information on this topic.

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**Comment**: *[In reference to Section 3.2, Air Quality] - Qing Chen, (360) 407-6809, [is available to address concerns related to] Best Management Practice for minimization of track out and windblown dust should be required in applicable permitting. [Whereas, Connie Groven, (360) 407-625, is available to discuss any toxics cleanup. Otherwise], there are no new comments submitted at this time. [LTR 187, CMT 1]*

**Response**: Section 3.2.3 identifies several mitigation measures to avoid, minimize, and compensate for potential construction-related air emissions and dust impacts.

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**Comment**: *[Regarding] climate change - we recognize the significant threat climate change poses to birds and bird habitat, including threatened and endangered bird species. That is why we support well-designed, appropriately sited renewable energy projects as a critical step in reducing carbon emissions. Seattle Audubon is greatly encouraged by the potential for this project to avoid the emissions from combustion of an estimated 114,000 barrels of crude oil or 654 million cubic feet of natural gas, leading to the displacement of over 131,000 tons of carbon dioxide annually. (DEIS at 3-20) The beneficial biological impact of such a displacement to birds and other wildlife in the region appears significant. It is also important to evaluate how the project's contribution to reducing carbon emissions would in turn impact at-risk species in the region such as the northern spotted owl. For example, climate change models predict that as a result of global warming, the Pacific Northwest will experience warmer and drier summers, thereby reducing the food supply for owls, as well as colder and wetter springs, resulting in a reduction in the survival chances of owl fledglings during nesting season (for more details, see http://ir.library.oregonstate.edu/jspui/bitstream/1957/11326/1/EGlennDisseration2009.pdf). While hard to quantify precisely, the FEIS should better evaluate the trade-off between potential benefits from the project to birds from avoided emissions (through reduced carbon output and the resulting effects on forest habitat and food supply) and the potential harm from the project to birds (through loss of existing habitat, habitat fragmentation and potential collision mortality). Your two agencies, together with the project proponent, are well positioned to facilitate a Northwest-specific study comparing the annual bird fatalities caused by wind farms versus those caused by fossil-fueled power stations, similar to the Sovacool study. (DEIS p. 3-276) [LTR 196, CMT 3]*

**Response**: While the proposed Project has the potential to offset emissions from combustion of an estimated 114,000 barrels of crude oil or 654 million cubic feet of natural gas, leading to the displacement of over 131,000 tons of carbon dioxide annually, it is beyond the scope of this EIS to evaluate how the Project's contribution to reducing carbon emissions would in turn impact at-risk species in the region such as the northern spotted owl. It could be concluded that the displacement of 131,000 tons of carbon dioxide annually would have a beneficial biological impact on at-risk species to the degree that changes to existing bird and wildlife habitat from global climate change are moderated. It would be overly speculative to estimate the trade-off between potential benefits from the Project to birds from avoided emissions (through reduced carbon output and the resulting effects on forest habitat and food supply) and the potential harm from the Project to birds (through loss of existing habitat, habitat fragmentation and potential collision mortality). The most that could be concluded would be that the benefits to at risk bird and wildlife species from carbon displacement would potentially offset potential harm from the Project to birds (through loss of existing habitat, habitat fragmentation and potential collision mortality).

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**Comment**: *About this time these objections are usually dismissed with the argument that we must save the world from green house gasses. The problem is that wind power will not accomplish that. Because wind power only produces energy when the wind Is blowing - and even then it produces variable energy - it must have 100% back-up by conventional or nuclear energy sources. In this way, wind power is in fact driving the need for gas (preferred source) electrical plants that produce a lot of green house gasses. [LTR 256, CMT 6]*

**Response**: It is true that wind generation requires back-up energy sources, however BPA currently supplies balancing generation from hydro power. Wind generation in the northwest may require additional backing sources in the future, but at this time are not 'driving the need for gas (preferred source) electrical plants within BPA's balancing authorities.

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**Comment**: *So, now we have come to the crux of the wind generation matter—wind is not a reliable source of energy and needs backup from "natural gas-fired generators; storage resources such as pumped-storage hydro plants; and utility demand response programs…natural gas-fired turbines and reciprocating engines appear to be good options." What is the carbon footprint of these backup systems? [LTR 279, CMT 14]*

**Response**: While these are excellent questions, they are speculative in nature and fall beyond the scope of this EIS. If BPA receives a request to interconnect new generation to the transmission system, back-up or otherwise, each request will be reviewed on a case by case basis and subject to review under NEPA. Furthermore, 100% of wind generation has back-up provided by the vast hydro-electric system within the Pacific Northwest. Therefore, no coal, gas, or any other new generation facility would be required as a result of the proposed Whistling Ridge Project.

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**Comment**: *[In reference to Section 3.2.1] - Just because the DEIS states that "Skamania County does not have any nonattainment areas for air quality" does not mean that the air quality in the Columbia River Gorge is good. The OR department of Environmental Quality and the SW Clean Air Agency have been working for many years on the issue of increasing haze and air quality in the Gorge and the surrounding environments. Most people who reside in the area or swim in the Columbia River will tell you that they have noticed a degradation of the air and water quality. These issues have not been adequately addressed by any government agency, to date. Which does not mean that air (or water) quality of the Gorge is good or bad, from a science viewpoint. It means that it needs to be thoroughly investigated and analyzed. The DEIS fails to do any adequate air [or water] cumulative impacts analyses. [LTR 286, CMT 10]*

**Response**: Please refer to the Background Air Quality section within Section 3.2.1. Air quality in the Project Area is influenced by a variety of sources including power plant emissions, woodstoves, motor vehicles, ships, trucks, agriculture, and other industrial activities. The well-documented haze problem within the Columbia Gorge is largely caused by winter stagnations that trap pollutants and fog, and by westerly winds transporting emissions from the Portland metropolitan area. No air emissions result from wind turbine operation as no fuel is being

burned. Air emissions would occur during construction activities, but these emissions would be temporary in nature and minor relative to other industrial activities (e.g., logging, manufacturing) and therefore would not have a notable effect on long-term air quality.

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**Comment**: *[In reference to DEIS Section 3.2.1] – "Half of all emissions from energy-related activities come from large stationary sources such as power plants" is not a reassuring statement. Half means 50 percent, that is 50%. This is not a small amount. The DEIS does not state, as far as I was able to ascertain, how much BPA contributes to greenhouse gases through its entire energy production process. How many power plants back up BPA's hydro-energy production when there is not enough water, or fish protections prohibit BPA from dumping water over the dam? What is BPA's calculated carbon footprint? Why didn't BPA calculate its total carbon footprint for the DEIS? This is another fatal flaw in this document. The statement that hydropower "produces less carbon dioxide per MW-hour than any other region in the United States" is NOT a conclusive statement about BPA's or the wind farms' total cumulative contribution to greenhouse gases! LESS does not mean that BPA and Whistling Ridge and all the other energy production facilities in the region do not contribute C02 to the total footprint. BPA needs to calculate its cumulative carbon footprint from ALL its energy production facilities and processes. Then we call start to talk about carbon footprints. [LTR 286, CMT 12]*

**Response**: It is important to note that BPA provides transmission services to electrical generation facilities, but does not own or operate any generation facilities. Additionally, the scope of this EIS relates specifically to the Whistling Ridge Wind Energy Project and is not intended to document impacts from other sources. Nevertheless, BPA has made it a priority to quantify GHG emissions associated with all of the agencies activities. As discussed on page 3-17 and 3-18 of the DEIS, BPA has already prepared a climate change roadmap and plans to release annual GHG inventory reports beginning in 2010.

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**Comment**: *[In reference to DEIS Section 3.2.1] - The state initiative to lower greenhouse gases by 2020 through the use of renewable energy sources, while admirable, is perhaps not the only and best way to achieve reduction of greenhouse gases. Going green is not a concept carved in cement. Our ideas can evolve and we can change our minds if a better and safer ideas and technology comes along. [LTR 286, CMT 15]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to DEIS Section 3.2.1] - Where is this document in the DEIS? I was not able to find it. This should be part of the DEIS and if it isn't then the DEIS is not adequate and should not have been rushed out for public comment. This is a critical report on BPA's carbon footprint. One rationale for all of these regional wind farms is that they produce less C02 than other types of energy production facilities and therefore have less of a carbon footprint. Well, we don't really know that, do we? There is nothing in the DEIS that would lead to this*

*conclusion, at least nothing based on facts and figures. All of BPA's greenhouse gas-cal/sing activities SHOULD be in the DEIS, so that a comparison can be made based on facts and figures. [LTR 286, CMT 16]*

**Response**: As stated on DEIS page 3-17, "This document" refers to BPA's climate change road map which can be located at: *http://www.bpa.gov/corporate/pubs/Climate_Change_2008_Initial_Roadmap_final.pdf*. Please also see the response to Comment LTR 286, CMT 12 above. Wind powered turbines do not produce any $CO_2$ as they are solely powered by wind. Therefore, they have a smaller carbon footprint than any combustion generation facility.

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**Comment**: *[In reference to DEIS Section 3.2.2] – So, nitrogen oxides, hydrocarbons, carbon dioxide, particulate matter, and sulfur dioxide would be the primary air pollutants, plus more particulate matter produced by the rock crusher and batch plants! What quantity of each of these would be produced? How much particulate matter would go into our air and affect air quality? Where is the data (and some hard numbers so that we can see what quality of these "primary air pollutants" will be produced! Where are the cumulative impacts analyses on our regional air' and water quality to see how much air and water pollution this project would contribute to our region? There is nothing here to compare, assess, and analyze. This is a DEIS deficiency. [LTR 286, CMT 17]*

**Response**: As discussed in Section 3.2.2, the primary air pollutants from diesel-powered equipment would be nitrogen oxides, hydrocarbons, carbon dioxide, particulate matter (PM) and sulfur dioxide. In addition to these, the rock crusher and batch plant(s) would produce additional PM. These emissions would be similar in nature to those produced by any construction project that involves heavy equipment and transportation of materials to the Project Area. These construction emissions would be temporary and would be limited to the areas adjacent to the construction site. They would not affect a substantial number of persons or persist for an extended period of time and would not result in exceedance of any air quality standards.

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**Comment**: *[In reference to DEIS Section 3.2.2] – So what does "wind energy's carbon dioxide emissions are on the order of 1 percent of coal or 2 percent of natural gas per unit of electricity generated" actually mean? This statement doesn't mean anything without data to compare. Where are the comparison charts for wind, gas, and coal CO2 emissions? I could not find them in the DEIS. [LTR 286, CMT 19]*

**Response**: The sentence, "The American Wind Energy Association estimates that including generation from all sources, wind energy's carbon dioxide emissions are on the order of 1 percent of coal or 2 percent of natural gas per unit of electricity generated (AWEA 2009)," on page 3-21 has been removed from the EIS.

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**Comment**: *[In reference to DEIS Section 3.9.2.2] - It is now accepted (OSU and other universities, scientific studies, etc.) that old growth trees sequester more CO2 than younger trees. The age when young trees begin to become part of the sequestration cycle of CO2 is fifteen years. So, the harvesting of the older trees and the replanting with seedlings would actually put MORE CO2 into the atmosphere. This must be computed into the total carbon footprint of this project; it must also be considered when calculating BPA's carbon footprint. [LTR 286, CMT 59]*

**Response**: Discussing the theoretical sequestering of carbon dioxide from old-growth trees versus that of seedlings in addition to forestry practices are out of the scope of this EIS.

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**Comment**: *Wind farm proponents talk about turbines as if they are do not change air quality, but propellers whirling around do change the chemical composition of air. Where is the analysis to look at this air quality issue? Wind turbines can change the flow of wind in the area where they are located. How do wind turbines changing local wind patterns affect the local area? How does it affect crops? Rainfall? [LTR 314, CMT 7]*

**Response**: Wind turbine operation, including propeller rotation, does not emit any air pollutant nor is there any scientific basis suggesting that it modifies the chemical composition of air. In addition, research suggesting wind facilities influence weather patterns is preliminary and is not considered viable at this time. If future research concludes the contrary, then localized and global meteorological studies would be considered.

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

# BPA's wind power efforts surge forward

As the nation seeks new sources of clean electricity, wind has emerged as the most mature and promising new resource. It is free of $CO_2$ emissions, relatively cost effective compared to other new generating resources and is, thus far, the most viable non-hydro renewable resource available on a large scale. Its assimilation into the U.S. and Pacific Northwest generation resource base is advancing rapidly, thanks to concerted efforts to meet and overcome challenges to dealing with wind's variability.

Others, primarily independent companies, are developing wind resources. The Bonneville Power Administration's major role is to provide the reliable transmission that delivers electricity from wind farms, often located in remote areas, to the region's communities. Bringing a variable and difficult to predict energy resource, such as wind, onto the power grid in large amounts is one of the great engineering and economic challenges in the power industry today. BPA is maintaining a remarkable pace of connecting wind power onto its transmission system and has among the highest levels of wind power in its transmission system compared to load of any grid balancing authority in the country.

## Growth rate fuels progress

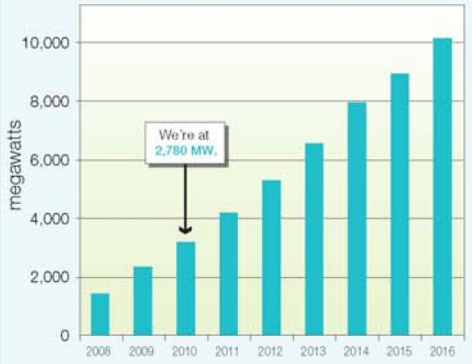
All but one of the states in BPA's service territory have enacted renewable electric generation standards for their retail utilities. These requirements, coupled with those of other Western states, have set off a "gold rush" of wind developers to the region.

The growth rate of wind interconnections is astounding. In 2009 alone, the amount of wind power integrated into BPA's transmission system went from 1,500 megawatts to more than 2,500 megawatts. It is now above 2,700 megawatts. In the next two years, BPA expects a near doubling of wind on its system. By 2013, BPA may have more than 6,000 MW of wind power on its system.

As wind power continues to grow, the energy industry faces dramatic change. This is an exciting time for the industry, and BPA is helping lead the nation into a new age of renewable power.

BPA and the region's wind community have been working aggressively to adapt to wind power's rapid growth. In 2009, the agency released an accelerated

Projected Wind Projects Connected to BPA Grid on Existing Queue and Recent Trends




*Northwest wind power is growing fast.*

18-month work plan for wind integration activities. BPA's Wind Integration Team is tackling five projects to better manage large amounts of wind power in BPA's balancing authority area. All of these projects, summarized below, are on or ahead of schedule.

## Making it work

Given the challenges, how can 6,000 megawatts of wind, and perhaps more ultimately, successfully operate in a balancing area with just under 11,000 megawatts of peak load? BPA is focusing its efforts in four areas to make it work.

- Building transmission to support wind integration.
- Using existing transmission capacity in new ways.
- Exploring new sources of generation capacity reserves.
- Developing partnerships with other utilities and the wind power community.

## Building transmission to support wind integration

The region needs new transmission to meet growing demand for energy, particularly renewable energy. Because BPA owns and operates three-quarters of the region's high-voltage transmission, the agency plays a vital role in facilitating the development of renewable energy. Simply put, wind and other resources will not be developed unless transmission is available to get those resources to market. This is particularly challenging because, on average, wind projects in the BPA service territory only operate at about 30 percent of their capacity.

To determine transmission needed to support additional wind generation, as well as to shore up reliability, BPA initiated a new process called Network Open Season in 2008 to better manage the queue of customers seeking BPA's transmission services. Previously, many potential developers had sought to reserve transmission for plants still in the planning stage or plants that might never be built. The result was a long and unmanageable queue. Under Network Open Season, BPA offers firm network transmission service to customers who request it, but the customers must make a financial commitment for that service. This winnows out the speculative requests for transmission.

In 2009, BPA confirmed financial commitments for 6,410 megawatts of transmission service requests. Three-quarters of the requested service capacity were for wind generation.

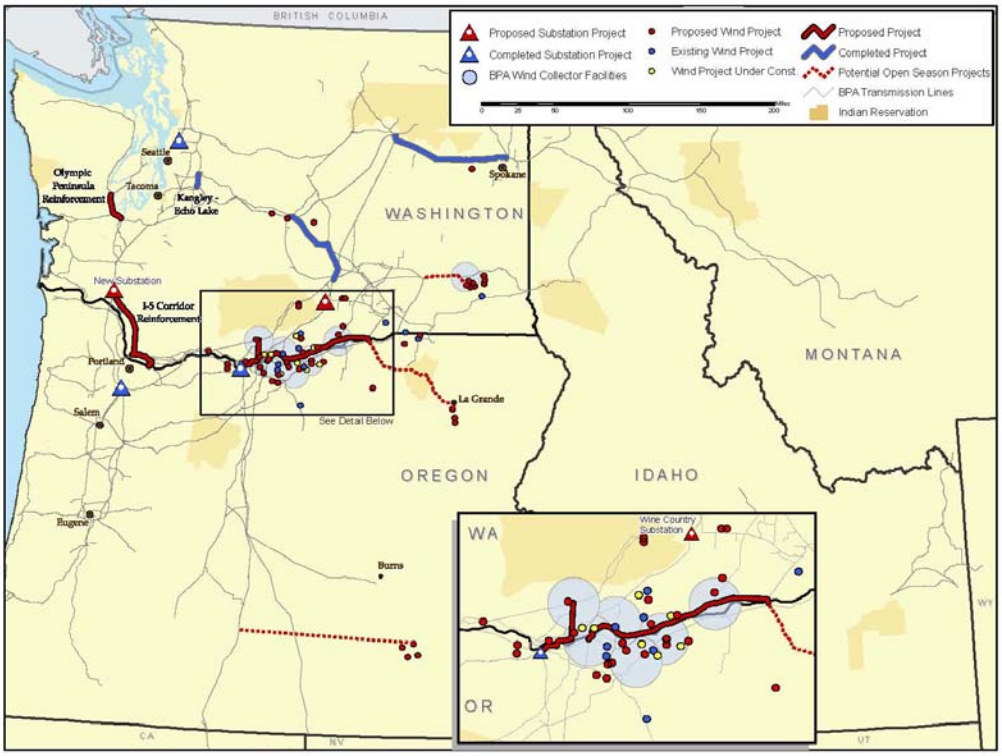
BPA was able to accommodate more than 20 percent of the requests with existing capacity. It was also able to offer a new "conditional firm service" to provide still more transmission service from existing capacity of the system. Conditional firm allows some curtailment of service under certain conditions. This allowed BPA to make the most efficient use of its existing system before proposing new construction.

Network Open Season did show, however, that BPA needs to move forward with four new transmission projects. Together, these projects would bring 1,800 megawatts of new wind generation to the region. BPA is ahead of schedule on the construction of the first project and is conducting environmental work on the others. The feasibility of these projects was enhanced by access to increased borrowing authority granted BPA under the American Recovery and Reinvestment Act. BPA will pay this money back with interest to U.S. taxpayers, but the expanded borrowing authority provides increased capital for critical projects. BPA is completing its second Network Open Season and plans to conduct the process annually.

> BPA wind initiatives are stretching the capability of the existing system.

## Changing grid management for wind power integration

BPA's Wind Integration Team is developing new processes and systems to wring as much efficiency as possible out of existing transmission and generating reserve assets. Basically, BPA is stretching the capability of the existing system through efficiencies from operational improvements. If these initiatives succeed and are implemented over the long term,




*Most of the wind power in the Northwest is clustering in the heart of BPA's grid.*

they could make a significant dent in the amount of balancing reserves needed to support a tripling of the wind generation interconnected to BPA's system.

## New protocols manage extreme wind ramps

BPA has seen unscheduled wind generation swings of more than 1,000 megawatts in less than an hour on its system. New operating protocols introduced in 2009 help manage sudden fluctuations in wind generation. When wind picks up and unscheduled generation threatens to deplete BPA's balancing reserves, BPA dispatch now automatically sends an electronic signal to wind plants to reduce their generation to scheduled levels. So far, BPA dispatchers have applied the protocols several times a month. Likewise, when large decreases in scheduled wind generation deplete BPA's ability to provide balancing energy, BPA revises the wind schedules downward, and receiving utilities must make up the difference with their own resources.

## Shorter scheduling intervals

Historically, utilities schedule power deliveries by the hour. As a pilot project, BPA is allowing within-hour changes to power schedules for wind projects that are exceeding their hourly schedule. Intra-hour scheduling can help wind generators avoid curtailment of excess generation and could make it possible for them to sell excess power that otherwise might be limited. This has the potential to help reduce reserve requirements and generation imbalance charges. BPA is evaluating possible expansion of this project.

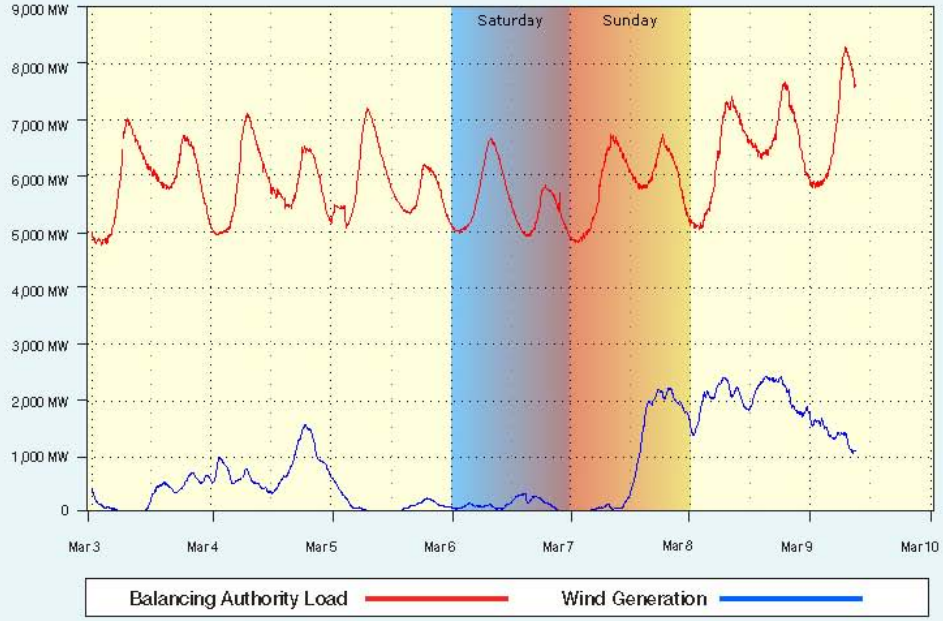
## The challenge

Wind is a variable power resource that is hard to predict. That's a challenge because, unless generation matches demand second by second, the transmission system will destabilize. If the system becomes unbalanced, blackouts can result. Think of it in terms of a computer. We use surge protectors to prevent a sudden increase in electricity. Some sensitive electronic equipment also incorporates voltage sag protectors. Without these protections, equipment can suffer the equivalent of a "black out."

To maintain system balance in the high-voltage grid, utilities use balancing reserves, or generation held available to manage fluctuations between power load and power generation. In the Northwest, the hydro system has historically provided all the balancing reserves we need, because hydro generation can be increased or decreased quickly. But the hydro system has limits. To support continued large-scale wind power growth, we are learning to operate the existing system in new ways.

As with most coastal climates, Northwest winds are not steady. They tend to ramp up or down quickly and often unexpectedly. System operators are inventing new techniques to maintain the constant balance needed between power loads and generation levels. Some solutions already have been put in practice; others are on the way.

BPA Balancing Authority Load & Total Wind Generation
March 3–10, 2010




*BPA now operates the hydro system to respond to and balance both variations in power loads and unexpected changes — up and down — in wind power output.*

### New wind forecasting applications

Wind output is difficult to predict, making it hard to schedule accurately. This uncertainty increases the amount of reserves BPA must hold to keep loads and generation in balance. BPA has installed 14 anemometers throughout the region to better predict wind availability and is using the data to develop a more accurate wind power forecast system for the Columbia Basin.

### Dynamic transfer

Dynamic transfer is one of the most important techniques to reliably and cost-effectively integrate large amounts of variable renewable generation resources. This technique would allow a dispatcher in one balancing authority to control and take responsibility for supplying balancing reserves for a generator located in another balancing authority. A study identifying available dynamic transfer capacity on 11 key transmission paths completed in February 2010 found moderate amounts of available dynamic transfer capability. BPA is making this capability available to its customers on a pilot basis.

Managing large wind fleets is proving most efficient when handled across large geographic areas.

### Customer-supplied imbalance reserves

Also known as self-supply, this project would allow wind generators in the BPA balancing authority area to supply their own imbalance reserves rather than relying on BPA for such services. BPA plans to launch this project on a pilot basis in October 2010, once the necessary technical adjustments are in place on both BPA and participating wind project systems. Wind project owners likely will use the Joint Initiative's Dynamic Scheduling System to facilitate supplying their reserves.

There are more than 30 discrete balancing authorities in the Western Electricity Coordinating Council (see box, page 6.). The result is numerous system operators, each of whom has individual requirements to maintain a constant balance between load and generation. This fragmentation is a challenge for the development of wind power in the Northwest, because wind generated in one balancing authority often serves consumers in another balancing authority that may be located across several intervening balancing authorities.

## Exploring generation capacity reserves

Wind project operators in BPA's balancing authority pay for integration services for their projects, so that the consumers who pay to purchase wind power both receive the benefits of wind power and pay the costs of the resource. For 2010–2011, the rate reflects the costs of generation imbalance reserves provided from federal hydropower resources.

As the wind resource grows, even with efficiencies, new resources likely will be needed to provide balancing services for variable renewable resources. In preparation, BPA has begun to explore options for adding flexibility capacity.

### Key terms

**Balancing Authority:** A balancing authority is an entity that is responsible for maintaining a constant balance between power load and power generation in a geographic area. It is usually a utility or other transmission provider such as a regional transmission organization. There are 14 balancing authorities in the Pacific Northwest. BPA's balancing authority area includes primarily rural portions of Oregon and Washington, plus small portions of northern Idaho and northwest Montana.

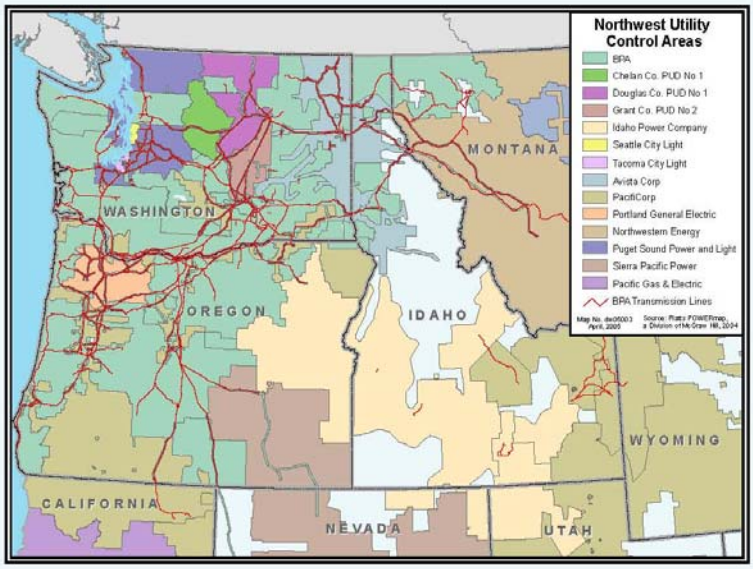
**Balancing Reserves:** Generation held available to be ready to use if needed to maintain the balance between power load and power generation as loads fluctuate and/or as real-time generation differs from scheduled generation.

## Part of a much larger picture

Most of the Northwest's wind generation is in rural portions of eastern Oregon and Washington, while most consumers of wind power are in larger metropolitan areas in balancing authorities managed by other utilities. Worldwide, managing large wind fleets is proving most efficient when handled in unified systems that cover large geographic areas with millions of people and many, diverse power sources, such as in Spain and Texas.

Utilities in the Northwest are working together to realize similar benefits across their smaller balancing authorities. BPA is among many Western utilities participating in a Joint Initiative of ColumbiaGrid, WestConnect and the Northern Tier Transmission Group — entities managing and coordinating some transmission issues among utilities — to develop common approaches to wind integration. For example, the Joint Initiative is creating a common system for dynamically scheduling control of a wind generator from a resident balancing authority to another balancing authority where the wind power is being consumed.

On a still larger scale, utilities throughout the Western Interconnection — the interconnected power system of the Western United States, British Columbia, Alberta and small parts of Mexico — are working to redesign transmission and power resource planning and adapt the way the grid works to help meet state and national renewable power objectives. The Western Electricity Coordinating Council, the reliability organization for the Western Interconnection, is leading this effort.




*BPA is the balancing authority responsible for maintaining a constant balance between the power load and power generation in the area shown in teal. (A balancing authority is also known as a control area.) Most of the wind power on line and planned for the Pacific Northwest is clustered in BPA's balancing authority at the eastern end of the Columbia River Gorge. However, 80 percent of the wind power in BPA's balancing authority area serves loads in other utilities' balancing authorities.*

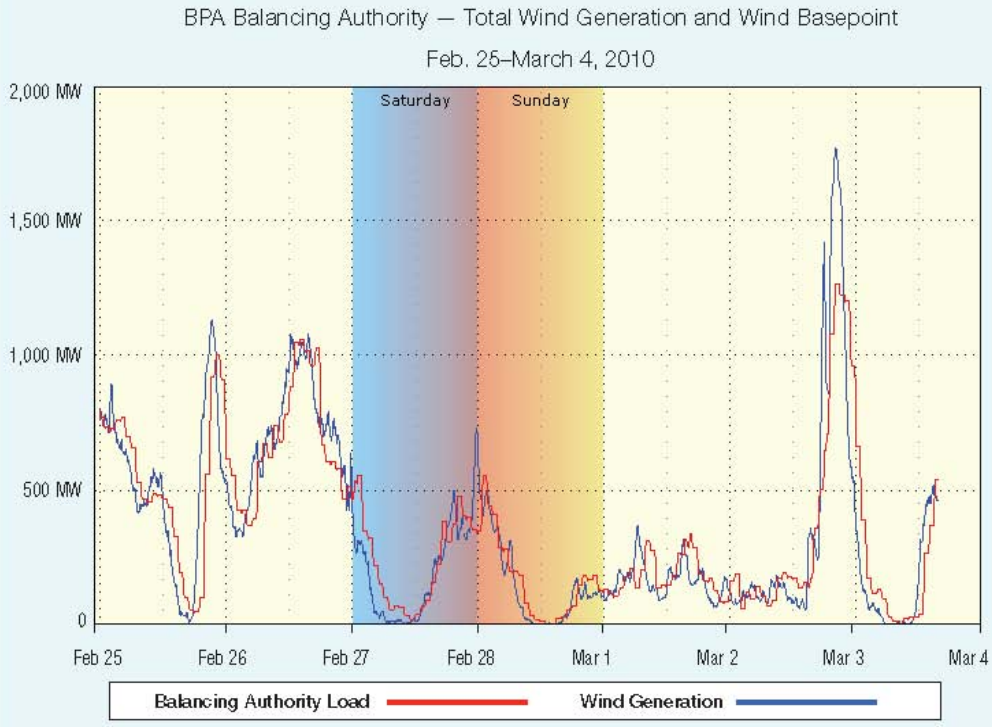
Energy storage technologies could be a valuable source of such flexibility to the degree they can absorb excess wind energy when it is not needed and return it to the grid during periods of greater demand. For example, BPA is working with the Pacific Northwest National Laboratory on its study of various options including pumped storage, compressed air storage, batteries and flywheels. PNNL is also examining residential applications such as hot water heaters as potential sources of energy storage for the grid.

BPA is working with the U.S. Army Corps of Engineers and the Bureau of Reclamation on the potential for pumped hydro storage in the Northwest. This represents a new application of an existing but evolving technology that could help fill the need for more frequent uses of ramping generation to respond to wind variability.

BPA has begun to explore options for adding flexibility capacity.

## Follow our progress

To follow BPA's wind integration work or participate in its efforts, go to *www.bpa.gov/go/wind*, contact Eric King at *evking@bpa.gov* or call BPA at 1-800-622-4519.




*Scheduling wind power to track closely to nature's changes in wind speed is a challenge. Blue line is actual generation, red is wind power scheduled in BPA's balancing authority.*

BONNEVILLE POWER ADMINISTRATION
DOE/BP-4146 • MARCH 2010

## G.3.3 WATER RESOURCES

**Comment**: *[In reference to DEIS Section 3.3.1.1] – There is no mention of the unnamed stream west (and down slope) of the A1-A7 turbine group. This stream initiates as a spring and flows year round, and eventually empties into the Columbia River. In addition, it flows through World Stewardship Nature Preserve land (soon to be purchased by Columbia land Trust). Please add this consideration to your study. [LTR 60, CMT 2]*

**Response**: All known and field verified surface water resources in and near the Project Area (including those west and down slope of the A1-A7 turbine string) are shown in Figure 3.3-1. Most of these drainages are small perennials streams or seasonal streams with short periods of spring or storm runoff. The construction and operation of the wind turbines, access roads, and other project features are not anticipated to impact surface or ground water resources in or near the Project Area.

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**Comment**: *[In reference to DEIS Section 3.3.1.3], the same unnamed stream mentioned above has been overlooked since it does originate at groundwater. Please add this to your study. [LTR 60, CMT 3]*

**Response**: Please see response to Comment LTR 60, CMT 2 above.

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**Comment**: *The geologic and soils information is troubling even when one has seen the steep hillsides that this project proposes to disturb. Construction will require blasting, which can destabilize fragile habitats, and unpredictable effects may result over large periods of time. The soil types present at or immediately adjacent to the construction sites are not stable and the planned mitigation measures which aim to control erosion and slides may be difficult, if not impossible to achieve, as can be already seen at numerous locations in this portion of the country. Although downplayed in the EIS, significant erosion events will surely degrade water quality and adversely affect downstream functions as well as local aquatic invertebrate populations. [LTR 76, CMT 6]*

**Response**: Please see response to Comment LTR 60, CMT 2 above.

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**Comment**: *[In reference to DEIS Section 3.3.1.1] -There is no mention of the unnamed stream east (and down slope) of the A1-A7 turbine group. This stream initiates as a spring and flows year round, and eventually empties into the Columbia River. In addition, it flows through World Stewardship Nature Preserve Land (soon to be purchased by Columbia Land Trust). Please add this consideration to your study. [In reference to DEIS Section 3.3.1.3], the same*

*unnamed stream mentioned above has been overlooked since it does originate at groundwater. Eliminating the A1-A7 turbine would eliminate any effects on the following factors would eliminate the impact to these important water resources. [LTR 124, CMT 2]*

**Response**: Please see response to Comment LTR 60, CMT 2 above.

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**Comment**: *There is no mention of the unmapped stream west and down slope of the A-1 through A-7 turbine group. This stream initiates as a spring and flows year around and eventually into the Columbia. In addition, it flows though World Stewardship Nature Preserve Land which will soon be purchased by Columbia Land Trust. Please add this consideration to your study. [LTR 317, CMT 23]*

**Response**: Please see response to Comment LTR 60, CMT 2 above.

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**Comment**: *On ground water the same unmapped stream mentioned above has been overlooked since it doesn't originate as ground water and springs. Please add that to your study. [LTR 317, CMT 24]*

**Response**: Please see response to Comment LTR 60, CMT 2 above.

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**Comment**: *We are also concerned about whether there will be effects to groundwater and surface water. We request that the EIS carefully evaluate what effects the Project would have on wildlife and the ecosystem. [LTR 119, CMT 7]*

**Response**: The Water Resources section addresses surface water (Section 3.3.1.1, DEIS page 3-24) and groundwater issues (Section 3.3.1.3, DEIS page 3-26). The impacts to surface waters and groundwater are listed in Section 3.3.2.1 and state that "Temporary roadways would be built to provide additional access for heavy machinery during construction. Of these improvements, only the planned improvement to West Pit Road may directly affect water resources."

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**Comment**: *[In reference to DEIS Section 3.3.1.3, this section] lacks sufficient information on the existing groundwater environment to support the finding of little or no impact. Suggest the section more fully address the depth to groundwater, flow direction, and transmissivity (permeability) of the aquifer as it relates to possible affects on the area domestic and agricultural ground-water resources (also see DEIS Section 3.3.1.5). Helsel et.al. (2002) is a good reference for this type of analysis. Pg. 3-29: Because [S]ection 3.3.3 addresses mitigation procedures for the isolation of groundwater from chemical spills, we assume that chemicals will be present on site during both construction and operation. Suggest the document include a discussion of potential chemical spills, and aquifer transmissivity (permeability), as it relates to*

*the potential movement of contaminants toward nearby domestic or agricultural water wells. [LTR 164, CMT 4]*

**Response**: As mentioned in Section 5.4.2 of the geotechnical report prepared in support of the Application for Site Certification, during the excavation of test pits at the site, no ground water was encountered up to a depth of 16 feet below ground surface. Presence of groundwater will be determined during subsequent geotechnical investigations to be performed in support of final foundation design. Potential spills to groundwater during construction would be controlled through standard construction BMP's. A Spill Prevention, Control and Countermeasure (SPCC) Plan will be prepared prior to construction.

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**Comment**: *[In reference to Section 3.3] - Roberta Woods, (360) 407-6269, [is available to address concerns related to] any discharge of sediment-laden runoff or other pollutants to waters of the state [as governed by Chapter 90.48 RCW, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington]. Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent stormwater runoff from carrying soil and other pollutants into surface water or storm drains that lead to waters of the state. [LTR 171, CMT 4]*

**Response**: Coordination efforts with Washington Department of Ecology will be made to ensure that erosion control practices are in place prior to any construction activities if this proposed Project were to move forward. Furthermore, as discussed in Section 3.1.3, EFSEC will require the Applicant to obtain coverage under Ecology's Construction Stormwater General Permit. The Stormwater General Permit (NPDES) will include BMPs to minimize erosion and runoff from Project Areas.

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**Comment**: *[In reference to Section 3.3] - Vicki Cline, (360) 407-0278, [is available to address concerns related to] all water wells shall be constructed in accordance with the provisions of Chapter 173-160 WAC by a driller licensed in the State of Washington. Well reports must be submitted to Ecology within 30 days after completion of a well. All water wells that may be drilled must be a minimum of 100 feet from any known, suspected, or potential source of contamination. Wells shall not be located within 1,000 feet of a solid waste landfill. WAC 173-160-171(1) The proposed water well shall be located where it is not subject to ponding and is not in the floodway, except as provided in Chapter 86.16 RCW. (2) It shall be protected from a one hundred year flood and from any surface or subsurface drainage capable of impairing the quality of the ground water supply. The Growth Management Act (Section 63) requires an applicant to submit evidence of an adequate water supply before a building permit can be issued for any building requiring potable water. Any ground water withdrawals anticipated exceeding 5,000 gallons a day for domestic uses or for commercial/industrial uses*

*require a water right permit. Any modification to existing water rights must be approved by Ecology's Water Resources Program. [LTR 187, CMT 3]*

**Response**: The O&M facility will include a water well exempt pursuant to RCW 90.44.050 (withdrawing less than 5,000 gallons per day) for water supply. Sanitary wastewater from the maintenance facility will be discharged to an on-site septic system. The RCW reference on page 3-28 in the DEIS has been revised to reflect the correct citation.

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**Comment**: *The DEIS indicates that water quality may be adversely affected if construction alters the hydrology of springs and surface runoff such that erosion carries sediment to nearby waterbodies. We recommend that this aspect of the project be monitored to assure that water quality is protected. Please also note that anti degradation provisions of the Clean Water Act apply to those waterbodies where water quality standards are currently being met, and prohibit degradation of their water quality. [LTR 189, CMT 6]*

**Response**: Mitigation measures related to erosion control and their potential effect on water quality standards are discussed in both the Earth section (Section 3.1.3) as well as the Water Resources section (Section 3.3.3). Furthermore, for any Project construction activities, EFSEC will require the Applicant to obtain coverage under Washington Department of Ecology's Construction Stormwater General Permit. No later than sixty (60) days prior to the beginning of Site Preparation, the Certificate Holder would develop and submit for EFSEC approval a Construction Stormwater Pollution Prevention Plan (Construction SWPPP). The Construction SWPPP would meet the requirements of the Ecology stormwater pollution prevention program (chapter 173-230 WAC), and the objectives and requirements in Special Condition S.9. of the National Pollutant Discharge Elimination System and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activities issued by the Department of Ecology on November 16, 2005 or as revised. The Certificate Holder would not begin Site Preparation prior to obtaining Council approval of the Construction SWPPP. The Construction SWPPP would include measures for temporary erosion and sedimentation control. The Construction SWPPP would identify a regular inspection and maintenance schedule for all erosion control structures. The schedule would include inspections after significant rainfall events. Any damaged structures would be addressed immediately. Inspections, and subsequent erosion control structure corrections, would be documented in writing and available for EFSEC's review on request.

Construction activities in the State of Washington related to the construction of the BPA substation is overseen by EPA. EPA retains enforcement and permitting authority for Federal facilities. BPA would prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to control stormwater pollution associated with construction activities. The SWPPP would be prepared to meet the requirements of the U.S. EPA Construction General Permit (CGP) of the NPDES permitting program. The SWPPP addresses project requirements utilizing low impact construction methods and project-specific erosion and sediment control measures. Best Management Practices (BMPs) for erosion control for the various activities will be developed. The BMP specifications to be utilized are taken from The Department of Ecology's "Stormwater

Management Manual for Eastern Washington," Chapter 7, Sept. 2004, Publication 04-10-076. As part of the SWPPP, a Spill Prevention and Response section will be prepared to address petroleum and hazardous materials handling and management procedures for this project.

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**Comment**: *BPA should coordinate with Washington State Department of Ecology (Ecology) and Tribes affected by the project to assure that the state and tribal water quality standards would be met during implementation of the proposed action. Since the project anticipates obtaining a National Pollutant Discharge Elimination System (NPDES) permit for planned construction activities likely to disturb 1 or more acres, the final EIS should include updated information on such permit application process and conditions to protect water quality. [LTR 189, CMT 7]*

**Response**: Coordination efforts with Washington Department of Ecology will be made to ensure that erosion control practices are in place prior to any construction activities if this proposed Project were to move forward. Mitigation measures related to erosion control and water quality standards are discussed in both the Earth section (Section 3.1.3) as well as the Water Resources section (Section 3.3.3). Any Tribal water quality standards will be taken into consideration.

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**Comment**: *The [Skamania] Board [of Commissioners] finds [that] in addition to the comment concerning the Scenic Area and the Interstate Highway corridor, [the US Department of] Interior provided specific comments related to purported groundwater issues-issues raised by local citizen neighbor opponents at the NEPA/SEPA comment hearing. Skamania County has regulatory responsibility for groundwater issues, and will work with EFSEC to address the citizen comment. This is not a federal issue. Interior has no authority to insert itself into this uniquely local issue, and its decision to do so demonstrates its lack of regard for Skamania County's authority: strongly suggesting inappropriate collaboration with Whistling Ridge project opponents. [LTR 197, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *Well, I don't want to burst anybody's bubble of happiness, but where are you all planning on getting the water that's necessary to produce pumped-storage hydro power? There is no chance on this green Earth that any water is coming out of the Columbia River. There are already too many users and abusers feasting on the Columbia. This is probably a non-starter idea. But, it should have been addressed in the DEIS. BPA's failure to do so is irresponsible. [LTR 279, CMT 18]*

**Response**: Water to be used during construction of the proposed Project will be purchased from an outside vendor as outlined in Section 1.4.1.5. During operation of the proposed Project,

a well will be drilled on site to provide water primarily for the bathrooms, showers, and kitchen within the Operations and Maintenance building (see Section 3.3.2.1).

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**Comment**: *Watersheds are very important and should be protected from industrial wind farms. [LTR 281, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *No watershed studies have been done for this Project Area, even though the Soil Surveys clearly state that this is a watershed area. [LTR 281, CMT 18]*

**Response**: Water resources that occur within the proposed Project Area are outlined in Section 3.3 - Water Resources. This section relies on information collected during field surveys which are found in Appendix C - Wildlife Reports (Section C2 - Wetland Delineation Report). Specifically, runoff that occurs within the proposed Project Area is outlined in Section 3.3.1.2 - Stormwater Runoff.

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**Comment**: *[In reference to Section 3.3,Water Resources] - In 2007, Underwood had a really dangerous water situation, as reported in The Columbian newspaper: [short article text included] "Underwood water deemed safe to drink" The Columbian State health officials Wednesday lifted a boil-water advisory issued Friday for the Underwood area after tests showed the water is now safe to drink. Major firefighting efforts in the Columbia River Gorge last week drained local water supplies, causing Underwood's water system to lose pressure in some areas. The pressure loss could have allowed contaminants to enter the water, so the state Department of Health and the Skamania County Public Utility District issued the boil- water advisory as a precaution. The Underwood system serves 876 residents. Water supplies have returned to normal, officials said, and excess air has been flushed from the system. Water samples sent for bacterial analysis came back indicating the water is safe. Originally published by KATHIE DURBIN, Columbian staff writer, 9/27/2007. (c) 2007 Columbian. Provided by ProQuest Information and Learning. All rights Reserved. Source: Columbian. The DEIS has no data on the watershed in this area and from which or what type of source, in actuality, the residents get their water. This is a fatal flaw in data gathering and analysis. What would be the cumulative effects, on the water resources that these 876 Underwood residents use, of all the impermeable surfaces—wind turbine pads, substation, maintenance roads, etc. -- that would result from the construction of this proposed wind farm? This is a critical question for fire fighters and the residents. We all know that there will be future fires. What if one of the turbines causes a fire in the woods? Where is the water going to come from to combat this type of fire? Would the Underwood reservoir be depleted thus affecting the residents and their health and safety?[LTR 286, CMT 21]*

**Response**: Please see response to Comment LTR 281, CMT 18 above. The EIS addresses only the water resources currently found within the proposed Project Area and also addresses the future needs and impacts to all water resources found within the proposed Project Area. Any discussion as to how the residents of Underwood, WA, get their water is outside the scope of this EIS. With respect to runoff and cumulative impacts to water resources - runoff from the Project Area are described for the proposed action while in its construction phase, while the proposed Project is in its operational phase, and while the Project is being decommissioned (see Section 3.3.2.1). Cumulative Impacts to water resources are outlined in Section 3.14.3.3 for both surface waters and ground water resources. Lastly, fire fighting and fire prevention plans for the proposed Project are outlined in Section 3.6 - Public Health and Safety. Fire prevention is discussed at length in Section 3.6.1.2 and fire prevention plans are listed under the Mitigation Measures to be implemented within Section 3.6 - Public Health and Safety. The fire prevention plans will be developed in conjunction with the Skamania County Fire Marshall as well as with other appropriate local fire prevention agencies and all plans will be shared with DNR.

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**Comment**: *[In reference to Section 3.8.3.1, Proposed Action] - Since there is no watershed data, the proponent cannot say that the project would or would not cause changes in water use. The proponent does NOT know how this project would affect any aquifer's), water tables, or wells, in the area. [LTR 286, CMT 56]*

**Response**: Please see response to Comment LTR 281, CMT 18 above.

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**Comment**: *Construction of this facility would create unacceptable impacts on ground water supplies, and contribute to the already high fire hazard. [LTR 283, CMT 15]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to DEIS Section 3.3.1.1, Surface Water] - LIDAR reconnaissance would be useful to determine drainages and streambeds. It could also be used for the geologic survey. Why isn't LIDAR a requirement for this DEIS? [LTR 286, CMT 22]*

**Response**: BPA follows the rules and guidelines set forth by the Council on Environmental Quality (*http://ceq.hss.doe.gov/ceq_regulations/regulations.html*) and EFSEC follows the rules and guidelines set forth by the Washington State Legislature (*http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21C*) for developing their respective environmental documents. The use of LIDAR for analysis of surface waters, drainages, and other landscape-water features is not a requirement for use as a tool of analysis by these agencies (or by any other federal or state agencies for that matter).

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**Comment**: *[In reference to DEIS Section 3.3.1.3, Groundwater] - Why weren't the field investigations done during the rainy season? How does one find perched water tables and if they "may be present at greater depth" shouldn't they be found since SDS and BPA are proposing to put structures that weigh quite a few tons unto unstable ground that is subject to mass wasting? The groundwater issue needs to be addressed with further field studies and deeper coring. Where is the watershed map for this area? What is the extent of the watershed for this area? The 50+ turbine pads are 50 X 50 feet and this would introduce a large quantity of impermeable surface area to unstable ridges. How would these impermeable surfaces affect water saturation and water flow in the watershed? Is this area included in the Water Resource Inventory Area (WRIA) 29? [LTR 286, CMT 23]*

**Response**: As stated in Section 3.3.1.3, a subsurface investigation conducted in September 2007 that included twelve test pits excavated from 7 to 16 feet in depth did not encounter groundwater in any of the test pits. Because most ground disturbing activities would occur during the drier times of the year, groundwater is not expected to be a construction constraint. Prior to the final siting process, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted. If this investigation indicates the potential for slope instability at turbine sites or other Project facilities such as access roads (including improvements to West Pit Road), these facilities will be redesigned or relocated to avoid this risk. Figure 3.3-1 was included in the EIS to show the surface water resources in and near the Project Area. Watershed boundaries were not included on this map. The Project Area is located in the Wind/White Salmon Water Resource Inventory Area #29.

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**Comment**: *[In reference to DEIS Section 3.3.1.5, Private and Public Water Supplies] - Well, where do these "private water supplies" come from? From perched water tables? Other types of groundwater? Are these wells interconnected? Could the construction and excavation from Whistling Ridge affect these wells? [LTR 286, CMT 24]*

**Response**: Water to be used during construction of the proposed Project will be purchased from an outside vendor as outlined in Section 1.4.1.5. During operation of the proposed Project, a well will be drilled on site to provide water primarily for the bathrooms, showers, and kitchen within the Operations and Maintenance building (see Section 3.3.2.1). Additionally, as outlined on page 3-29 of the DEIS, project water usage is not expected to affect water levels in private wells in the vicinity of the Project.

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**Comment**: *[In reference to DEIS Section 3.3.2.1, Proposed Action] - So there is an aquifer. If there is an aquifer then there is groundwater. What is this aquifer, what is its extent? Do the other wells in the area use this aquifer for their water? [LTR 286, CMT 27]*

**Response**: Please see response to Comment LTR 286, CMT 24 above.

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**Comment**: *[In reference to DEIS Section 3.3.2.1, Proposed Action] - What are these "mitigation measures" that will be proposed if there are water impacts? What kind of impacts to water resources is SDS anticipating? Why not list these mitigation measures now so that we can all see if they would be adequate? The DEIS should include information on impacts to water resources. [LTR 286, CMT 29]*

**Response**: Mitigation measures for Water Resources are outlined in Section 3.3.3 (and have been available since the release of the DEIS.

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**Comment**: *[In reference to DEIS Section 3.3.4, Unavoidable Adverse Impacts] - Now see, this is why this DEIS is so frustrating. Since there is no watershed map and the proponents don't know whether there is an aquifer or perched water tables or other sources of groundwater, they cannot make such a blatantly inaccurate statement. There is no data in this DEIS that could be used to conclude "negligible to minor impacts to water resources." The proponents don't have any way of knowing whether "impacts are localized and the disturbance short term" because they have NOT done a CUMULATIVE IMPACTS ANALYSIS for impacts and effects of this project and all other such projects in the region. [LTR 286, CMT 32]*

**Response**: Figure 3.3-1 lists the drainages that occur nearby and within the Project Area.

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**Comment**: *Very little to no analysis is given to the environment affects of increasing the road mileage on the area (DEIS, Page 3-226-3-227). The Final Environmental Impact Statement should include the analysis of sediment from gravel as well as paved road leaching into streams. [LTR 302, CMT 13]*

**Response**: Mitigation measures related to erosion control and their potential effect on water quality standards are discussed in both the Earth section (Section 3.1.3) as well as the Water Resources section (Section 3.3.3).

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**Comment**: *The submitted scoping notice identifies the intent of preparing a floodplain and wetland assessment as part of the analysis used in the draft environmental impact statement (DEIS). The assessment should include: An inventory of all wetlands and areas of floodplain in the project area and within the vicinity of the proposal; the environmental values these aquatic features provide to the landscape; what and how the floodplain areas and wetlands will be impacted by the proposal; what environmental values will be lost from these impacts; and mitigation measures to offset the proposed environmental impacts that cannot be avoided. The DEIS should also include an analysis of all other surface water bodies in, and within the vicinity of, the project site. An equivalent documentation of existing environmental values, proposed impacts, and proposed mitigation measures to unavoidable impacts should be outlined in the DEIS as requested for the wetlands and floodplain areas above. [LTR 171, CMT 2]*

**Response**: Wetland inventories were conducted both within the Project Area as well as near the vicinity of the Project Area (see Figures 3.4-2, 3.4-3a and 3.4-3b) and are described in Sections 3.3.1.1 and 3.4.1.3. Floodplain areas were identified in Section 3.3.1.4 and lie outside of the 100-year floodplain for the White Salmon, Little White Salmon, and Columbia Rivers. The description of the environmental values of these water features are described in Section 3.3.1. The impacts to these water features are described in Section 3.3.2. The mitigation measures to be used due to impacts are described in Section 3.3.3. Unavoidable impacts to these described water bodies are seen in Section 3.3.4 and state that construction and operation of the Project would only result in negligible to minor impacts to water resources because the impacts are localized and the disturbance is short-term.

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**Comment**: *[In reference to DEIS Section 3.4.2.1, Wetlands, where it was stated that] no wetlands or wetland buffers are located within the project footprint. [This is a] misleading statement. A wetland is included in the project footprint, as it is within the project area borders. This wetland has been and will continue to be impacted if the project is permitted. SDS obtained a permit to harvest timber in the WMZ from DNR. This disturbing activity may have, like most logging operations, damaged the WMZ that could remove silt in runoff from construction activities. Reference – DNR Maps and FPA's. Remedy - Update and correct this section with the most recent forestry actions that are planned or have occurred. Correct and place this information in DEIS and resubmit for comments. [LTR 178, CMT 108]*

**Response**: There are no wetlands or wetland buffers within any of the Project footprint. This assessment is accurate. There is, however, a wetland classified as "palustrine unconsolidated bottom, semi-permanently flooded, impounded (PUBFh) wetland on the National Wetland Inventory (NWI)" and as a "Category II wetland according to the Washington State Wetland Rating System for Eastern Washington." This wetland, referred to as a "cedar swamp" is within the Project Area, but it is not within the Project footprint (or more specifically, it is not within the 650' turbine string corridor for turbine string C1-C4.

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**Comment**: *[In reference to DEIS Section Section 3.4.2.1, Wetlands, where it was stated that] no wetlands or wetland buffers are located within the project operation area. . [This is a] misleading statement. A wetland is included in the project operation area, as it is within the project area borders and a possible wind impediment. This wetland has been and will continue to be impacted if the project is permitted. SDS obtained a permit to harvest trees in the RMZ of the wetland (or is it called a WMZ?) from DNR (FPA #2704045 and #2704443). Because this wetland is along a road accessing project area from the east, it raises the question of whether the logging [occurred] to improve the road for WRE access or for logging operations or in the words of a long time local "to remove an environmental problem" (sensitive species). Remedy - Update and correct this section with the most recent forestry actions that are planned or have occurred. Correct and place this information in DEIS and resubmit to public for comments. [LTR 178, CMT 109]*

**Response**: Please see response to Comment LTR 178, CMT 108 above. The focus of this EIS is related to impacts from the construction, operation, and decommissioning of the proposed wind facility and its related interconnection transmission request. The focus of this EIS does not take into consideration the logging operations in which the applicant is currently engaged. There is mention of the applicants current logging activities (see Sections 1.4.2 and 2.2, and in multiple areas within Chapter 3), but they are outside the scope of this EIS.

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**Comment**: *[In reference to the statement that] "roadway improvements to the County or private logging roads are not expected to affect wetlands. This information was confirmed through field investigations performed in May and July 2009." - This Report is not cited as existing in Appendix. Remedy - include this report in DEIS and resubmit to public for comments. [LTR 178, CMT 110]*

**Response**: Both the DEIS and associated appendices were released to the public for comment on May 25, 2010. The appropriate mitigation measures will be in place for any road improvements to ensure little-to-no erosion run-off and also to protect any water resources in the vicinity of these road improvements. See Section 3.3.3 for a listing of all mitigation measures to be used related to water resources.

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## G.3.4 BIOLOGICAL RESOURCES

**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat and result in direct and indirect impacts to multiple wildlife species through habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. In addition, locating 426-foot-tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 2, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant positive impacts to sensitive wildlife and plant habitat. [LTR 3, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the cascade mountains. The project would permanently disturb large areas of forested habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. In addition, locating 426-foot tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 4, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the cascade mountains. The project would permanently disturb large areas of forested habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. In addition, locating 426-foot tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 5, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. In addition, locating 426-foot tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 6, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat and result in direct and indirect impacts to multiple wildlife species through habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. In addition, locating 426-foot tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 9, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Early research is documenting how these turbines kill birds and bats. [LTR 12, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project could cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. [LTR 13, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat and result in direct and indirect impacts to multiple wildlife species through habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. In addition, locating 426-foot tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 13, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat and result in direct and indirect impacts to multiple wildlife species through habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. In addition, locating 426-foot-tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 19, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat and result in direct and indirect impacts to multiple wildlife species through habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. In addition, locating 426-foot-tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 23, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I have reviewed the wildlife baseline studies and I have visited the site. There are no significant. Sensitive wildlife and plant habitat areas associated with this project area. [LTR 28, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *There is no evidence that the installation and operations of the proposed facility will have any significant impacts on sensitive or special status animal or plant species. The data and analysis by qualified third parties indicates that no significant impact will occur. The Whistling Ridge Wind Farm is also outside of the Columbia River Gorge Natural Scenic Area. [LTR 28, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *There are no sensitive species and no sensitive habitat in or adjacent to the lands in question, so the impact of the wind farm will be insignificant. [LTR 31, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *They harm wild life. [LTR 32, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is not likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, even though this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. Whistling Ridge has been studies for seven years and found to pose no wildlife impacts. [LTR 34, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I was happy to learn that the US Department of Fish and Wildlife has found that there would be no significant impact on wildlife as a result of this project. [LTR 35, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS provides no evidence to substantiate the applicant's assertion that the proposed Whistling Ridge wind project will not cause mortality to birds and bats in sufficient quantities to affect population viability. The analysis does not include any reasonable estimates of current population levels of sensitive species, nor of the threshold population levels required to maintain viability. [LTR 36, CMT 3]*

**Response**: The Wildlife Society, in a landmark publication on wind energy and wildlife, concluded that fatalities of passerines from wind turbine strikes generally are not significant at the population level (Arnett et al. 2007). In addition, the National Academy of Sciences (NAS 2008) recent review of wind energy impacts on birds came to the following conclusion: "At the current level of wind-energy development (approximately 11,600 MW of installed capacity in the United States at the end of 2006, including the older California turbines), the committee sees no evidence that fatalities caused by wind turbines result in measurable demographic changes to bird populations in the United States, with the possible exception of raptor fatalities in the Altamont Pass area." The available information suggests that the Project would be unlikely to have population impacts on birds. Additionally, the revised report "Analysis of Cumulative Impacts on Avian, Bat and Habitat Associated with Wind Energy Development in the Columbia

Plateau Ecoregion of Eastern Washington and Oregon" (WEST 2010) prepared for Klickitat County does not suggest the possibility of cumulative population impacts on birds.

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**Comment**: *An independent study of Big Horn's monitoring results written by Dr. Smallwood concluded that raptor fatalities are up to 16 times higher than predicted prior to construction? Big Horn also kills twice as many bats as anticipated, according to fatality monitoring reports. Monitoring studies at other wind projects in Klickitat County are not yet completed, but the preliminary results from those projects suggest even higher fatality rates. The above-cited independent scientific analysis based on the results from Big Horn (the only project in Klickitat County where fatality monitoring has been completed) reported a conservative estimate of 243 raptor fatalities annually in Klickitat County. That estimate of 243 raptor fatalities is for a level of development that does not exceed 1,000 megawatts. At its current rate of wind development, Klickitat County is likely to reach a level of 2,000 megawatts or more within the next year or so. For raptors in Klickitat County, these numbers are rapidly approaching population-level impacts. "There is probably no other human source of mortality that comes close to these levels," writes Dr. Smallwood. The DEIS underestimates potential impacts on northern spotted owls and other avian species. The proposed project falls within critical habitat for the northern spotted owl, a species that is not only endangered but has continued to decline since the adoption of the Washington Department of Natural Resources' Habitat Conservation Plan for the species. This species has continued to decline on federal lands, which makes the state's HCP more important than ever. There are only an estimated 500 northern spotted owl pairs remaining in all of Washington State. Even as the state's Habitat Conservation Plan is failing miserably, the applicant is proposing to undermine that plan by allowing commercial-scale energy development within a Spotted Owl Special Emphasis Area. A commercial wind energy project is not appropriate for habitat that is designated as a nesting, roosting and foraging area for a federally endangered species. In materials distributed to the public prior to the mid-June 20 I 0 hearings, SDS Lumber writes: "After years of timber harvest, there's no suitable habitat for the bird." It is ironic that the applicant is pointing the finger at its own destructive timber practices to justify further risk to northern spotted owls. Regardless of whether spotted owls are currently nesting on or near this property, as they did in recent history, this area is designated as prime potential habitat for the species. The fact that Washington's Habitat Conservation Plan for spotted owls is not increasing the numbers of reproductive pairs makes it all the more important to restore this species' habitat-not to damage it even further. The Environmental Impact Statement commissioned by Klickitat County for its Energy Overlay Zone stated (on page 2-15 of the Final EIS) that "forested areas host higher concentrations of owl and other sensitive species habitats." The EIS recommended that areas with high concentrations of forested habitats be excluded from the Energy Overlay Zone because of their "higher potential for use by sensitive species and avian species likely to be impacted by wind turbines." This sensitive forested habitat is exactly what is being proposed for development at Whistling Ridge. Spotted owls are not the only species likely to be significantly impacted by the proposal. Klickitat County's Energy Overlay EIS also found high use of forested habitats by other raptors. The SDS map for the proposed project shows ridge-top locations for turbines, and these are typically the worst possible locations from an avian perspective-i.e., likely to result in the highest number of bird collisions. 6. The DEIS fails to assess compliance with state and federal laws protecting bald eagles, golden eagles, migratory birds, and endangered species. There are reports of bald eagles*

*and bald eagle nests at the proposed wind site. Yet there is no evidence that the proposed project will be in compliance with the state's Bald Eagle Protection Act, RCW chapter 77.12, and regulations associated with this act. Nor is there any evidence that the proposed project will be in compliance with the federal Bald and Golden Eagle Protection Act, 16 USC § 668-668( d). This act prohibits any person, association, partnership or corporation from taking a bald or golden eagle at any time or by any manner without a permit. A permit may be issued only if the take would be compatible with the preservation of the species. There is no evidence in the DEIS that the proposed project will be in compliance with the federal Migratory Bird Treaty Act (MBTA), 16 USC §§ 703-712. The MBTA requires that the U.S. Fish & Wildlife Service take enforcement against "any person, association, partnership or corporation" that "by any means or in any manner" pursues, hunts, takes, captures, kills, or attempts to take, capture or kill a migratory bird or any part, nest or eggs of any migratory bird. Under the MBTA, a corporation may take or kill a migratory bird only if the U.S. Fish & Wildlife Service determines that the take or kill is compatible with migratory bird treaties. This determination must include an evaluation of the bird's species abundance and distribution, as well as its migratory and breeding habits. The killing of a single migratory bird is sufficient to create criminal liability, and does not need to be intentional. There is no evidence in the DEIS that the proposed project will be in compliance with the federal Endangered Species Act (ESA) of 1973, 16 USC §§ 1531-1544. Under the ESA, "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Section 9 of the ESA prohibits any actions that would "take" an endangered species, as well as actions that would cause an act constituting a "take." The Ninth Circuit has held that "a habitat modification which significantly impairs the breeding and sheltering of a protected species amounts to 'harm' under the ESA.["] It seems quite possible that the proposed Whistling Ridge wind project may kill a bald eagle, a migratory bird, or an endangered species. The DEIS must evaluate the likelihood of each of these possibilities, and whether Incidental Take Permits are required from the U.S. Fish & Wildlife Service. A recent court ruling in West Virginia has made it clear that such permits are required under federal law when a wind project is likely to kill any individual animals protected by the Endangered Species Act. [LTR 36, CMT 8]*

**Response**: The baseline avian use study was conducted in compliance with the Washington Department of Fish and Wildlife (WDFW) Wind Energy Guidelines (WDFW 2009). There is a growing body of data available to compare pre-construction avian use estimates with post-construction mortality, and the pre-construction use estimates show a positive correlation with avian mortality. The methods used to show a disparity between pre-construction estimates and elevated post-construction mortality are being contested as not accurate. The proposed Whistling Ridge Project is located in Skamania Co., rather than Klickitat Co., so estimates of wind development for Klickitat Co. were not considered. The American Wind Energy Association reviewed human-caused sources of bird mortality in 2001, and determined that only 0.01 to 0.02 percent of the mortality was from wind developments. As noted in Section 3.4.2.1 (on DEIS page 3-75), the Project has been sited to avoid habitat areas deemed critical to the northern spotted owl or essential to its recovery. Surveys conducted pursuant to the USFWS protocol indicate that spotted owls are not present in or near the Project Area. No bald eagle nests occur on site and eagle use of the Project Area was determined to be extremely low. Avian and raptor use was also relatively low; therefore, no significant impacts to eagles or migratory birds are anticipated. Section 4.5 of the EIS addresses compliance with the Migratory Bird Treaty Act. Section 4.7 addresses compliance with the Bald Eagle Protection Act. Section 4.7

has been corrected to revise the last sentence to read: "The Project would not involve intentional acts or acts in wanton disregard of bald or golden eagles. Any accidental injuries or deaths would be subject to Federal law." The EIS, in Section 3.4, evaluates the potential for harm to a bald eagle, migratory bird, or an endangered species. BPA prepared a Biological Assessment (dated June 8, 2010) and submitted it to USFWS for informal consultation. In a letter to BPA dated July 19, 2010, USFWS concurred with BPA's conclusion that the Project "may affect, but is not likely to adversely affect, the northern spotted owl, a threatened species." The northern spotted owl is the only listed or threatened species present or with critical habitat in the vicinity of the Project Area. Please see response to Comments LTR 173, CMT 1 to LTR 173, CMT 4 - the USFWS Section 7(a) consultation concurrence for this project.

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**Comment**: *This proposal NOT is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along an actively forested ridgeline in the foothills of the Cascade Mountains. [LTR 40, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Collisions with turbine blades are a minor concern compared to the impacts of fossil [fuel] generation. [LTR 40, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *While I am a supporter of renewable energy, all the environmental choices we make need to be careful ones, considering all impacts. The Whistling Ridge Energy Project, along the Skamania and Klickitat county line is a mix of positive and negative impacts - the negative effects on wildlife and on the environmental well-being of the Gorge outweigh the benefits. I am aware that the potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. I sincerely hope the decision-makers involved will listen to reason and choose alternatives, preserving what undisturbed areas we have left! [LTR 42, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Death to thousands of various wild animals (birds and mammals--especially our best friends, BATS/mosquito mowers, which are abundant in the fecund Cascades). [LTR 49, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Just say "NO" to: Death and malaise to thousands of beautiful and beneficial animals. [LTR 49, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is not likely to have any different or greater wildlife impacts than any other wind energy facility proposed in the State of Washington. The project will not permanently disturb any areas of forested habitat and will not result in direct or indirect impacts to the multiple wildlife species. None of the listed or sensitive species including the northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, or elk will suffer detrimental effects from this project. I support renewable energy, and I support industrial-scale wind energy development wherever it can help us become energy self sufficient. [LTR 52, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is unlikely to have any different and greater wildlife impact than any other wind energy facility proposed in the State of Washington, perhaps even less because this project is proposed along an already cleared for utility access low ridgeline in the foothills of the Cascade Mountains. [LTR 53, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The wind turbines are also detrimental to the birds, big horn sheep and wild life and the endangered species in the area. [LTR 55, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat and result in direct and indirect impacts to multiple wildlife species through habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern*

*spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. [LTR 57, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am a renewable energy enthusiast yet I feel I need to speak out about this project. In eastern Oregon there are prolific wind generators located in some key areas of strong wind. All that I have seen so far, are located in grassland areas with virtually no trees nearby. This locating factor reduces the possibility of damage to wildlife because most of the wildlife is lower flying, if at all, having little habitat from 100 feet up. However, to locate 50 wind generators in the middle of a forested area really exposes a great deal of habitat to almost 6000 feet of turbulent rotors, which they will not survive. Please do not allow the dollar signs and the green speak to move us one step forward yet 3 steps back. [LTR 59, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *More recent studies on bat and raptor deaths caused by wind turbines indicate a significantly higher number than expected. Klickitas County has recently begun a new study because many more deaths were occurring than promised by the boiler plate information in their EIS. Please update your study to consider recent results. [LTR 60, CMT 8]*

**Response**: The revised report "Analysis of Cumulative Impacts on Avian, Bat and Habitat Associated with Wind Energy Development in the Columbia Plateau Ecoregion of Eastern Washington and Oregon" (WEST 2010) prepared for Klickitat County has been included as an appendix in the FEIS. A revised cumulative impacts analysis that takes into consideration wind energy development within forested habitats of western WA has been added to Section 3.14.3.5 of the EIS.

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**Comment**: *There does not seem to be mention or analysis of that land being designated as "Deer and Elk Winter Range"? I was unable to get a map from WDFW in this short time, but I do know that the land immediately south of the project is designated winter range preserve. If this project is or is not in the preserve, what would be the impacts to elk and deer movement, how will they react to the "strings" of turbines, operational noise, construction, etc? If you believe that this wildlife will simply "go around", what is the impact and how will the applicant mitigate the impact to the surrounding communities now in the path of ranging wildlife? What would be the impact to the surrounding communities when the predators (e.g. cougars) follow the new path, and how will we be protected? [LTR 60, CMT 9]*

**Response**: Information on the winter range for deer and elk was presented in Section 3.4.1.6 (on page 3-69 of the DEIS). As stated, WDFW Priority Habitat for mule deer and black-tailed deer (winter range) are present east of Underwood Mountain (east of the Project Area), and

Columbia black-tail deer (winter range) is present west, north and south of the Project Area. The only WDFW Priority Habitat that exists in the Project Area is winter range for elk. Potential impacts during construction were presented in Section 3.4.2.1 (on page 3-76 of the DEIS). As noted on DEIS page 3-81, additional coordination with WDFW is on-going regarding elk habitat.

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**Comment**: *I've spent several winters in desert hot springs/palm springs area and not once have I seen any bird kill from the wind turbine windfarms. [LTR 63, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat[s]. [LTR 66, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *In one area it states that this project has to be defined as an "integrated whole" to be worthwhile yet in the design/mitigation measure under Biological Resources that "micrositing of turbines and associated facilities would allow any sensitive resources discovered during construction to be avoided." You can't have it both ways. [LTR 74, CMT 3]*

**Response**: The EIS considers numerous protected resources, and considers them as an integrated whole in terms of identifying any resource (or resources) that may require additional protection through macro- and micro-siting turbine strings and individual turbines.

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**Comment**: *This EIS is woefully insufficient in its evaluations of wildlife. It does a poor job of covering bat evaluations, lacks significant bird/bat dispersal data and has no mention of large animal. It is so bold as to state, "For potential impacts to big game species (deer and elk), coordination with WDFW will occur if appropriate." It is a known wintering ground for Elk. Also what about cougar, bobcat, coyotes and all the other game? It states that it will "Convene a Technical Advisory Committee to evaluate mitigation and monitoring programs for impacts to wildlife and habitat" - why is this not already in place? [LTR 74, CMT 8]*

**Response**: Large mammal effects were described in the DEIS on page 3-76. Three years of bat studies were conducted at the Whistling Ridge site, likely more than any other proposed wind project in the country. Bat mortality will be monitored post-construction, and, if warranted, turbine curtailment during low wind speed nights is known to dramatically reduce bat fatalities and would be implemented at the site to reduce fatalities.

**Comment**: *Birds mortality! Let [‘s] close the airport in Portland! [LTR 75, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *In view of the fact that no studies have been conducted in the US that determine what effect wind turbines have upon forest-dwelling species of wildlife, it is inappropriate and misleading to repeatedly state that “No impacts are anticipated...” Frequent statements of conclusion appear throughout the document; some are nebulous, speculative, inaccurate or contradict the material provided in the previous text or appendices and add to the appearance of bias. On [DEIS] page 3-77, it is confidently stated that “Operation of the project would result in no further impacts to habitats on the project site” despite a statement on [DEIS] page 3-81 that “Because data on impacts to big game as a result of wind project operations is limited, it is difficult to predict the impact of the proposed project on wildlife using priority habitats on the proposed project site.” (“Additional coordination with WDFW is ongoing, and would continue to address this resource.”) [LTR 76, CMT 3]*

**Response**: The statement on DEIS page 3-77 refers to “no further impacts” beyond those described during the construction phase, while the statement on DEIS page 3-81 indicates the uncertainty regarding the operational effect on big game.

**NOTE:** Chapter 3 of the EIS (Affected Environment, Impacts, and Mitigation) is organized so that it describes the Impacts during the construction-, operation-, and project decommissioning-phases for the Proposed Action. Impacts under these different phases of the Proposed Action differ in nature and to present them this way allows the reader to know what impacts are expected during each phase.

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**Comment**: *The Columbia River flyway could be considered a cultural resource for the avian species. It has likely existed for a longer time than humans have been here and constitutes a known route for both north-south and east-west migrating birds. It is inconceivable that a project that is known to kill birds could be approved for an area located within the flyway. Larger turbine blades and consequent slower rotation speeds have been reported to minimize bird fatalities, but the fact that Columbia River is the major western flyway in the United States negates this improvement since denser concentrations of birds would be present during migration flights. The rotation speeds mentioned in the document stipulated a wide range and was indicative that the authors were not aware that rotation speed guidelines purporting to offer some protection from bird strikes are available. [LTR 76, CMT 8]*

**Response**: Based on the avian point count data, bird use in the Project Area is considered too low to identify the site as a flyway or concentrated migration route. Birds are migrating through the Project Area, but not using it as a primary route.

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**Comment**: *The flyer [sent out by the project proponent] further asserts that there will be no "harm" to wildlife populations. This also is a hoax. The raptor mortality from wind energy projects developed in Klickitat county is ten times what the EIS predicted [as reported by Kathy Durbin in The Columbian - "First Golden Eagle killed by Wind Turbines in WA State")]. [LTR 77, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *The draft [EIS] also does not state, as it should, that this project would be the first such project allowed on Pacific Northwest forest lands. Moreover, the draft should recognize that no comprehensive studies have been made concerning effects of wind turbines upon Pacific Northwest forest dwelling wildlife. [LTR 79, CMT 6]*

**Response**: Both the avian and bat fatality studies in the DEIS appendices acknowledged that no wind energy facilities have been constructed in Pacific Northwest coniferous forests. Because the Whistling Ridge site is in an even aged, relatively young forest managed for timber production, wildlife habitat on the site is already greatly compromised.

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**Comment**: *Potential impacts on mammals other than draft-mentioned bats and a single squirrel species should be described in the EIS. What animals are present in what relative numbers, and which are most likely to be driven from or avoid the area because of the turbines? [LTR 79, CMT 7]*

**Response**: Section 3.4.1.6 (on page 3-69 of the DEIS) described the large mammals that have the potential to occur within the Project Area, including cougar, bobcat, coyote, and black bear. The site is within the winter range of elk. Douglas squirrels were recorded during surveys for western gray squirrel. Potential construction impacts were discussed in Section 3.4.2.1 (on DEIS page 3-76).

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**Comment**: *Estimates of expected turbine-caused avian and bat mortalities should be included by utilizing available information from studies at existing wind farm projects. Such estimates would perhaps be difficult for those bird and bat species that prefer forest habitats. But most bird species that frequent Whistling Ridge (87 species, including the bald eagle and five others of "Special Concern", have been recorded there) are also found around wind farms where mortality studies have already been made. To simply state, as the draft now does, that the turbines would "not affect viability" of bird and bat populations "in the region" is quite inadequate. Cumulative impact data, rather than unfounded beliefs, are necessary in making decisions of the magnitude that this proposal encompasses. [LTR 79, CMT 8]*

**Response**: Pre-construction use data for birds was compared with that from eleven other wind developments where post-construction mortality data was available. Use estimates

compared with these other wind developments suggest the mortality from the proposed Project would occur at similar levels (moderate). Bat monitoring data was difficult to use for predicting mortality, because the pattern of use varied compared with the use pattern from the other sites. Data from numerous wind projects were used to predict avian fatality rates at Whistling Ridge. A revised cumulative impacts analysis, which takes into consideration proposed wind energy development in coniferous forests of western Washington and Oregon, has been added to Section 3.14.3.5, under the subheading of Bird and Bat Species.

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**Comment**: *Numerous wildlife species, not just those threatened or endangered, rely of forest habitats. Bird mortality from wind turbines is fairly well documented, but most such studies have focused on turbines located outside of forest areas. Other wildlife concerns are associated with the SDS proposal; these concerns include seasonal use patterns, travel corridors, habitat alteration or removal, soil loss and associated stream sedimentation, and area abandonment by wildlife due to turbine noise. Many animals, with hearing more acute than ours, can be detrimentally affected by noise. [LTR 79, CMT 17]*

**Response**: Comment acknowledged.

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**Comment**: *[Excerpts from] The Oregonian, June 11, 2010; and, "Birds vs. the wind farms," by Hal Bernton, The Olympian, June 08, 2010: "Based on that information, the windpower turbines currently operating in Oregon and Washington kill more than 6500 birds and more than 3000 bats annually." [LTR 82, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat and result in direct and indirect impacts to multiple wildlife species through habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. I am especially concerned about the impact on spotted owls, as recent studies have shown their numbers continue to decrease steadily, even dramatically in some areas. Any development that might disturb their habitat must be closely, closely scrutinized. [LTR 87, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *It [the Project] will be an eyesore and kill many birds. Bald Eagles inhabit the area. [LTR 92, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The Washington Department of Fish and Wildlife (WDFW) has reviewed the above reference document and offers the following comments at this time. Other comments may be offered as the project progresses. Overall, the Preliminary DEIS is consistent with the 2009 WDFW Wind Power Guidelines, including early and regular consultation, as well as avian and bat studies, habitat characterization, and impact analysis. [LTR 94, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We support the two-year minimum post-construction avian mortality study, as well as the development of a Technical Advisory Committee (TAC) WDFW is in general agreement with the proposed commercial forestry operations within the vicinity of each turbine as described in [DEIS] Section 3.0 ("turbine timber buffer") and would like to offer the following interpretation. According to [DEIS] Section 3.0, "Vegetation surrounding each turbine would be managed according to the following specifications: A circular area extending 50 feet from each turbine tower base would be harvested and graveled. From 50 feet to 150 feet from the base of the turbine towers, tree heights would be limited to 15 feet above the elevation of the base of the turbine. From 150 feet to 500 feet from the base of the turbine towers, tree height would be limited to 50 feet above the turbine base within an area formed by it 90 degree arc centered on the ordinary downwind direction." From this, we conclude that within a diameter of 100 to 300 feet surrounding each turbine, tree heights would be limited to 15 feet, and from a diameter of 300 to 500 feet, tree heights would be limited to 50 feet, but only within a 90-degree arc on either side of the turbine aligned with the direction of the prevailing wind. The other 90-degree arc on either side of the turbine perpendicular with the direction of the prevailing wind will essentially be unchanged habitat (i.e. existing commercial forest). We are interested in how this type of habitat and commercial forest management in the immediate vicinity of operating wind turbines will or will not affect the avian and bat mortality. We look forward to working with Whistling Ridge through the TAC to address this issue and cooperatively develop management strategies, if needed, to reduce avian and bat mortality. Thank you for the opportunity to review the Preliminary DEIS and offer these comments. [LTR 94, CMT 3]*

**Response**: Comments acknowledged. The interpretation in the comment is correct with the exception that within the diameter from 300 feet to 1000 feet (not 500 feet) heights would be limited to 50 feet within a 90-degree arc with the direction of the prevailing wind. See Figure 2-4 in the DEIS.

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**Comment**: *As a key participant in these processes, it is our view that the most important element of good wind energy facility siting that minimizes impacts to wildlife and habitat is the early, active and regular consultation with the interested public and with wildlife agencies, including the development of specific protocols to evaluate potential impacts. As noted in a January 19, 2010 letter from WDFW to the Whistling Ridge Energy Project permitting consultant (enclosed), the wildlife data and information supporting the agency review draft of the DEIS "*is consistent with the 2009 WDFW Wind Power Guidelines, including early and regular consultation, as well as avian and bat studies; habitat characterization, and impact analysis.*" Under the 2009 Wind Power Guidelines, for commercial forestlands, consultation with WDFW is the principal measure to address habitat and wildlife concerns. Whistling Ridge Energy's early and regular consultation with WDFW, and its use of study protocols and analyses particularly tailored to commercial forestlands, satisfies the spirit and letter of the Guidelines. The Whistling Ridge Energy Project has undergone consistent and regular wildlife and habitat studies for multiple seasons and multiple years, beginning as early as 2003. Avian data has been secured over multiple years and in every season of the year. Whistling Ridge has also completed three years of season-specific analysis of bat populations, demonstrating a commitment to wildlife agency review of data concerning impacts to bats. [LTR 94, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *The wildlife habitat in the area will change, but the habitat itself will not be "lost." Some animals will move out while others will move into the area. In this case, change might be good, or at least neutral. [LTR 96, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I have been to meetings and listened to the talk about how safe for birds these mills are. The [N]ative Americans told us that they could not imagine how a bird could fly into these blades. About 2 weeks later, front page of the Oregonian, Golden eagle killed by wind turbines at Goodnoe Hills. How many Golden Eagles are there in the gorge? At least one is dead. We were told that up to 7000 bats would be killed if the Whistling Ridge project goes in. How many hawks and eagles will die because of this? [LTR 102, CMT 5]*

**Response**: The bat data collected at met towers in 2009 in the area most likely to be developed for wind energy does not suggest bat mortality would be excessive at this site. The estimated raptor mortality rate is 0 to 0.25/MW/year.

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**Comment**: *The effect of a wind farm on bird and wildlife populations is negative. Turbines Kill!! [LTR 104, CMT 3]*

**Response**: Comment acknowledged.

**Comment**: *[…] killing of birds and wildlife […] [LTR 118, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *There are many items that should be considered from an environmental and ecosystem perspective regarding a large project like this. All projects like this have an "environmental cost" and although it may not appear to affect our community directly, it does affect the earth; ultimately we are all reliant on the environmental resources of the earth to keep us and all other living creatures alive. In particular, we are concerned that, due to this Project's location in a forest ecosystem, far more wildlife will be negatively affected or harmed than if it were located in a wheat field or open plain environment. [LTR 119, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because this project is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The project would permanently disturb large areas of forested habitat and result in direct and indirect impacts to multiple wildlife species through habitat loss and displacement, direct collisions with turbine blades, and other factors. The potentially affected listed and sensitive species include northern spotted owl, western gray squirrel, northern goshawk, several species of bats, multiple migratory bird species, mule deer, black-tailed deer, and elk. [LTR 121, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *More recent studies on bat and raptor deaths caused by wind turbines indicate a significantly higher number than expected. Klickitat County has recently begun a new study because many more deaths were occurring than promised by the boiler plate information in their EIS. Please update your study to consider recent results. Eliminating the A1-A7 turbines would significantly reduce the risk of bat and raptor deaths as the turbines closest to the flyway are eliminated. [LTR 124, CMT 7]*

**Response**: There is a growing body of data available to compare pre-construction avian use estimates with post-construction mortality, and the pre-construction use estimates show a positive correlation with avian mortality. The methods used to show a disparity between pre-construction estimates and elevated post-construction mortality are being contested as not accurate. Based on the avian point count data, bird use in the Project Area is considered too low to identify the site as a flyway or concentrated migration route. Birds are migrating through the Project Area, but not using it as a primary route.

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**Comment**: *The land immediately south of the A1-A7 turbines project is designated winter range preserve. Eliminating the A1-A7 turbines eliminates a major impact to elk and deer movement in their designated winter range. [LTR 124, CMT 8]*

**Response**: As noted in Section 3.4.1.6 (on DEIS page 3-69) of the, only elk winter range is present within the Project Area and it is located throughout the Project Area, not just in the location of the A-string.

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**Comment**: *This proposal is likely to cause significant negative impacts to sensitive wildlife and plant habitat. [LTR 127, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I've been told also that wildlife will be greatly impacted in this location. [LTR 130, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The Draft EIS found; [bulleted item] - No significant impact on wildlife or bird populations. [LTR 140, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *A recent bird study in Klickitat County is not even mentioned in the EIS. Please, do not rubber stamp this project! [LTR 142, CMT 3]*

**Response**: The best available data refers specifically and only to the cumulative impacts analysis for the Columbia Plateau Ecoregion. A revised cumulative impacts analysis that considers proposed wind energy development in forested habitats of western WA has been added to Section 3.14.3.5 of the FEIS.

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**Comment**: *It is indeed sad that wind turbines impact individual birds. As a birder and long time volunteer for a raptor rehabilitation center, I'm the last person who would want to see birds die. But they are dying by the thousands---tens of thousands----across the globe because of climate change's impact on habitat. [LTR 156, CMT 3]*

**Response**: Comment acknowledged.

**Comment**: *The WEST report prepared for the Klickitat County Planning Department is not applicable to the proposed Whistling Ridge Energy Project, and cannot be relied upon to evaluate cumulative impacts. The report prepared by Western EcoSystems Technology, Inc. (WEST) purports to be a cumulative impacts analysis for Klickitat County. [REFERENCE: Avian, Bat and Habitat Cumulative Impacts Associated with Wind Energy Development in the Columbia Plateau Ecoregion of Eastern Washington and Oregon, Prepared for Klickitat County Planning Department by Gregory D. Johnson and Wallace P. Erickson, Western EcoSystems Technology, Inc., February 2010] Unfortunately, this report sheds little light on the cumulative impacts of wind power development on wildlife in Klickitat County, and it is even less relevant to a project proposed for Skamania County. As the WEST report's title suggests, the Columbia Plateau Ecoregion is located in eastern Washington and Oregon, which have completely different plant and animal communities than the western Washington site proposed for the Whistling Ridge wind project. All of the projects evaluated in the WEST report are located in arid and un-forested lands, whereas Whistling Ridge is located in a coniferous forest that receives much more precipitation and has a much different plant and animal population. Impacts of wind projects on birds and bats are extremely site-specific, and because of that the WEST study has little applicability to the Whistling Ridge proposal. It is no more applicable than studies from the Altamont Pass Wind Resources Area in California, where significant population-level impacts on birds have been documented; or from the forested Mountaineer wind project in Appalachia, where significant population-level impacts on bats have been documented. The WEST report contains fatality monitoring data from 12 projects around the Columbia Plateau Ecoregion. Only one of those projects, Big Horn, is actually located in Klickitat County-and the results from Big Horn show much higher raptor fatality rates than anywhere else in the Pacific Northwest. In other words, the WEST report underestimates the impacts of wind projects in Klickitat County by merging the Big Horn data with results from less lethal projects elsewhere in the region. The WEST report also looked at 24 projects in the Pacific Northwest for which preconstruction estimates of avian use are available. Here too, the results from Klickitat County show a much higher likelihood of avian impacts than elsewhere in the region. Of the 24 projects evaluated in the report, the seven projects located in Klickitat County had much higher estimated use by both raptors and by birds of all types. For example, the highest raptor use estimated anywhere in our region is at the Linden Ranch in Klickitat County. Raptor use there is estimated to be 2.5 times the average for the Columbia Plateau ecoregion. In other words, the WEST report does not give an accurate picture of cumulative impacts from expanding wind power here in Klickitat County, much less any indications of cumulative impacts to be expected in Skamania County. To the contrary, the WEST report uses data from projects in other parts of Oregon and eastern Washington to underestimate how many birds-especially raptors-are likely to be killed here. The WEST report has another fundamental flaw. To arrive at a prediction of cumulative fatalities, the report's authors averaged existing fatalities in the region and then compared those averages with estimates of regional population size based on breeding bird surveys provided by the Partners in Flight North American Landbird Conservation Plan. However, the Partners in Flight estimates include relatively large standard errors, and are not accurate enough to serve as reliable population indicators. The estimates used in the WEST report were designed for detecting long-term population trends but not for estimating population size. As Dr. K. Shawn Smallwood, an ecologist who is one of the nation's leading experts on the interactions between wildlife and wind turbines, points out in a review of the WEST report, the estimates from Partners in Flight are "unsuitable for the use that Johnson and Erickson made of them." [REFERENCE: Review of Cumulative Impacts Analysis of Wind*

*Energy Expansion on the Columbia Plateau, K. Shawn Smallwood, May 18, 2010]. Other researchers have pointed out this flaw but WEST continues to rely on these unsuitable estimates. Smallwood further writes: "No studies or monitoring programs have been designed or implemented in the US to document wind energy-related population declines of any bird species. Most fatality monitoring programs have been much too brief to document declines, lasting one or two years. All monitoring programs have been too crude to document declines, and the majority of post-construction studies have not been designed to estimate population size of any bird species. Therefore, Johnson and Erickson's statement about wind energy impacts was misleading." There is no peer-reviewed science in the DEIS submitted by the applicant. Instead the applicant relies on WEST, a wind industry contractor whose work has not been independently reviewed. [LTR 161, CMT 5]*

**Response**: The DEIS recognized that the WEST report was developed for the more arid shrub-steppe lands, rather than the coniferous forests found within the proposed Project Area. The conclusion from their report remains pertinent for the proposed Project, because avian mortality from wind developments is far less significant than the effect from traditional energy development or climate change. There are no other projects in coniferous forests in the west for comparison, so the Klickitat study was used. Only one other wind development is currently proposed, suggesting cumulative effects in this habitat type will remain very limited compared with other habitats. A revised cumulative impacts analysis that takes into consideration proposed wind energy development in coniferous forest habitats of western WA has been added to Section 3.14.3.5 of the FEIS.

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**Comment**: *Pre-construction estimates of avian and bat fatalities have not proved reliable. Although no scientists have done a thorough comparison of pre-construction and post-construction mortality estimates, there is plenty of anecdotal evidence that post-construction mortalities often greatly exceed pre-construction estimates made using the same methodology as has been employed for the Whistling Ridge wind project. For example, the Environmental Impact Statement (EIS) prepared prior to adoption of the Energy Overlay Zone in Klickitat County grossly underestimated the level of wildlife fatalities likely to result from wind development. At all of the wind projects in Klickitat County where monitoring has been completed or is under way, reports prepared by wildlife consultants show that fatalities of raptors and bats are far in excess of what was anticipated by the EIS. Whistling Ridge is using the same consultants and methodology as Klickitat County for its pre-construction fatality estimates. At Big Horn, the first large wind project built in Klickitat County, the developer's wildlife consultants did a full year of monitoring at 100 percent of the turbines, which makes this one of the most comprehensively monitored wind projects anywhere in the United States. The results of that monitoring study show that raptor fatalities are at least eight times higher than what the developer, PPM/Iberdrola, projected. [REFERENCE: Big Horn Wind Power Project Wildlife Fatality Monitoring Study 2006-2007. Prepared for PPM Energy and Big Horn Wind Project Technical Advisory Committee by Northwest Wildlife Consultants, Inc., 2008.] An independent study of Big Horn's monitoring results written by Dr. Smallwood concluded that raptor fatalities are up to 16 times higher than predicted prior to construction. [REFERENCE: Avian and Bat Mortality at the Big Horn Wind Energy Project, Klickitat County, Washington. K. Shawn Smallwood, 2008.] Big Horn also kills twice as many bats as anticipated, according to*

*fatality monitoring reports. Monitoring studies at other wind projects in Klickitat County are not yet completed, but the preliminary results from those projects suggest even higher fatality rates. The above-cited independent scientific analysis based on the results from Big Horn (the first of only two projects in Klickitat County where fatality monitoring has been completed) reported a conservative estimate of 243 raptor fatalities annually in Klickitat County. That estimate of 243 raptor fatalities is for a level of development that does not exceed 1,000 megawatts. At its current rate of wind development, Klickitat County is likely to reach a level of 2,000 megawatts or more within the next year or so. For raptors in Klickitat County, these numbers are rapidly approaching population-level impacts. "There is probably no other human source of mortality that comes close to these levels," writes Dr. Smallwood. At the second project in Klickitat County where monitoring has been completed, Goodnoe, the results are similar. [REFERENCE: Goodnoe Hills Wind Project Avian Mortality Monitoring Report, Prepared for PacifiCorp by URS Corporation, March 16, 2010.] The final monitoring report for Goodnoe calculated fatalities of 0.34 raptors per year per turbine, or 0.17 raptors per megawatt per turbine, or 16 fatalities per year for the project. Only one project reviewed in the WEST report had a higher raptor fatality rate than the one found for Goodnoe. The Goodnoe project is killing far more raptors than predicted by pre-construction surveys. [LTR 161, CMT 7]*

**Response**: There is a growing body of data available to compare pre-construction avian use estimates with post-construction mortality, and the pre-construction use estimates show a positive correlation with avian mortality. The methods used to show a disparity between pre-construction estimates and elevated post-construction mortality are being contested as not accurate.

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**Comment**: *With the completion of this DEIS, more biological review has been done than on any other previously sited wind project anywhere in the Northwest, let alone Washington [S]tate. To our knowledge, no other wind energy project has completed the multiple years of biological surveys, including three years of bat survey work. [LTR 162, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *In its "Section 7" consultation letter dated July 19, 2010, the USFWS confirmed that the project will no impact Northern Spotted Owls - a determination that should be considered conclusive on this issue. [LTR 162, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the*

*outstanding scenic beauty of the Columbia River Gorge National Scenic Area. [LTR 163, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. [LTR 165, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. [LTR 167, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The proposed Project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. [LTR 169, CMT 2]

**Response**: Comment acknowledged.

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**Comment**: *Thank you for the opportunity to review and comment on the joint NEPA SEPA Whistling Ridge draft environmental impact statement (DEIS). We looked primarily at fire hazard, plant species and communities, northern spotted owls and WA Department of Natural Resources' Habitat Conservation Plan (DNR HCP), forest practice requirements, and surface mines and reclamation. Some of our concerns include: the presence or impacts to Oregon white oak/Idaho fescue plant communities; northern spotted owls, their habitat and associated HCPs; forest practice requirements for this proposal, and a permitted source of aggregate for roads*

*and structures. Our adjacent HCP land to the north is managed to provide habitat that makes a significant contribution to demographic support, maintenance of species distribution and facilitation of owl dispersal. [LTR 172, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS on page 3-56 states there are no HCPs in or near the project area. Forest practices owl protection requirements were also not correctly explained. Please also note that state agency wildlife species review is typically done by WA Department of Fish and Wildlife (WDFW), and DNR biologists did not look at impacts to species not protected under the DNR forest land HCP in eastern Washington, other than compliance with Forest Practices Rules. [LTR 172, CMT 2]*

**Response**: The Applicant must submit any harvest plan to DNR and WDFW for review and must abide by all forest practices owl protection requirements. If any harvest proposals fall within an HCP there is another layer of regulation that is required. All appropriate legal avenues were followed when submitting permits.

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**Comment**: *[In reference to DEIS Figure 2-2], the map shows a riparian area. The wetland is described in [DEIS Section 3.3.1.1, Surface Water] County protection measures are described on [DEIS Section 3.4.1.3] for category II wetlands. [Our] request [is] if this is on forest land you should verify if it is a Type A or Type B wetland and that the 100 foot buffer would also meet or exceed any FP Rule requirements for a Type A or B wetland (WAC 222-30-020) for that location. [LTR 172, CMT 14]*

**Response**: The non-forested area of the Cedar Swamp wetland is considered to be a Type A wetland under Forest Practices regulations. According to WAC 222-30-020, the allowable buffer could range from 25 to 100 feet for this size of non-forested wetland community. However, this buffer is measured at transition from non-forested to forested wetland, which is inside the wetland boundary. Nevertheless, the 100-foot buffer on the wetland edge exceeds Forest Practices requirements.

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**Comment**: *[In reference to DEIS page] 3-50, the comment is made that the project is not sited in or near any Spotted Owls or Spotted Owl activity site centers. There are two Spotted Owl circles within portions of the proposal area. Request: Please correct the inaccurate statement concerning spotted owls. [In reference to DEIS pages] 3-50 and 3-53, [it is stated that] "the two Spotted Owl site centers are no longer considered to be occupied pursuant to USF & W protocols and state law." This is an inaccurate statement. The two Spotted Owl circles are still in the state data base and have not been decertified as of this date. Forest Practices rules and regulations still require appropriate protections (WAC 222-16-080(6)). [DNR's] Request: Please correct the inaccurate statement concerning spotted owls and correctly state the*

*appropriate FP Rule mitigation measures that are required. [In reference to DEIS pages] 3-75 and 3-78, [it is stated that] "The proposal would not impact the White Salmon SOSEA's 40% suitable Spotted Owl habitat level." This is an inaccurate statement. The habitat level is calculated on a circle by circle basis, not over the entire SOSEA. There is a small mapped portion of potential habitat in one of the two circles in the proposal. [DNR's] Request: Please document whether this proposal (including all of the associated timber harvests) will harvest suitable owl habitat (WAC 222-16-085) and or impact the suitable habitat totals for one of the spotted owl circles, if that is the case (WAC 222-10-040) [LTR 172, CMT 17]*

**Response**: The text in Section 3.4.1.5 (the last sentence on page 3-49 of the DEIS and the first full sentence on DEIS page 3-50) has been revised to read: "There are a total of 9 turbines proposed within the 1.8 mile provincial range of two NSO activity centers. There are no proposed turbines located within the 500 acre core areas of these activity centers. Two historical meeting sites on public lands near the property have not been used in over six and eight years, respectively, and are no longer considered to be occupied by USFW endorsed protocols but have not been decertified by WDFW or USFW and are still considered occupied by state and federal law."

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**Comment**: *This letter responds to your request for consultation under section 7(a)(2) of the Endangered Species Act of 1973, (ESA) as amended (16 U.S.C. 1531 et seq.) on the proposed Whistling Ridge Energy Project LLC (Project). Your biological assessment (BA), dated June 8, 2010, was received by the U.S. Fish and Wildlife Service's (Service) Washington Fish and Wildlife Office on June 9, 2010. You requested concurrence with your determination that the Project* "may affect, but is not likely to adversely affect" *the threatened northern spotted owl (Strix occidentalis caurina) (spotted owl). No designated spotted owl critical habitat occurs on or near the Project; therefore, no critical habitat will be affected. This letter is based on information provided in the BA, the 2009 Final Report "Results of Northern Owl, Western Gray Squirrel and Northern Goshawk Surveys Conducted for the Whistling Ridge Wind Energy Project", the Draft Environmental Impact Statement, a field trip to the Project attended by staff of the Service and the Washington Department of Fish and Wildlife on May 14, 2009, and a meeting between Service and Washington Department of Fish and Wildlife staff on August 28, 2009. [LTR 173, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *<u>Status of Spotted Owls in the Project Area</u>. Two spotted owl territories are located on Washington State Department of Natural Resources (DNR) and National Forest lands located north of and adjacent to the Project. The site center for the Mill Creek owl (MSNO #0991) is located in Township 4 North, Range 10 East, Section 28 and the site center for the Moss Creek owl (MSNO #1003) is located in Township 4 North, Range 9 East, Section 35. Both of these owl territories are within Washington State's White Salmon Spotted Owl Special Emphasis Area, which provides added protection for spotted owls located on private lands through the Washington State Forest Practices Rules. Both of the 70 acre core areas are located*

*on DNR lands and are provided additional protection from their Habitat Conservation Plan for the State Trust Lands. The estimated median annual home range size for the spotted owl in this physiographic province is approximately 6,657 acres, which for regulatory purposes is assumed to lie within a 1.8-mile radius circle. Best available science indicates that when the amount of suitable spotted owl habitat within a circle falls below 40 percent, there is a likelihood of "take" under section 9 of the ESA. Each of these territories contains more than 40 percent suitable spotted owl habitat (J. Spadaro, pers. com. 2009). A small portion of the Moss Creek circle overlaps the northern end of the Project and contains dispersal habitat and some foraging habitat. However, removal of this small amount of habitat (2 acres) would not reduce the habitat acreage below 40 percent in either territory. Protocol spotted owl surveys were conducted within these estimated home ranges during the 2003, 2004, 2008, and 2009 breeding seasons. Numerous barred owls (Strix varia) were detected, but no spotted owls were detected; however, because of the presence of barred owls with these territories, it is possible that spotted owls were present but did not vocalize. The 2009 surveys followed the Service's revised 2010 protocol to better elicit spotted owl responses in the presence of barred owls (USFWS 2010) (the consultant contacted the U.S. Fish and Wildlife Service on May 29, 2009, how to call for spotted owls in light of the numerous barred owl detections north of the Project and was provided the changes to the 1992 surveying protocol prior to the release of the 2010 revised protocol on February 18, 2010). However, in 2010 surveys were continued in the Project area. On May 6, 2010, a single male spotted owl was detected while conducting a night visit in the far north edge of the Mill Creek provincial range on DNR property. On May 7th, the biologist conducted a follow-up visit during the daytime. The bird exhibited non-nesting behaviors. On May 29, the biologist conducted a second visit and located what appeared to be the same male owl that was detected on May 7th. The bird on both survey visits took and consumed mice, indicating that it is a single male not supporting young. Spotted owl survey protocol requires 3 sightings of a spotted owl single within the same area within the breeding season to be regarded as a territorial single. This does not change the analyses of effects of the Project to spotted owls, as addressed below, regardless of whether or not a territorial status is established. Effects from Construction. Approximately 2 acres of spotted owl dispersal habitat (with some patches of foraging habitat) would be removed from the Moss Creek spotted owl site by the construction of the Project from the northern end of the turbine string. This habitat is located at the southern extremity of the circle and is on the edge of the Project that has already been clear-cut by SDS Lumber Company, and would not remove suitable spotted owl habitat below 40 percent in the territory (J. Spadaro, pers. com. 2009). The discovery of the new owl in 2010 in the extreme north of the Moss Creek owl circle is located more than 2 miles northwest of the northern-most turbine. Because of this and since the remainder of the Project does not contain suitable spotted owl habitat, we believe that potential effects to spotted owls as a result of habitat loss or degradation is expected to be insignificant. [LTR 173, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Effects from Maintenance. The effects of the operation and maintenance of the Project are anticipated to be minor. Maintenance of the Project would occur primarily around the turbine pads, inside the nacelle (the nacelle is the part of the turbine that houses the generator, transmission gears, and the shaft that turns the generator that, on its opposite end,*

*bolts to the hub that the blades attach to) and the blades. In addition, because the landscape will be maintained as young second-growth forest we do not expect disturbance to nesting owls from maintenance because owls are not likely to nest in these younger forest stands (non-habitat). Risk of Spotted Owl Collision with Wind Turbines. Bird mortality from collisions with wind turbines is well documented and varies greatly by bird species and flight behavior (Smallwood et al. 2009). Spotted owls are forest-dwelling birds that are strongly associated with older conifer forests. Spotted owls primarily use closed-canopy forested habitats throughout their entire lives for nesting, roosting, foraging, and dispersal (Forsman et al. 1984). Because spotted owls are non-migratory, forest-dwelling owls, they are at much lower risk of exposure to wind turbines than many other bird species, which typically use non-forested upland habitats for foraging and migration. Spotted owls less commonly use recent clear-cuts or burned areas for foraging, but spotted owls do occasionally cross such areas while dispersing between patches of older forest (Forsman et al. 1984; 2002). Although spotted owls do occasionally disperse across open areas, they usually avoid crossing such areas by traveling through corridors of forested habitat (Forsman et al. 1984). The typical flight behavior of the spotted owls is described in the Birds of North America: "Quick wingbeats interspersed with gliding flight. Not a fast flier. Long flights unusual except during dispersal…Flight labored when attempting to fly to a higher perch or up to nest sites. When gaining altitude in the forest canopy, makes a series of short climbing flights rather than continuous flight. Flights above the forest canopy probably rare except during dispersal. (Gutierrez et al 1995, p.9)." During natal dispersal, spotted owls will occasionally cross open areas and, as notes above, may occasionally fly above the level of the forest canopy. Considering spotted owl flight behavior above-canopy flights are most likely to occur in steep-walled valley settings, where the spotted owl may choose to fly across a valley above the level of the forest canopy on the valley floor. The Whistling Ridge site is located on a forested ridge top that will be maintained as a cleared area for the wind turbines. Spotted owls dispersing across the ridge are more likely to disperse through forested areas along the perimeter of the site, rather than crossing the open areas near the turbines. If a spotted owl were to fly through the turbine array, it would most likely cross at an altitude that is at or below the level of the adjacent forest canopy, and well below the height of the lower of the wind turbine blades (164-425 ft. above ground level). To assess the risk of owl collision with the turbine blades or towers, we convened a review panel of three spotted owl biologists from this office and one spotted owl biologist from the Washington Department of Fish and Wildlife. Based on our knowledge of spotted owl flight behaviors and habitat preferences, the group concluded that the risk of spotted owl collisions with turbines at this site is low. Considering the strong association of spotted owls with the forest canopy, and spotted owl flight behaviors, we conclude that it is unlikely that spotted owls would cross the Whistling Ridge site at an altitude that would put the owls at risk of collision with turbine blades. Therefore, the risk of a spotted owl collision at this site is considered to be discountable. Concurrence. Considering the current status of spotted owls in the Project area, and the anticipated Project effects, we concur that the Project is not likely to adversely affect the spotted owl. This concludes informal consultation pursuant to the regulations implementing the ESA (50 CFR 402.13). This action should be re-analyzed if new information reveals effects of the action that may affect listed species or designated critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to an listed species or designated critical habitat that was not considered in this consultation; and/or, if a new species or critical habitat is designated that may be affected by this Project. [LTR 173, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *While reading through the DEIS for this Project, we found some issues that require your attention. On [DEIS] Page 4-4, first paragraph, last sentence "As described in Section 3.4 Biological Resources, no listed species or critical habitat are anticipated to be affected by the Project." This statement equates to a finding of no effect. To the contrary, the biological assessment prepared by BPA made a finding of "may affect, not likely to adversely affect"; hence, the need for this informal consultation. [LTR 173, CMT 5]*

**Response**: The last sentence in Section 4.2 on page 4-4 of the DEIS has been deleted, and the following has been added: "BPA prepared a Biological Assessment (dated June 8, 2010) and submitted it to USFWS for informal consultation. In a letter to BPA dated July 19, 2010, USFWS concurred with BPA's conclusion that the Project may affect, but is not likely to adversely affect, the northern spotted owl, a threatened species."

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**Comment**: *On [DEIS] page 4-5, 4.5 Migratory Bird Treaty Act, both the interpretation of this Act and the effects of the Project to avian species are in error. Both avian studies and the analysis in Section 3.4 Biological Resources state that many avian species occur within the Project and that some of those individuals will be killed (collisions with blades or tower) and contrary to the statements provided in the Biological effects Section. Within this context, how is it concluded at 4.5, that impacts to migratory birds could only occur through temporary disturbance during construction? [LTR 173, CMT 6]*

**Response**: The phrase "impacts to migratory birds could occur through temporary disturbance during construction" in Section 4.5 of the DEIS has been revised to read "impacts to migratory birds could occur through both temporary disturbance during construction and during operation of the Project."

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**Comment**: *On [DEIS] page 4-5, 4.7 Bald Eagle Protection Act, the last statement "Because the Project would not involve intentional acts or acts in wanton disregard of bald or golden eagles, this Project is not considered to be subject to compliance with the Act," is an inaccurate statement. Federal Law Enforcement and the US Department of Justice decide whether or not an eagle killed by a project is subject to compliance under this Act. The Service appreciates your efforts to protect listed species and the habitats on which they depend while meeting your mission to provide the public with reliable electricity. [LTR 173, CMT 7]*

**Response:** Section 4.7 has been corrected so that the last sentence reads "The Project would not involve intentional acts or acts in wanton disregard of bald or golden eagles. Any accidental injuries or deaths would be subject to Federal law."

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**Comment**: *[In reference to DEIS] p. 3-39, [t]he final sentence in this section states that "[t]he project site is not located within any known wildlife corridor, flyway, foraging area, or migratory route." This statement is problematic as the site lies within the landscape-scale Pacific Flyway, which is adjacent to the Columbia River gorge ( which, in turn, is a significant migratory flyway, particularly for water birds), and all north-south cordilleras in the state support at least a weak raptor migration. Elsewhere in the document (e.g., p. 3-46), raptor activity at the site is ascribed to migratory behavior. Also, some of the bat behavior observed at the site is assumed to be foraging behavior, and birds and other wildlife are known to forage in the project area. Use of the term "known" is also problematic and suggests the need for additional study. For example, no data was collected to assess bird or bat migration activity at the site. [LTR 177, CMT 30]*

**Response**: Based on the avian point count data, bird use in the Project Area is considered too low to identify the site as a flyway or concentrated migration route. Birds are migrating through the Project Area, but not using it as a primary route. The avian point counts included all raptors observed, not only migrating raptors, so the level of migratory use would be lower than the total use estimated.

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**Comment**: *[In reference to DEIS Section] 3.4.1.5 Special Status Wildlife Species General Comments, Strike Risk Modeling: The avian surveys for the project use a very crude index to rank relative strike risk among the various species of birds recorded at the site. One of the three variables in the strike risk model relies on where in the vertical air column (in or out of the rotor swept zone) birds were initially detected when they were first seen. [Footnote: Glancing at a bird and assigning it to "in" or "out" of the rotor swept area is an exceptionally poor predictor of mortality risk. For example, the avian survey report indicates that Homed Larks are often the most commonly found birds killed at wind tower sites. Homed Larks spend a significant amount of time on the ground. Accordingly, it is likely that an index of this species' strike risk formulated based on this project's model would forecast a low mortality risk and be a very poor predictor.] No observations of bird behavior were made over any extended period of time. The behavior was apparently not even recorded for all observations, as in some years the metric is absent. Furthermore, as highly mobile species, almost any bird will at some point cross the rotor-swept area. Some very sophisticated strike risk models have been developed around wind energy towers. The validity of at least some of these models is still in question. Nonetheless, they attempt to quantify the amount of time a species spends in the rotor strike zone, and assign risk based in part on the size, speed, and flight paths of birds crossing the rotor swept area. While implementation of such complex models may not be necessary (at this point) for this project, reliance on the simplistic model used for this project is misleading and the results should be removed from the DEIS, or at the very least the model's limitations (which are discussed in some detail in avian survey reports) should be fully disclosed in the body of the DEIS to ensure that the reader is not misled. The avian survey report (Appendix C-4) indicates that the index is formulated to help rank the relative risk each species might face in the presence of wind towers. At best, the index may give some insight among the species at this site, but comparison to other sites, particularly in different habitat types from the proposed project, is highly suspect and appears to be untested. Appendix C-4 also states "... no relationships have been observed between overall use by bird types other than raptors, and fatality rates of those bird types at*

*wind-energy facility." Such a lack of predictive ability also speaks for a need for long-term follow up monitoring to assess the true impacts of the project on birds. General Comment [on] Species Abundance: Discussion regarding the abundance of species at the site lack context. For example, the DEIS reports that fifteen (15) swifts were seen in fall 2004, four (4) in summer 2006, and eleven (11) in summer 2009. The DEIS, however, fails to place these types of figures into a context. Do these observations constitute "a lot"? "Very few"? Compared to the next watershed west, or the core of the species range? In the case of the swifts, and indeed most species recorded in the project area, subjectively it seems that few of any given species are represented. However, in the case of migrating birds (such as the 15 swifts observed in fall 2004), this could represent a rate. In other words, there could be 15 swifts per day, or per hour trying to migrate across the project site. There is simply no contextual information to put these numbers into a wider perspective. Similar information subject to this same criticism is provided for other species of concern. [LTR 177, CMT 31]*

**Response**: Avian use, rather than the exposure index, was used to predict the level of post-construction avian mortality. The mortality estimate was based on a regression of mortality at other wind developments in the region with the pre-construction use estimate. Bird behavior would not need to be known to apply the regression approach to mortality estimates. Qualifying information on the utility of the risk index is explained in the Avian Baseline Report included in Appendix C of the DEIS.

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**Comment**: *Olive-sided flycatcher, [DEIS] p. 3-56: This section should be expanded to address the following issues. According to Breeding Bird Survey data, this species declined at the rate of 3.3 percent per year between 1966 and 2001. Loss of winter habitat is thought to be one causal mechanism. Another is that managed forests, which superficially replicate the fire-altered forests the birds depend on, may not offer all that the birds need to meet life history requirements. The last sentence in this paragraph states "none were recorded during the fall of 2004 or the winter of 2008-2009." The Olive-sided Flycatcher is a late spring arrival and departs in late summer. Recording the species at the site in fall or winter would be most unusual. [LTR 177, CMT 33]*

**Response**: The species, Olive-sided flycatcher, would not be expected during winter; however the EIS as written is correct in its report that none were recorded.

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**Comment**: *Vaux's Swift, p. 3-57. See General Comment, Species Abundance above. [LTR 177, CMT 34]*

**Response**: The abundance of bird species was determined based on field studies, and standardized to bird use for comparison with 13 other wind developments in the region for comparative estimation of the level of mortality. Species-specific analysis was not conducted for non-special status birds that are not known to constitute the majority of passerine mortality at wind developments.

**Comment**: *[In reference to] Keen's Myotis and Townsend's Big-eared Bat, [DEIS] pp. 59-60: The bat survey, and consequently the distilled discussion in the DEIS, are lacking in detail. The Keen's Myotis discussion discloses "[b]at surveys conducted during 2007, 2008, and 2009 ... did not have the ability to detect individual species of bats." That species composition at the site could not be determined serves to emphasize that too little is known about the bat fauna. At a minimum, this lack of knowledge demands that there be post-construction studies to evaluate bat mortality and species composition of fatalities. Also, as (potentially) the first wind energy site to be built in a forest setting in the Pacific Northwest, this project should be used to study the impacts of such development on bats and birds. The U.S. Fish and Wildlife Service Wind Turbine Guidelines Advisory Committee draft report of March, 2010 states, "[o]ur current state of knowledge about bat-wind turbine interactions... does not allow a quantitative link between pre-construction acoustic assessments of bat activity and operations fatalities." [Footnotes: Wind Turbine Guidelines Advisory Committee. 2010. Wind Turbine Guidelines Advisory Committee Recommendations. US Fish and Wildlife Service Wind Turbine Guidelines Advisory Committee. Draft report to the Secretary of the Interior. March 4.] The report goes on to say: There is growing interest in determining whether "low" position samples (~1.5-2 meters) can provide equal or greater correlation with bat fatalities than "high" position samples because this would substantially lower cost of this work. Developers could then install a greater number of detectors at lower cost resulting in improved estimates of bat activity and, potentially, improved qualitative estimates of risk to bats. Because the applicant sampled at a variety of sites and elevations within the project area, follow up monitoring could contribute to the body of knowledge regarding the ability of various approaches to pre-implementation sampling to predict post-project mortality. The Townsend's discussion states "[t]here are no known roosting structures or maternity colonies occurring iri the vicinity of the project area. Consequently, the likelihood of occurrence on the site is considered to be low." The absence of evidence should not be assumed to be evidence of absence, especially in light of the caveat disclosed about inability to distinguish species during the bat surveys. This species (and many other bats) will roost singly in tree cavities or behind loose bark, so it is impossible to completely dismiss their presence at the site. [LTR 177, CMT 35]*

**Response**: The bat surveys that were conducted used the best available standard methods for surveying bats, and which have the limitation identified in the comment. Following construction, bat and bird mortality will be surveyed at a minimum for two years. Neither Keen's myotis nor Townsend's big-eared bats have been documented as fatalities at wind developments in the U.S.

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**Comment**: *[In reference to DEIS Section] 3.4.1.6 Other Wildlife Species, Birds, p.3-63: The DEIS states that "[m]ean overall bird use in the study area was low compared to these other wind resource areas studied; ranking 19th compared to 24 other wind resource areas..." This section should explain that comparisons to other wind resource areas in Washington and Oregon may be of little value as these other areas occupy different habitat types-primarily shrub-steppe and agricultural lands. Comparisons to sites located in Eastern deciduous forests are also questionable because of the different suite of bird species, different structural components to the surrounding forests, and dissimilar migration behavior. [LTR 177, CMT 36]*

**Response**: Although the use estimates were from wind developments in different habitat types, the presence of a correlation between avian use and mortality indicates that avian use is an accurate predictor of whether a site is located in a relatively high or low bird use area independent of habitat. The site data was not compared with sites in eastern deciduous forests.

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**Comment**: *[In reference to] Fall Migration Surveys (2004), [DEIS] p.3-64: Eight species of raptors were observed during the survey. Those with the highest use of the site were sharp-shinned hawk, Cooper's hawk, and red-tail hawk. The highest raptor use observed at the site during 2004 surveys occurred between September 11 and October 12, 2004. This observation is consistent with annual observations made at the Chelan Ridge Raptor Observation Project site in northern Washington, also on the east side of the Cascades. Raptors throughout the West migrate along ridge lines. Some ranges are located at geographic restrictions or at the confluence of ranges that funnel concentrations of raptors. Data do not indicate this is such a site, but do support the idea of a weak raptor migration through the area. Based on the number of raptors encountered during fall surveys, a rough estimate of the number of birds migrating through the site each fall should be made and included as part of the FEIS. [LTR 177, CMT 37]*

**Response**: Based on the avian point count data, bird use in the Project Area is considered too low to identify the site as a flyway or concentrated migration route. Birds are migrating through the Project Area, but not using it as a primary route. The TAC will determine the scope of post-construction monitoring surveys, and the suggestion to include fall migration estimates for raptors will be considered.

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**Comment**: *[In reference to DEIS Section] 3.4.2.1 Proposed Action Western Gray Squirrel, p. 3-75: This section suggests that the lack of oak trees in the project area indicates that the area has poor habitat quality for this species. In the northern part of the species' range, however, oaks are completely lacking. Accordingly, the absence of oak trees should not be used to conclude that the squirrels are absent from a site. [LTR 177, CMT 38]*

**Response**: Western gray squirrel surveys were conducted according to protocol and in consultation with WDFW, and no squirrels were detected.

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**Comment**: *[In reference to] Special Status Wildlife Species, [DEIS] p.3-77: This section introduces the collision risk model (or "bird exposure index" as it is called in the avian reports) from the avian survey reports. As discussed above, this model is highly suspect. The avian survey reports present numerous caveats when using this model or index: "This index is only based on initial flight height observations and relative abundance (defined as the use estimate) and does not account for other possible collision risk factors such as foraging or courtship behavior." Reliance upon the Index is subject to criticism on several grounds. Intuitively, the model makes little sense. The model also fails to account for the disproportionate impact of mortality on rare populations. The model also fails to account for many of the other variables*

*that influence strike risk. These include size of the bird, speed of flight, and direction of flight, or weather conditions which could obscure blades or towers. Ultimately, there is no indication that this model has any predictive value. Neither the DEIS nor the avian surveys indicate that this model has ever been tested in the field or been utilized prior to the construction of a wind energy facility, followed by post-construction surveys to verify its usefulness. Given these limitations, any use of numbers from the index should be reported judiciously, sparingly, and with all the caveats identified in Appendix C and the DEIS, otherwise unqualified validity and strength are implied for these indices. [In reference to] Other Wildlife Species, Birds, [DEIS] p. 3-79. The final paragraph in the bird impacts lists a host of caveats, which are cause for concern. Although there is no geographic feature suggesting this site constitutes a migratory bottleneck or should host a concentration of migrants, no effort was made to assess passerine migration, particularly at night (when most of these species migrate). In the absence of such an effort and in light of the long list of caveats associated with the collision index, post-construction monitoring and appropriate mitigation (should significant mortality occur) is warranted. Long term impacts should be assessed over a 5 - 10 year period because of our lack of experience with siting wind projects in Western forested ecosystems, and because of the inter-annual variability in migrating bird numbers. [LTR 177, CMT 39]*

**Response**: While the exposure index was calculated for each bird species observed during point count surveys as one measure of the relative risk a species might have to collision, avian use estimates were used to compare with wind developments where mortality data is available so the proposed Project could be evaluated for the relative level of mortality that would be anticipated. No nocturnal surveys were conducted to estimate migratory bird passage, but the regression between avian use and mortality includes nocturnal mortality in addition to daytime mortality.

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**Comment**: *[In reference to] Other Wildlife Species, Bats, [DEIS] p. 3-79: Bats are difficult to study. Nonetheless, the fact that of all the bats detected and all the species that could be present at the site, only the hoary bat was identified to species, leaves much information for the site lacking. The DEIS concludes (based on Appendix C reports) that relatively little bat activity was recorded at elevated heights, and two seasons of monitoring did not detect significant migrations. While these are good signs, the DEIS concludes "variable levels of recorded use by bats across years, habitats and recording height above ground indicate that the extent of impacts is difficult to predict at this time." This conclusion demands years of follow-up monitoring to assess actual impacts. As one of the first sites placed in a forested setting, such monitoring is particularly critical to understanding the environmental impacts of wind energy sites in forests. [LTR 177, CMT 40]*

**Response**: The bat surveys that were conducted used the best available standard methods for surveying bats, and which have the limitation identified in the comment. Following construction, bat mortality will be surveyed at a minimum for two years.

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**Comment**: *[In reference to Section] 3.4.3 Mitigation Measures Post-Construction Avian [and Bat] Mortality Study: Given the large number of unknowns discussed above regarding both bats and birds, the avian mortality monitoring mitigation measure should be expanded to include bats and its duration should be expanded from 2 years to a 5-10 year horizon. [LTR 177, CMT 41]*

**Response**: The bird and bat surveys that were conducted used the best available standard methods for surveying. Following construction, bird and bat mortality will be surveyed at a minimum for two years, and potentially longer if the TAC determines that if the level of mortality or that if the species composition of fatalities merit further studies.

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**Comment**: *[With respect to] [r]esearch-oriented [s]tudies: As one of the first wind power projects proposed for construction within a forested habitat in the Pacific Northwest, this project offers a unique opportunity to conduct research-oriented studies regarding the wind energy/wildlife interactions like the research studies identified in the WDFW Wind Power Guidelines (2009) and the USFWS Wind Turbine Guidelines (2010). [LTR 177, CMT 42]*

**Response**: The pre-construction surveys provide baseline pre-construction survey data to which additional study results can be compared, depending on the study designs that are selected by the TAC and carried out by the applicant.

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**Comment**: *[With respect to] [d]iscussion of [the] West Cumulative Impact Study, pp. 3-275-76: The cumulative impact study prepared by West, Inc. for the Klickitat County Planning Department has contextual issues that need to be addressed. As the DEIS points out, habitat assessed by West for Klickitat County is significantly different from that at the project site. The DEIS states that "none of the estimated fatalities were anticipated to cause a significant loss in population, and no cumulative impacts were anticipated." Since the completion of the West report, however, the number of occupied Ferruginous Hawk nests in Washington has dropped precipitously. [LTR 177, CMT 67]*

**Response**: The proposed Project Area is not located in or adjacent to ferruginous hawk nesting and/or foraging habitat.

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**Comment**: *The cumulative impacts discussion in the DEIS concludes with the following sentence: For example, one study from 2009 estimated that, based on performance in the United States and Europe, wind farms and nuclear power stations are responsible each for between 0.3 and 0.4 bird fatalities per gigawatt-hour (GWh) of electricity while fossil-fueled power stations are responsible for about 5.2 fatalities per GWh (Sovacool 2009). The Sovacool (2009) paper appears to be fundamentally flawed in its assumptions. Willis et al. (2010) published a rebuttal to this paper that would suggest that its premises are unsound. This line of reasoning should either be removed from the FEIS, or better supporting literature provided to support the point.*

*Thank you for this opportunity to submit comments on the Whistling Ridge DEIS. [LTR 177, CMT 70]*

**Response**: Sovacool published a response to the Willis (2010) rebuttal [Energy Policy 38: 2070-2073] which disputes several key statements made by Willis. This dialogue shows that the methods for evaluating impacts to birds and bats as a result of wind turbines are evolving at the present time. However, the Applicant used the best available science at the time of the publication of the DEIS to reach the stated conclusions.

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**Comment**: *I am commenting on the methods, results and conclusions resulting within the Acoustic Bat Surveys and the text of the Whistling Ridge DEIS. METHODS Whistling Ridge Energy (WRE) hired the consultant WEST, Inc to perform bat surveys in 2007, 2008, and 2009. The bat survey consisted only of Anabat recordings at selected locations. This method has the ability to detect and record the ultrasonic calls allowing bat species to be identified and enumerated within the spatial range of the Anabat equipment. Use of the Anabat recorder however has limitations. Anabat recorders are used to determine activity. What specific activity is occurring, such as migration or feeding cannot be determined from the calls themselves. The limitations of the survey methods must be addressed and conclusions need to remain within the methodology limitations and not go beyond. WRE makes assertions that do not have any empirical basis in an attempt to lead reviewers to believe it has fulfilled the requirements of the DEIS. To begin with, WEST, Inc. did not consistently achieve their own stated goals: "(1) characterize the local bat populations in a variety of habitats, (2) identify areas of high usage by bats, and (3) characterize the frequency of bat usage areas representative of where turbine strings would be located" if they were achieved at all. [With respect to WEST's stated goals:], (1) Local bat populations were not characterized in a variety of habitats. Implied in characterizing the bat populations is the identification of species and providing their composition of the calls in each habitat. Only one bat, the hoary bat, was identified. This bat in general only made up approximately 5-6% of the calls. Out of the 15 species of bats that may be present in the WRE area, six have status, and two are candidates for listing. Over 90% of the bat calls remains unidentified. WEST, Inc. states that they did not have the ability to detect individual species of bats. Perhaps WEST, Inc. does not have the ability to do so in house, but they could have sent out the recordings for analysis by a qualified expert. WEST, Inc. provided text in a report for another wind development company Acciona demonstrating they have sent tapes out for expert analysis (Exhibit 1). [LTR 178, CMT 3]*

**Response**: The acoustic bat studies were conducted using standard methods for pre-construction surveys, and have the limitation that individual species (except for the hoary bat) were not identified. The activity levels were compared to other wind developments to categorically identify the risk level to bats based on the results of mortality monitoring. Post-construction mortality monitoring will provide the species and numbers of bats that may be fatalities at the proposed Project. Four habitat types were studied during pre-construction bat surveys (Table 3.4-7), and results provided the number of bat passes in each habitat type so high-usage areas could be identified. The frequency of bat passes was analyzed in areas where turbine strings would be located (Section 3.4.1.6, DEIS page 3-65). The two candidate species, Townsend's big-eared bat and Keen's myotis, have never been fatalities at a wind development

and have a low likelihood of occurrence in the Project Area. Bat species were grouped into frequency groups that are related to risk of turbine collisions. For example, Myotis bats, most of which have high frequencies, are rarely killed at wind energy facilities whereas hoary and silver-haired bats echolocate at low frequencies and are the two most common species killed in the Pacific Northwest. Categorizing calls according to frequency groups allows a risk assessment without having to identify each call to species.

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**Comment**: *[With respect to WEST's stated goals:], (2) During 2008, four locations closely representing the diversity of habitats and the turbine corridors in the WRE project area were monitored with the Anabat II recorders. These general habitat types included a wetland between two strings, a road corridor, and two clear cut locations. [With respect to WEST's stated goals:], (3) The 2007 survey did not state habitat type monitored and 2009 did not monitor a similar variety of habitats in the WRE area as in 2008. In 2009, WEST, Inc. only monitored areas similar to the one identified in 2008 as having the lowest activity. WEST, Inc. did not indicate whether they surveyed locations that would represent tree stands of 10, 20, and 30 years of growth. These tree ages would be present as the project area becomes reforested. WEST, Inc. surveyed highly disturbed locations only, worst case scenario from a species use standpoint. The results in 2009 therefore only represents the lowest probably use by surveying what appears to be the least desirable bat habitats, and in conditions only present for the first few years following completion of construction. Yet, only the 2009 activity data was used as the basis of comparison to other wind facilities with bat mortality data. Bat activity numbers should be normalized by a fixed time period, like day, week, or month. In the case of WRE, they normalized by study period, when each year's study duration was different, as well as start and stop dates. The longer study period, lasting past normal activity periods for bats will indicate lower average values for the whole year's study. The bat survey did not cover any of the bat activity during spring. The longest survey period covered June thru October. Bats have been seen adjacent to the WRE area as early as March. Wind in the PNW is most frequent during the winter and spring as frontal systems move in from the Pacific Ocean. Bats, with high springtime metabolic requirement would be vulnerable as they forage to recover lost fat from hibernation or migrate through the WRE site. [LTR 178, CMT 4]*

**Response**: The habitat types monitored in 2007 are provided in Table 3.4-7. Two habitat types, clear cut and young forest, were monitored in 2009 because these habitats were representative of areas where the turbines are proposed and include habitats expected to be present over the 30-year lifespan of the Project. The 2009 data were compared with other sites because they best represent likely bat presence where turbines will be constructed. Bat passes per detector night was calculated to provide comparisons among years and habitats. The timing of the bat study coincides with the period when the majority of bat fatalities occur.

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**Comment**: *The WRE surveys discarded single calls. These single calls could belong to species that range on the quiet or non vocal side of the bat world. A table needs to be created showing which NW bats vocalize with two or more calls and which ones often use single calls. Very significantly, the WRE bat survey failed to assess the prevalence of migrating bats through*

*the project area. The DEIS makes statements that appear intended to demonstrate WRE does not believe they pose a significant risk to migrating bats, but these statements are not supported by any study or facts. Anabat recordings do not differentiate between bats feeding, migrating, or engaged in other activities. Simply noting what time of year activity was higher or lower does not even suggest migration. Migration can only be elucidated from carefully designed and executed surveys. Kunz et al. (2007) outlines some of the different technology and methods available for assessing nocturnal bats. Equipment such as tracking radar and thermal infrared imaging cameras can be used in conjunction with ultrasound microphones for bats and audio microphones for birds to obtain a greater picture of bat and bird migration and behavior in and through the WRE area. Because, bird migration was also not assessed, a bird and a bat could be hit with the nearly same proverbial stone should a migration survey be required. Bat experts with specialized knowledge were not consulted for information on location of hibernacula and maternity colonies, the only person consulted was a generalist WDFW habitat biologist, Bill Weiler ([DEIS] pg 3-80). These deficiencies in the methods makes it difficult to truly assess what bat species may be at greatest risk both from a numbers issue a population perspective. [LTR 178, CMT 5]*

**Response**: Recorded bat call length is both a function of species and the quality of the recording, which is less clear with increasing distance from the microphone. Because there is significant overlap in call characteristics for some species, species identification was not made in order to avoid the potential for error. An in-depth migratory bat study was not considered necessary to characterize bat use in the proposed Project Area, because elevated detectors picked up some of the low-flying migratory bats that would have been at risk of collision with wind turbines. The primary means for determining the risk to bats posed by the proposed wind development is comparison with wind developments where pre- and post-construction monitoring has been conducted (Section 3.4.2.1, DEIS page 3-80). Readily available data sources, as from USFWS and WDFW, were researched to determine whether any bat hibernacula or maternity colonies were known to occur near the Project Area. Additionally, biologists familiar with the area were consulted. The most relevant data on bat use of the Project Area are data collected at the site. Three years of on-site bat data were collected at Whistling Ridge, making it one of the most studied project areas in the country related to bat use.

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**Comment**: *The acoustic bat surveys during 2008 better covered the diverse habitats currently available on or near the WRE site than either 2007 or 2009. The WRE project site contains wetlands, streams, ridges, low lying areas, clear cuts, varying ages of forest, and forest fringe areas. Not all these areas were monitored, but in 2008 several of them were. In 2008, three upland sampling locations, two clear cuts and a road corridor (July 3 to Oct 7) were monitored over 97 nights recording 39,326 bat passes and one additional sampling station next to a wetland (located between two rows of turbine strings) was monitored over 97 nights and recorded a whopping 17,269 bat passes (mean of 178.0 bat passes per detector night). The three upland locations had means of 14.3, 73.8, and 397.3 bat passes per detector night. These results appear to be some of the highest bat pass detections reported (and in three locations, the highest detections) of any wind turbine site in the U.S. Compare to the numbers in the Activity column in Table 4 in appendix C-10, page 18. The highest activity on the table is 38.3 bat detections/detector night. WRE suggests that bat use of the site is not high and states that the*

*"extent of impacts is difficult to predict at this time ([DEIS] pg. 3-81)." The absolute extent cannot be precisely predicted, but a general ballpark statement can be made upon closer examination of the numbers. WRE agrees "a) bat mortality shows a rough correlation with bat activity as measured by Anabat units (Table 4.)." The WRE Anabat monitors more than suggest high bat activity, it has been clearly demonstrated. It is reasonable to expect that bat mortality could be very high at the WRE location if turbines are installed. It is common knowledge that bats have been killed in far greater numbers than birds, particularly along the mountain ridges of the Eastern US. No information exists in the Pacific Northwest on bat mortality associated on the forested ridges of the Pacific Northwest, simply because no industrial wind projects have been built in this location to date. Whether resident or local populations are more at risk is completely unknown. In absence of information, a conservative approach would be best, especially in light of six status species of which two are candidates for listing, possibly inhabiting or migrating through the WRE area. [LTR 178, CMT 6]*

**Response**: As stated in the DEIS (page 3-67 and page 3-80), the timing of the high levels of bat activity as well as the locations away from proposed turbine locations suggests that the bat mortality may not be high, as observed at other locations in the U.S. (page 3-80 of the DEIS). The 2009 data are from the area around the turbines, and provide the most accurate indicator of background bat use; the previous studies included habitats not located near the proposed turbine strings.

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**Comment**: *Bats do not have to be struck by wind turbines, but simply being in the proximity to a rotating blade may cause fatalities from barotrama (Baerwald et. al 2008). Whether bats are killed as a result of a random event or by some selective mechanism is not fully known. However, it appears that bats may be attracted to wind turbines (Horn et al. 2008). Bats are long-lived and have low reproductive rates, making populations susceptible to localized extinction (Barclay and Harder 2003). Bat populations may not be able to withstand the existing rate of wind turbine fatalities (Kunz et al. 2007; Arnett et al. 2008). As the number of wind turbine facilities increase across the continent, even greater numbers of fatalities will occur. One serious bat problem looming on the horizon is the possibility that White Nose Syndrome may infect western bats. The cumulative effect of wind turbines and this devastating infection on bats has not been addressed in cumulative impacts. This information needs to be added, especially in light of the high bat activity at the WRE location. Society needs to take great care protecting these small flying mammals, Journal of Wildlife Management 71:2449–2486. Please also reference the charted comments on the pages below. Bats are significant consumers of human and agricultural pests. Without them life could be different. CITATIONS: ARNETT, E. B., ET AL. 2008. Patterns of bat fatalities at wind energy facilities in North America. Journal of Wildlife Management 71:61–78. BAERWALD, E. F., G. H. D'AMOURS, B. J. KLUG, AND R. M. R. BARCLAY. 2008. Barotrauma is a significant cause of bat fatalities at wind turbines. Current Biology 18:R695– 696. Barclay, R.M.R., Harder, L.D., 2003. Life histories of bats: life in the slow lane. In: Kunz, T.H., Fenton, M.B. (Eds.), Bat Ecology. University of Chicago Press, Chicago, pp. 209–253. HORN, J. W., E. B. ARNETT, AND T. H. KUNZ. 2008. Behavioral responses of bats to working wind turbines, Journal of Wildlife Management 72:123–132 KUNZ, T. H., ET AL. 2007. Assessing impacts of wind-energy development on nocturnally active birds and bats: a guidance document. [LTR 178, CMT 7]*

**Response**: Section 3.14.3.5 includes a revised cumulative impacts analysis that considers the amount of wind energy development in coniferous forests of western Washington. The revised analysis indicates little potential for cumulative impacts to bats based on the small amount of development anticipated. Bat mortality at the site will be monitored and, if warranted, effective mitigation techniques (such as turbine curtailment during low wind speed nights, which has been shown to greatly reduce bat fatality levels) will be implemented.

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**Comment:** *[In reference to DEIS Section] 3.4.1.6 Bat acoustic studies conducted from 2007 through 2009 were implemented at various locations on the project site. The goal of the studies were to: (1) characterize the local bat populations in a variety of habitats, (2) identify areas of high usage by bats, and (3) characterize the frequency of bat usage areas representative of where turbine strings would be located. Studies were done across several seasons to estimate annual variation during breeding and periods of migration. Goal (1) was not met. One cannot characterize the local bat populations (note plural) if one does not know what different populations of bats exist at the site. The Anabat recordings were only used to differentiate between high and low frequency calls, and only the call of the hoary bat (approximately 6% of the calls) was identified to species. Goal (3) only addressed one of a number of "representative" habitats, and this one habitat selected had the lowest activity of all monitored habitats. Only goal (2) was accomp[l]ished. Periods of migration were not identified by the study, only an assumption that migrating bats would migrate during the same period as bats on the East Coast of the US. Because migration by bats from or through the area were not studied, WRE cannot make any conclusions about migration. Not all bats migrate, some are residents, so unless one knows what migratory species are in or moving through the area nothing other that counts of presence can be made. Remedy - Identify all common and unique bat calls by Genus and Genus species and report along with location, date, time, wind speeds, and other meteorological information. Provide all information in a supplemental DEIS. Characterize the local bat populations in a variety of habitats. Design study to specifically address MIGRATION according to established best practices. [LTR 178, CMT 9]*

**Response**: The acoustic bat studies were conducted using standard methods for pre-construction surveys, and have the limitation that individual species (except for the hoary bat) were not identified. The activity levels were compared to other wind developments to categorically identify the risk level to bats based on the results of mortality monitoring. Four habitat types were studied during pre-construction bat surveys (Table 3.4-7), and results provided the number of bat passes in each habitat type so high-usage areas could be identified. The 2009 data were selected for comparison because the habitats were representative of the proposed location of turbine strings. Migratory period ending was determined by the attenuation of bat calls. The second paragraph under "Bats" (on DEIS page 3-65) has been revised in the second sentence for the first goal. "Populations" has been changed to "population" because all bats in the area are members of one population. An in-depth migratory bat study was not considered necessary to characterize bat use in the proposed Project Area, because elevated detectors picked up some of the low-flying migratory bats that would have been at risk of collision with wind turbines. The primary means for determining the risk to bats posed by the proposed wind development is comparison with wind developments where pre- and post-construction monitoring has been conducted (page 3-80 of the DEIS).

**Comment**: *[In reference to DEIS] Section 3.4.1.6, [f]or all studies, passive Anabat II echolocation detectors coupled with Zero Crossing Analysis Interface Modules (ZCAIM; Titly Electronics Pty Ltd., NSW, Australia) were used in all survey years. Bat species are generally grouped into those that emit low frequency (<35 kHz) or high frequency (≥35 kHz) calls. Bats need to be identified to species, particularly in light of a number of species with an elevated status. The Applicant's consultant, WEST INC, has demonstrated capability to provide this service and needs to perform this analysis. Bats should be grouped by Genus, and Genus Species in addition to low and high frequency calls. [LTR 178, CMT 10]*

**Response**: The acoustic bat studies were conducted using standard methods for pre-construction surveys, and have the limitation that individual species (except for the hoary bat) were not identified. The activity levels were compared to other wind developments to categorically identify the risk level to bats based on the results of mortality monitoring. Post-construction mortality monitoring will provide the species and numbers of bats that may be fatalities at the proposed Project.

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**Comment**: *[In reference to DEIS] Section 3.4.1.6, [i]n 2009, the bat survey efforts were further refined to focus specifically on the types of locations where turbines would be sited. This statement is patently false and misleading. The study design in 2008 represented the turbine locations by including areas near water sources. There are two water sources bats can use. One is the wetland just outside of 150 feet from some of southern the C string of turbines. The second, although mentioned a number of times during scoping, is from a creek below the southern A-array. This creek flows into an old reservoir located on the east side under the southern A string. It too provides a water source for bats. The 2009 survey selected locations far from water sources and as far from any size of trees that could be attained and is not representative of the diverse environment typical of a mountainous coniferous environment. No comparison to environmental conditions during the time Anabat equipment was operating, No mention of how bat use will increase in clearcuts as trees regrow. Bats data cannot be compared to other PNW use and mortality surveys. A those surveys occurred in the open, dry, unforested farmlands and grasslands and not in the damp coniferous forests and ridgelines of the Cascade Mountains. Patterns in use and activity are highly likely given differences in species and therefore behavior patterns of each individual species. Timing of reproduction and migration or hibernation is very likely to be different in the hot and dry environments than in the forests of the Cascade Mountains for those species that inhabit both areas. Remedy - An expanded, in-depth independent study needs to be performed over multiple years prior to any conclusions about seasonal and temporal use patterns and predicted mortality. [LTR 178, CMT 11]*

**Response**: The acoustic bat studies were conducted using standard methods for pre-construction surveys, and have the limitation that individual species (except for the hoary bat) were not identified. The habitats studied in 2008 more broadly characterize the site, but in 2009 the habitats were selected for comparison because they are in the immediate area of the proposed turbine strings, where bat mortality could occur. Water sources are away from the proposed turbine strings and could be used by bats flying in the area of the proposed strings, but data from

near the water sources would not accurately represent the bat population at risk which is in the area of the proposed turbine strings.

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**Comment**: *[In reference to DEIS] Section 3.4.1.6, [T]able 3.4-6, [n]eed to identify also what species are high and low frequency. A count shows that two high frequency and four low frequency bats have status. Of the low frequency bats one has been identified but only makes up 5.9% of the total calls. This means that over 94% of the bat calls are unidentified. Of particular interest, in the low frequency group, one species had been identified as being in the area, leaving six not identified. Out of those six, four have status. In the high frequency group, two of the 8 have status. Overall, there is a very good chance that a number, if not all of these status species use this area, given the number of unidentified calls. Remedy - Have expert biologists identify calls and present results along with detailed life history and overall abundance. [LTR 178, CMT 12]*

**Response**: Table 3.4-6 has been revised to include the high- and low-frequency status of each species. The acoustic bat studies were conducted using standard methods for pre-construction surveys, and have the limitation that individual species (except for the hoary bat) were not identified. The activity levels were compared to other wind developments to categorically identify the risk level to bats based on the results of mortality monitoring. Post-construction mortality monitoring will provide the species and numbers of bats that may be fatalities at the proposed Project, and if mortality of special status species or a large number of bats occurs, the TAC and USFWS will determine mitigation measures.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [i]t is likely that some bat mortality would occur during operation; however, mortality estimates are difficult due to our lack of understanding of why bats collide with wind turbines…. It is common knowledge that it is not necessary to know why things happen to be able to assign a number to how often it may happen. It may be necessary to know why things happen to develop an effective solution. For example: Survival studies (mortality) in salmon are able to calculate the estimated number in a species population surviving through each dam, and the number surviving to the ocean based on the survival passage at each dam. Those numbers can be used to develop models of survival based on flow, temperature, size of fish, species, and timing of migration. It is not necessary to determine what exact or behavioral factor is involved. Same with bats. Scientists may not know what behavior exposes bats to be killed by wind turbines, but it IS known that bats are killed based on exposure (activity) to turbines. Significantly more than some are likely to be killed, especially if WRE is along a migration pathway. Population effect could result for a number of the bat species and particularly for Townsend's big eared bat. [LTR 178, CMT 13]*

**Response**: Post-construction mortality monitoring will provide the species and numbers of bats that may be fatalities at the proposed Project, and if mortality of special status species or a large number of bats occurs, the TAC and USFWS will determine mitigation measures. The Townsend's big-eared bat has never been a fatality at a wind development and has a low likelihood of occurrence in the Project Area.

**Comment**: *[In reference to DEIS] Section 3.4.1.7, [t]he timing of peak bat activity on the proposed project site (portions of July and August) does not coincide with when the highest levels of bat mortality have been documented at other wind projects in the US. Fatality studies have shown a peak in mortality in August and September and generally lower mortality earlier in the summer (citations)..... Rest of paragraph. This section tries to suggest that because more bat calls were recorded in the summer months that mortality in migrating bats will be low. This does not correlate with other projects in the PNW. These other projects are in the eastern part of the state not having all the same species, a warmer drier environment with moderate fall weather where bat activity will remain higher longer into the fall. Second, bat mortality IS correlated with bat call recordings that indicate activity. Bat activity occurs until late September and early November with a peak in September. Because bat migration was not studied, no conclusions about bat migration can be made. [LTR 178, CMT 14]*

**Response**: Bat mortality at wind developments is categorically correlated with pre-construction bat pass density, and because the fall monitoring (period of highest mortality of bats) was low relative to other wind developments, it is possible that the proposed wind development also will have low mortality during this period. During summer, higher bat pass density was documented, but as noted in the DEIS (page 3-80), many sites have higher summer bat populations but low summer bat mortality. The elevated Anabat units deployed in 2009 would have picked up migratory bats, and although an in-depth migratory study was not conducted, these elevated units recorded low call density so migration is likely light in the area of the proposed Project.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [a]fter August 31, activity for all bats was very low relative to earlier dates, indicating that most bats had left the area for winter hibernacula or warmer climates. This statement is not supported by an analysis of the numbers. Because species of bat calls are not identified and each species of bat has behavioral/physiological differences with response to oncoming winter, it cannot even be suggested that the bats left the area for hibernacula or warmer climates. For example: The Townsend's big eared bat's annual cycle includes an approximate 7 to 8 month period of peak activity in spring and summer when insects are most available and reproduction occurs. The life history and behavior of each bat species that may use the area needs to be incorporated into the timing of bat survey results and discussion. And the results need to include the identification of bat calls by the bat experts that specialize in studying each species of bats, especially the uncommon ones. Reference - http://www.yoloconservationplan.org/yolo_pdfs/speciesaccounts/mammals/townsends-big-earedbat.pdf. Remedy - Identify bat call to species. Conduct a full bat migration study. Use accepted statistical analysis to compare bat abundance and movement in and through the WRE project area. [LTR 178, CMT 15]*

**Response**: While individual bat species have unique behavioral characteristics, the majority of the migratory period for all bat species in the Project Area occurs within the period of study during each of the three years of monitoring. Discussion of the life history and identification of each species is beyond the scope of work needed to adequately analyze the effect of the proposed Project on bats. The acoustic bat studies were conducted using standard methods for pre-

construction surveys and statistical analysis, and have the limitation that individual species (except for the hoary bat) were not identified. The activity levels were compared to other wind developments to categorically identify the risk level to bats based on the results of mortality monitoring. An in-depth migratory bat study was not considered necessary to characterize bat use in the proposed Project Area, because elevated detectors picked up some of the low-flying migratory bats that would have been at risk of collision with wind turbines. The primary means for determining the risk to bats posed by the proposed wind development is a comparison with wind developments where pre- and post-construction monitoring has been conducted (page 3-80 of the DEIS).

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [t]he project site does not contain topographic features, such as canyons, that may funnel migrating bats toward corridors where turbines would be placed. Unfounded statements. There is no Pacific NW study on topographic effects on migrating bats to substantiate this. If so, cite the supporting document and do so for bat species that may migrate from or through the Pacific NW. [LTR 178, CMT 16*]

**Response**: There are no studies that show the effect of topographic features on bat migration. The sentence in the last paragraph on page 3-80 of the DEIS that states "The Project Area does not contain topographic features, such as canyons, that may funnel migrating bats toward corridors where turbines would be placed," has been deleted and replaced with "No significant peaks in bat activity, suggesting high migration activity, were noted during the August-September time frame that bats migrate."

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [n]o turbines would be constructed near wetlands or ponds, and cleared areas surrounding turbine strings would closely mimic clearcuts or young reforested areas, where to date, recorded bat activity levels on the project site were the lowest. Absolutely incorrect assertion. Cedar swamp, a wetland discussed in the DEIS, is only a little over 150 feet from the C string of turbines to the east and a little further to the E string. The SB2 Anabat placed near the wetland recorded 178.0 bat passes per detector-night. The A string sits above an old reservoir that holds water the entire year. The Anabat placed in the A string corridor recorded 73.8 bats per detector-night even though it was sitting out in the middle of a clearcut as were the detectors in 2009. By no stretch of the imagination is this a low number, only relatively lower than the extremely high numbers at two other locations in 2008. The numbers are so high; the developer did not want to compare them in the Table 4, page 18 [A]ppendix C-10. If 2008 numbers had been placed in the table, it would have reset the bar for all time high numbers of bats recorded per detector-night at wind turbine facilities. Remedy - Repair the deficiencies in the map and show the OLD RESERVOIR at the base of the southern A Array. Provide actual measures in FEET or METERS for each turbine within 2000 ft of a body of water. [LTR 178, CMT 17]*

**Response**: The distance from the Cedar Swamp wetland is shown on Figure 3.4-2 of the DEIS, and is approximately 660 feet from the centerline of the C turbine string based on the scale shown on the bottom of the figure. Using the same scale, the wetland is approximately

1320 feet from the centerline of the E string. There is no information as to the existence of a surface reservoir under the location for the A string. The habitats studied in 2008 more broadly characterize the site, but in 2009 the habitats were selected for comparison because they are in the immediate area of the proposed turbine strings, where bat mortality could occur.

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, [b]at surveys conducted during ..... did not have the ability to detect individual species of bats. Based on the lack of detailed information of this species life history and habitat requirements and nature of the bat surveys conducted it is difficult to conclude with certainty with the likelihood of Keen's bats occurring on the project site. However, Due to the lack of old growth or mature forest types within the project area and the predominant commercial forestry use of the property, the likelihood of occurrence on the site is considered to be low. Anabat II technology exists to identify, by call, individual bat species. This technology has existed for over 10 years. West has authored a paper where the Anabat technology was used to identify to species the majority of calls. Papers, abstracts, and excerpts are attached. The tapes need to be further analyzed by a highly qualified INDEPENDENT expert to identify bat calls with special emphasis to identify rare species. If WEST failed to set up the Anabat II correctly so that calls can be identified, then additional bat data collection needs to occur. Additionally, cumulative impacts should assess the possible future infection of bats by white nose syndrome. Increased mortality of ANY type, may directly affect these species future. [LTR 178, CMT 18]*

**Response**: The likelihood of Keen's bat presence was estimated to be low based on lack of preferred habitat and the presence of the proposed wind development along the edge of the predicted range for the species. While the call identification could have been completed, it was considered unnecessary for determination of risk to bats from the proposed Project. The activity levels were compared to other wind developments to categorically identify the risk level to bats based on the results of mortality monitoring at these other sites. At this time, scientific studies do not suggest that white nose syndrome is reasonably foreseeable in the Project Area.

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**Comment**: *[In reference to] Section 3.4.2, Keen's Myotis and Townsend's Big Eared Bat. Surveys for bats were not able to identify all bats to species level. Bats currently identified by the surveys, to Genus and Genus species, must be listed in a table form at the minimum. It is uncontainable to withhold such information, especially in light of this statement verifying the existence of bat species data. Remedy - Provide supplemental DEIS identifying how many Keen's Myotis and Townsend's Big Eared bat calls were detected by the Anabat II and locations, time of year, wind speeds, and other meteorological information. [LTR 179, CMT 19]*

**Response**: The acoustic bat studies were conducted using standard methods for pre-construction surveys and statistical analysis, and have the limitation that individual species (except for the hoary bat) were not identified. The activity levels were compared to other wind developments to categorically identify the risk level to bats based on the results of mortality monitoring. The two candidate species, Townsend's big-eared bat and Keen's myotis, have

never been fatalities at a wind development and have a low likelihood of occurrence in the Project Area.

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**Comment**: *[In reference to DEIS] Section 3.4.1.6, [t]wo additional special status species, Keen's bat (Myotis keener) and Townsend's big-eared bat (Corynorhinus townsendii), may occur but have not been identified in prior surveys. The reason for doing the WRE survey is to perform a survey and determine what species are identified to use the area. Remedy - State whether either of these two species have been identified in the current DEIS study. This can only be achieved by reporting species calls identified on the Anabat II recording. What PRIOR surveys are being referred to here? Explain why it matters whether something was identified prior? What is the purpose of a current survey that can identify species if it only matters what is identified PRIOR? [LTR 178, CMT 20]*

**Response**: Please see response to Comment LTR 178, CMT 19 above.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [t]he nearest know hibernaculum is located near the town of Trout Lake, nearly 20 miles north of the proposed project (B.Wieler, personal communication). Townsend's big eared bat hibernaculum near Trout Lake is known and is one of the largest in Washington. However, other as of yet identified hibernaculum, may exist nearby. A vast lava flow begin just a few miles west of the project site and it could contain hibernaculum. The project site is an area of old volcanic activity. Given that the Townsends big eared bat is difficult to identify through recordings, it is hard to find maternity colonies, and later in the season they may travel as much as 50 km, extra effort needs to be expended to determine if this at risk species is near to or using areas of the WRE project. [LTR 178, CMT 22]*

**Response**: The likelihood of Townsend's big-eared bat presence was estimated to be low based on lack of preferred habitat in the Project Area. Additional survey effort was determined to be unnecessary to evaluate the risk to this species because of lack of preferred habitat. To date, no Townsend's big-eared bat fatalities have been recorded at any wind development in the U.S.

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, [t]here are no known roosting structures or maternity colonies occurring in the vicinity of the project area. See comments on Keen's Myotis. Townsend's Big Eared Bat, a species of concern and a candidate for listing, is present in the region. One of the largest colonies at is located in lava cave nearer to Trout Lake to the north (400 bats?). Colonies are small compared to many other bat species and not many colonies are known to exist. The southern end of the old lava flow (can be seen from Google Earth) that may contain additional colonies is approximately three miles from the project. [LTR 178, CMT 23]*

**Response**: Comment acknowledged.

**Comment**: *[In reference to DEIS] Section 3.4.1.5, [b]at surveys conducted during 2007, 2008, and 2009 (Appendices C-8, C-9, and C-10) did not have the ability to detect individual species of bats. Completely inaccurate statement at the best. Hoary Bats were identified. It is accepted throughout the bat world that the Anabat is a product to collect bat calls and to Identify bat calls to species. Titley Inc, Australia (the company that makes this product)promotes the Anabat as a great product because of this capability! The DEIS text make this assertion a number of times and is just a false the first time stated as every other time stated in the DEIS! [LTR 178, CMT 24]*

**Response**: It is not necessary to identify each species of bat that made a call during a survey in order to complete a valid risk assessment. Furthermore, clearly separating closely related species (e.g., Myotis spp.) using an Anabat is not an exact science. Risk assessments are made based on the proportion of each frequency group in the dataset, as frequency group is known to be related to bat risk.

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**Comment**: *[In reference to Appendix] C-8, [h]oary bats comprised 5.7% of the total passes detected within the SWRA (20 of 348 bat passes: Table 1). So, it is possible to identify bat species, so why not the remaining 94.3% of the calls? It is clear these tapes need to be reviewed by qualified experts. [LTR 178, CMT 25]*

**Response**: Some species, but not all, could be identified using the Anabat system. However, efforts to identify all bat species present were determined to be unnecessary for evaluation of the proposed Project.

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**Comment**: *[In reference to Appendix] C-9, [a]coustic bat surveys were unable to determine bat species present in the study area (except for hoary bats).....So, it is possible to identify bat species, so why not the remaining 94.3% of the calls? It is clear these tapes need to be reviewed by qualified experts. [LTR 178, CMT 26]*

**Response**: Please see response to Comment LTR 178, CMT 25 above.

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**Comment**: *[In reference to Appendix] C-10, [h]oary bats comprised 5.9% of the total passes detected within the WRWRA. So, it is possible to identify bat species, so why not the remaining 94.3% of the calls? It is clear these tapes need to be reviewed by qualified experts. [LTR 178, CMT 27]*

**Response**: Please see response to Comment LTR 178, CMT 25 above.

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**Comment**: *[In reference to Appendix] C-10, Table 4 - The number 8.09 (activity/detector night) is a lower number from a study that appears to have been manipulated in 2009 in an attempt to achieve a low number. The numbers from the 2008 study should also be placed on this table. The numbers from 2008 are 14.3, 73.8, 178.0, and 397.3 activity/detector night. An average of the three should be generated and put in the table. That average is likely to be well over 100.0 (bat calls) activity/detector night, and will be exceeding high relative to every other number in that column. Is this why it is left off the table? [LTR 178, CMT 28]*

**Response**: The 2009 data are from the area around the proposed turbines, and provide the most accurate indicator of background bat use; the previous studies included habitats not located near the proposed turbine strings.

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**Comment**: *[In reference to an Exhibit submitted as part of Comment Letter 178. West, Inc.'s Bat Identification White Paper. Section] 3.4 - Nocturnal AnaBat Surveys, The objective of the nocturnal AnaBat surveys was to record the relative abundance of echolocating bats flying through the sampling area during summer breeding season and the spring and fall migration seasons. [LTR 178, CMT 29]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to an Exhibit submitted as part of Comment Letter 178. West, Inc.'s Bat Identification White Paper. Section] 3.4.1 - Methods Bat activity at the project area was recorded using an AnaBat II ultrasonic bat detector attached to a zero-crossing analysis interface module (ZCAIM) which houses a compact flash memory card for temporary download of ultrasonic activity files. To sample continuously on remote mode (automatic data collection), the detector and ZCAIM were powered by an external 12V battery. Each AnaBat unit (detector, ZCAIM, and 12V battery) was enclosed inside a plastic box or dry bag with the detector microphone positioned against a PVC tube protruding from the box/bag. This design prevented water from damaging the AnaBat units without compromising the ability of the unit to detect ultrasonic noise in the environment. To limit variation among AnaBats, sensitivity settings were calibrated for each unit prior to data collection. Most AnaBat units were set at or near setting 7 on the sensitivity dial. Each passive AnaBat unit was positioned so that the microphone faced the same cardinal direction for each sampling period. Calls were recorded for passive sampling from approximately sunset to sunrise (1900 – 0700). AnaBat units were removed from the field approximately once per week to download files, recharge batteries, and troubleshoot technical problems. Data gathered from the passive AnaBat units at the met tower were used to calculate bat activity (designated as number of calls/night) present at the site during the sampling periods. Nights that experienced any number of technical difficulties were not included in the final analyses. During the spring sampling season (April 13 – May 29), two AnaBat sampling locations were established. One unit was placed at ground level in the open grassy field at the base of the project met tower and another unit was deployed near a wooded edge (Non-met 1) to increase likelihood of detecting additional species [(Figure 15) - Figure is not included here]. Access issues and technical difficulties with the AnaBat unit at the Non-met 1 location caused the*

*unit to be relocated to a small farm pond near a wooded edge (Non-met 2) within the project boundary after a week of sampling. Acoustic sampling at these two locations (Met tower and Non-met 2) continued through spring and these locations were maintained through the summer sampling season (June 28 – August 8). During the fall season (August 13 – October 9), AnaBat sampling continued at ground level at the met tower. A second AnaBat unit was deployed from August 15 – October 16 in a tree approximately 10 m above ground near the radar survey station [(Radar; Figure 15) - Figure is not included here]. In addition to the stationary passive units, a "roaming" or mobile AnaBat unit was deployed during the summer to assess resident/breeding bat species present within the project area. Roaming sampling was conducted using a handheld AnaBat unit for 9 nights (3 sampling periods of 3 consecutive nights each) at habitats likely to have high numbers of resident bats. To select locations for active sampling, reconnaissance visits were made to the project area during the day time to select sampling locations based on the presence of travel corridors (trails and roads), linear landscape features (forest edges), and access to water; habitat features known to be important for bats. Active sampling was conducted from sunset until approximately 4-5 hours after sunset (2100 – 0100). Analysis of bat calls was conducted using Analook software (DOS version). Analook displays ultrasonic activity in a format similar to a sonogram used for analysis of bird vocalizations (e.g., frequency versus time). Species identification was aided by the Preliminary Key to the Qualitative Identification of Calls within the AnaBat System (Amelon 2005, unpublished data) where characteristics such as slope, frequency, minimum frequency, consistency of minimum frequency, and shape of pulse assist in the identification of bat vocalizations. Due to similarity of call characteristics, two species (big brown and silver-haired bat) were lumped into one species category. All Myotis-like calls were identified to genus only and submitted to NYSDEC-recommended biologist, Eric Britzke, for identification to species. To obtain species identifications, an ID filter (Britzke and Murray 2001) was loaded into Analook to determine calls sequences of sufficient quality and length for species identification to be attempted. Once separated, echolocation calls of sufficient quality and length were also identified using quantitative techniques (Britzke 2003). Quantitative analyses are conducted by a cross-validated classification model based on 10 extracted call parameters - duration (Dur), maximum frequency (Fmax), minimum frequency (Fmin), mean frequency (Fmean), duration to the knee (Tk), frequency of the knee (Fk), duration of the body (Tc), frequency of the body (Fc), initial slope (S1), and slope of the body (Sc)] collected from 1,846 sequences (35,979 calls) of 12 eastern U.S. bat species (Britzke 2003). Average accuracy rates for species identification using this statistical method ranges from 56.9% (L. borealis) to 98.5 % (M. grisescens), with accuracy rates for Myotis sodalis ranging from 81.4% to 88.6%. [Section] 3.4.2 - Results, Passage Rates - The total number of calls and number of calls per night, recorded by each AnaBat unit varied by location and season [(Table 4) - Table is not included here]. The met tower AnaBat unit detected 769 bat calls total (19.72 calls/night) during the 39 days of spring sampling. Sampling at the two non-met locations during spring resulted in higher bat activity (29-33 calls/night) than at the met tower, despite changing in sampling location for the non-met unit. Summer sampling occurred at the met tower on 9 nights and recorded a total of 198 calls (22.0 calls/night). Approximately 2.5 times as many calls (55.56 calls/night) were recorded at the non-met 2 location during summer, likely indicating a nearby roosting colony of species and/or better habitat for foraging bats. During fall, the AnaBat unit positioned at ground level at the met tower recorded the lowest number of bat vocalizations per night (9.26 calls/night). Despite a similar number of sampling days, the AnaBat unit located at the radar sampling station recorded more bat calls/night (32.58). Approximately 93% of calls (n=1519) at the radar location were*

*recorded between August 15 and August 21. Only 25% of the calls recorded at the met tower (n=117) were recorded during the same sampling period. Species Identification - Using qualitative analysis of search calls, 5 species groups of bats were positively identified at the met tower location [(Table 5) - Table is not included here]. As is typical with AnaBat sampling, the majority of vocalizations were unable to be identified due to the few number of pulses per call (<5 pulses/call sequence). Relative call frequency was calculated by dividing the number of calls recorded for each species by the total number of calls recorded at the met tower for each season. Of those calls that were able to be identified to species, Lasiurus borealis calls accounted for the majority of the vocalizations during all seasons at the met tower. Summer sampling with the mobile AnaBat unit occurred on nine nights and recorded 464 bat calls [(Table 6) - Table is not included here]. The objective of the mobile sampling was to identify to the extent possible the species of bats using the St. Lawrence Windpower project area during the summer breeding season. As with the fixed station sampling, many calls could not be identified to species. One individual of an additional species, eastern pipistrelle (Pipistrellus subflavus), was recorded during the roaming surveys and not recorded during sampling at the passive monitoring stations. The highest number of recorded calls was of hoary bat [(Table 6) - Table is not included here]; however, 95% of those calls occurred on one night at one location and may have been from only one or a few individuals echolocating repeatedly near the AnaBat microphone. Following the qualitative screening, 208 call files with characteristics resembling Myotis species were submitted to Eric Britzke for further analysis. Of those files, 76 calls (36.5%) did not contain sufficient enough information to be processed quantitatively. The remaining calls were analyzed quantitatively on a nightly basis by site (Britzke 2003). Calls meeting the quantitative criteria for the following species were identified: eastern red bat (22 calls), little brown bat (50 calls), northern myotis (44 calls), and Indiana bat (16 calls). [LTR 178, CMT 30]*

**NOTE**: The methods described above **are not** in reference to the methods used for bat surveys related to the Whistling Ridge Energy Project. This Exhibit was submitted as part of Comment Letter 178 and given the citation of *www.acciona-na.com/getattachment/6990b88d-6ff0-48e-990d-d208d4cb9776/*, but this document was not available at that website to verify the content.

**Response**: The protocol used to examine bat activity rates followed standard industry practices. Bat species were grouped into frequency groups that are related to risk of turbine collisions. For example, Myotis bats, most of which have high frequencies, are rarely killed at wind energy facilities whereas hoary and silver-haired bats echolocate at low frequencies and are the two most common species killed in the Pacific Northwest. Categorizing calls according to frequency groups allows a risk assessment without having to identify each call to species. Furthermore, despite claims by the manufacturer, bat biologists are not all in agreement that Anabats are capable of recording calls that can easily be identified to species (see, for example, Barclay, R.M.R. 1999. Bats Are Not Birds: A Cautionary Note on Using Echolocation Calls to Identify Bats: A Comment. Journal of Mammalogy, 80(1):290-296).

**Comment**: *[In reference to DEIS] Section 3.4.1.1, [a]s a result, the project area includes no native habitat and is permanently committed to use by commercial forestry operations and utility infrastructure. The area contains "no unaffected habitat" but under a normal logging regime that does not include an expedited process for turbines, habitat that can support many of the native species would exist. [LTR 178, CMT 83]*

**Response**: The last sentence in the second to last paragraph in Section 3.4.1.1 has been revised to read: "As a result, the Project Area includes only heavily managed native habitat and is permanently committed to use by commercial forestry operations and utility infrastructure."

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, [o]ne bald eagle was recorded on the project site in 2009 during surveys for northern goshawk. In addition, three bald eagles were observed during the winter of 2008-2009 during baseline avian surveys. Two were observed flying within the rotor-swept area, and one below. Bald eagles use the Columbia River, Little White Salmon and White Salmon Rivers as over-wintering and nesting habitat. As the bald eagle population recovers further, more eagles will reside in the area. WRE spans a saddle between Underwood Mtn and Nestor Peak between the Little White and the White Salmon River. It is not unexpected that bald eagles would hunt the WRE area and use it as a shortcut between the two river basins. WRE, if permitted, may likely be the first project to kill bald eagles in the Pacific Northwest. Remedy - There must be a discussion of the long-term risks and impacts to Bald Eagles. Nesting and over-wintering are not addressed. [LTR 178, CMT 85]*

**Response**: Please see Section 3.4.2.1 Proposed Action – Operation (DEIS page 3-77) for a discussion of potential impacts to bald and golden eagles.

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**Comment**: *[Quoting] Section 3.4.1.5, "[i]n Washington State, goshawks occur year-round and in some areas only during the non-breeding seasons. The project site is located in an area where either may occur, and the eastern slope of the Cascades is considered the most common place to find this "uncommon" species (Bird Web 2009)". [This section s]hould state that "The Northern Goshawk occur year round in breeding areas and in some areas only during the non breeding season." "The project site lies in an area that either may occur." [LTR 178, CMT 86]*

**Response**: The section discussing Northern Goshawk (Page 3-46) accurately represents the information from the cited source (i.e., BirdWeb).

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**Comment**: *[Quoting] Section 3.4.1.5, "Northern goshawks were recorded during avian surveys during the fall of 2004 and the summer of 2006. A total of five individuals were sighted; two during the fall and three during the summer. They were observed flying both within and above the rotor-swept height during surveys." Demonstrates that breeding populations exist and WRE if permitted may be the first project to kill this "uncommon" species and breeding population impacted. [LTR 178, CMT 87]*

**Response**: The Project Area habitat is marginal for the Northern Goshawk, because of the lack of dense mature forest habitat. While Northern Goshawks will hunt along edge habitats and open areas, the lack of mortality indicates a behavioral avoidance of wind turbines, so the likelihood of a fatality remains low. Intensive surveys for Northern Goshawks in suitable breeding habitat yielded no observations of goshawks in 2004, 2008, and 2009, so it is very unlikely that breeding Northern Goshawks are present within the Project Area. Additionally, please see Figure 3.4-5 to observe where the 2008-2009 Northern Goshawk surveys were conducted.

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, Northern goshawk surveys were conducted during the spring and summer seasons in 2004, 2008, and 2009 (No northern goshawk responses were recorded in 2004, 2008, 2008 [NOTE: It is believed that the commenter meant to say "2009"]). No northern goshawk responses were recorded, but yet they were noted during avian surveys. A basic rule of all survey work is that presence affirms presence; absence does not affirm the subject not present, just that it was not detected by some established measure. In the case of the northern goshawk survey, none were detected but yet, goshawks were affirmed as being present during the avian survey. The only message to take home is that the goshawk survey was not successful at detecting northern goshawks. The surveyors need to reevaluate survey methods and determine why they were not successful at stimulating northern goshawks to respond in a manner that could be recorded. This is a serious issue when one considers that the other bird-of-prey surveys are dependent on a response as well. It throws into doubt all the bird-of-prey response-dependent surveys. [LTR 178, CMT 88]*

**Response**: The observation of five northern goshawks over two years during avian point count surveys indicates incidental presence, but the intensive three-year survey in suitable habitat for goshawks is considered to successfully establish the absence of nesting or breeding goshawks in the surveyed areas. The summer and fall observations could have been of migrating birds; the absence of spring observations further suggests the absence of breeding birds.

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, [t]wo golden eagles were recorded during the fall of 2004. One was observed flying at a height within the rotor-swept area, and one was observed flying above the rotor-swept area. Golden eagles are documented to fly through the WRE project area and are, like the other raptors, at high risk of being killed. [LTR 178, CMT 89]*

**Response**: The presence of golden eagles was analyzed and the potential for a golden eagle fatality is considered low, as stated in Section 3.4.2.1 Proposed Action – Operation (on DEIS page 3-78).

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**Comment**: *[Quoting] Section 3.4.1.5, "[t]he Applicant conducted surveys and analysis to confirm the absence of northern spotted owls." This statement demonstrates a bias by looking*

*for a specific outcome. It is extremely difficult to definitively "confirm" absence, but reasonable to provide some probability of use at any given time. Spotted owls historically have, with high probability, been present in the area of the project. Vast clear cutting has reduced the modern small chance to a very small chance that spotted owls would be present in the WRE area at any given point in time for the near future. Surveys were conducted for northern goshawks and none were "detected" in a common place to find an uncommon species either. [LTR 178, CMT 90]*

**Response**: The text on page 3-49 of the DEIS, first sentence in the first paragraph, has been revised to indicate that surveys were conducted with no specific intended outcome regarding presence or absence of spotted owls or northern goshawks. The sentence now reads, "The applicant conducted surveys and analysis to determine spotted owl occupancy." Turnstone followed strict adherence to the 1992 revised version of "Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls." This protocol was based on the best available science and endorsed by both USFW and WDFW. Turnstone conducted surveys in a 1.8 (spotted provincial range) mile radius surrounding the proposed Project. All potential habitats were surveyed in 2003, 2004, 2008, 2009, and 2010. Only one spotted owl was detected in 2010 after 5 years of survey effort approximately 1.2 miles from the proposed Project. This single male was later found multiple times approximately 3 miles away and confirmed to be a territorial male outside the 1.8 mile buffer.

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**Comment**: *Section 3.4.1.5 [f]ails to state that the Little White Salmon is approximately 1 mile west of the project area. [This Section also i]gnores the potential flight corridor between the Little White Salmon River and the White Salmon rivers over the saddle formed by Nestor Peak and Underwood Mtn where WRE is located. [LTR 178, CMT 92]*

**Response**: Avian-use data was collected on site for one full year and there was no evidence of high use by eagles, raptors, or other birds. Therefore, there is no compelling reason to research avian use between the mentioned rivers.

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**Comment**: *[In DEIS] Section 3.4.1.5, [t]here were 21 birds observed during summer 2006 avian surveys, and six recorded during the spring of 2009. All 21 observed in 2006 were within the rotor-swept area; it is not reported in 2009 how many were in the rotor swept area. None were recorded during the fall of 2004 or the winter of 2008-2009. The WRE area is highly used by this species. Reporting absence in the fall and winter is misleading as this bird leaves begins its migration to S. America in August. Because 100% of the birds recorded in 2006 were in the rotor swept area, it is reasonable to assume that 100% of those recorded in spring 2009 would be in the rotor-swept area. Even though fewer numbers were observed in the spring, this is a particularly bad time to lose any member of the species. For each female lost, future recruitment is reduced. If three of the six are females and each female produces 3-4 offspring, then a lost of three females could represent a recruitment of 9-12 additional birds. The bird counts represent a minimum. There is no extrapolation over area. No method for comparing counts to scientific studies of local population levels. There is no mention of how loss of forest habitat from extensive clearcuts affects reproduction. For a species on the decline, it is important to consider*

*all actions of direct and indirect losses to the population. This has not been done for a migratory species. [LTR 178, CMT 93]*

**Response**: The text on DEIS page 3-56 of the regarding Olive-Sided Flycatcher in Section 3.4.1.5 has been revised regarding olive-sided flycatcher fatality risk to add the following: "The Olive-Sided Flycatcher is not listed as federally or state threatened or endangered. The Project habitat is not very conducive for this species, and that is why only a few individuals were observed. The species does migrate and it would not be expected in the Project Area in winter or early spring." With respect to migratory species that may occur within the Project Area, wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions within Section 3.4.

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**Comment**: *Section 3.4.1.5 [mentions that i]n Washington, pileated woodpeckers occur year round but are uncommon in the vicinity of the project site. During avian surveys in the project area, six pileated woodpeckers were recorded in the fall, two during the winter, seven during the the spring, and none in the summer. Doing the math, six plus two, plus seven equals 15 pileated woodpeckers observed. According to the Applicants own study numbers, pileated woodpeckers are anything but uncommon in the vicinity of the project site. Fifteen pileated woodpecker sightings is especially significant. These birds are fiercely territorial and the observation of such high numbers in periods separated by many years in some instances, is telling of the perseverance and number of territories in the vicinity of the project. Lack of sighting in the summer months, does not indicate absence, only lack of detection. The DEIS must be changed to reflect the significant use of the project vicinity by pileated woodpeckers. It is important to note here that pileated woodpeckers prefer habitats with large trees. Contrary to the Applicants claim, extensive logging in the area has not completely removed use by species that prefer habitats with older tree areas. Pileated woodpeckers demonstrate the resilience of some species to changing habitats. Therefore it should not be assumed that just because extensive logging has occurred in the project are that species will leave and therefore not be at risk. Pileated woodpeckers will fly at height that puts them into the rotor swept […] [LTR 178, CMT 94]*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4. The habitat is not good for this species due to lack of old growth forest. The 15 observations could be 15 individuals or 15 observations of the same individual; likely somewhere in between. No significant impacts would be anticipated due to very few individuals in the Project Area and due to lack of suitable habitat.

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, [d]uring fall 2004 avian surveys, 15 Vaux's swifts were recorded in three groups, 87 percent of which occurred within the rotor-swept area. Four were recorded in two groups during the summer of 2006, all of which occurred within the rotor-swept area. Doing the math, a total of 17 out of 19 Vaux's swifts were observed in the rotor-swept area for a number of almost 90% in the rotor swept area. This percentage applied to the 11 birds observed in the 2009 period would place a total of 10 swifts in the rotor-swept area. In total, 28 of the 31 of the observed swifts (in that short period alone) were at risk*

*of being killed. It is even more reasonable to assume that all the swifts have the potential to use the rotor-swept area and all members of the population are at risk. Again, this is a conservative number due to the very limited nature of the survey. Because original data was not supplied, the temporal separation in years, and lack of overlap between fixed points it is reasonable to assume that most if not all swifts were not counted more than once. [LTR 178, CMT 95]*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4. Because only 19 Vaux's swifts were observed over the course of the year, this species has very low use of the Project Area and significant impacts would not be anticipated.

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, [b]at surveys conducted during ..... did not have the ability to detect individual species of bats. Based on the lack of detailed information of this species life history and habitat requirements and nature of the bat surveys conducted it is difficult to conclude with certainty with the likelihood of Keen's bats occurring on the project site. However, Due to the lack of old growth or mature forest types within the project area and the predominant commercial forestry use of the property, the likelihood of occurrence on the site is considered to be low. Anabat II technology exists to identify, by call, individual bat species. This technology has existed for over 10 years. West has authored a paper where the Anabat technology was used to identify to species the majority of calls. Papers, abstacts, and exerpts are attached. The tapes need to be further analyzed by a highly qualified INDEPENDENT expert to identify bat calls with special emphasis to identify rare species. If WEST failed to set up the Anabat II correctly so that calls can be identified, then additional bat data collection needs to occur. Additionally, cumulative impacts should assess the possible future infection of bats by white nose syndrome. Increased mortality of ANY type, may directly affect these species future viability. [LTR 178, CMT 96]*

**Response**: This duplicative comment was already addressed in response to Comment Letter 178, Comment 18 above.

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, [t]here are no known roosting structures or maternity colonies occurring in the vicinity of the project area. See comments on Keen's Myotis. Townsend's Big Eared Bat, a species of concern and a candidate for listing, is present in the region. One of the largest colonies at 400 bats is located in lava cave nearer to Trout Lake to the north. Colonies are small compared to many other bat species and not many colonies are known to exist. The southern end of the old lava flow (can be seen from Google Earth) that may contain additional colonies is approximately three miles from the project. [LTR 178, CMT 97]*

**Response**: This duplicative comment was already addressed in response to Comment Letter 178, Comment 22 above.

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**Comment**: *[Referring to DEIS] Section 3.4.1.6, Table 3.4-5, [o]ne year round bird, the northern pygmy owl was not observed during ANY study, yet is common in the area. This speaks again to the basic rule, absence does not absence does not affirm the subject not present. Northern Pygmy owl and any other species that are likely to exist should be added to the list and represented as is the Northern saw-whet owl. [LTR 178, CMT 98]*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4. Northern pygmy and northern saw-whet owls were detected during several northern spotted owl surveys and were reported on field forms.

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**Comment**: *[In reference to DEIS] Section 3.4.1.6, [t]his annual rate is low relative to raptor use at 36 other wind-energy facilities that implemented similar protocols and had three or four season surveys. It is very important to note that a number of raptor species use the WRE area and rotor swept area are sensitive, candidates for listing, or formerly listed recovering species. This number needs to be compared relative to other wind energy facilities as well. Appendix C4 page 9 states: American kestrels..., red tailed hawks...., and golden eagles...were killed more often than predicted based on abundance. ... It is likely that many factors, in addition to abundance, are important in predicting raptor mortality. [LTR 178, CMT 99]*

**Response**: The potential for raptor mortality was analyzed based on an avian use regression with 13 other wind developments in the region with mortality data (Section 3.4.2.1 Proposed Action – Operation, page 3-79 of the DEIS). This approach avoids the potential for statistical underestimation which can occur from evaluation of exposure risk estimates, or simply comparing raptor use.

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**Comment**: *[In] Section 3.4.1.6, [t]he WDFW Priority Habitats and Species database was searched for known occurrences of raptor nests. The only recorded nest was for an osprey, more than one mile east of the project site. This database is not complete nor comprehensive and cannot be used as an authority. Just as the goshawk survey was not able to generate a response, any attempts, if one had been attempted, would likely not have found nests. WDFW is not allowed to enter SDS property unless permission is obtained and escorted by an SDS representative. It is highly unlikely any nests would be known. [LTR 178, CMT 100]*

**Response**: Nest surveys were conducted for the focal raptor species of concern in the Project Area, northern goshawk and spotted owl. No nests were found. An aerial survey for raptor nests was also conducted as part of the Klickitat County Energy Overlay Zone project and no nests were found.

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**Comment**: *[In] Section 3.4.1.6 [relating to f]all migration surveys (2004), [t]he DEIS fails to assess bird migration through the project area. This DEIS ONLY makes daytime observational counts of birds during four seasonal time periods, fall, winter, spring, and summer. Nothing in*

*this section or study assesses fall migration, the regular seasonal journey of species from one location to another. This is a serious deficiency because migrating birds are at significant risk when flying through the rotor-swept area. Birds migrate at varying heights by species and weather conditions. Conditions with poor visibility such as clouds, mist, fog can lower the migration paths of higher flying species so they too are exposed to the rotor swept area. These weather conditions are common in the spring, winter, and fall along the ridges of the Cascade Mountains. Include studies that describe methods of detecting bird movement at night for migration studies. [LTR 178, CMT 101]*

**Response**: Standard pre-construction avian surveys for raptors and passerines have been conducted for many years, and have provided the avian use data that allows estimation of the relative presence of birds compared with other wind developments in the region. Nocturnal migratory surveys are not generally conducted during pre-construction surveys. Post-construction mortality monitoring will be conducted for at least two years in order to document the number and species of bird fatalities. The TAC and USFWS will determine which mitigation measures should be used for protected species or for any other species of birds should any large number of birds land up being killed.

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**Comment**: *[Referring to DEIS] Section 3.4.1.6, [t]hree species of raptors were observed, including red-tailed hawk, northern goshawk, and sharp-shinned hawk. Northern Goshawk observed in spite of surveys failing to detect any. [LTR 178, CMT 102]*

**Response**: Please see response to Comment LTR 178, CMT 88 above.

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**Comment**: *[In Appendix] C4, [t]en species were always seen flying within the ZOR (zone of risk); however, these were based on fewer than five observations. These species need to be identified clearly in the text and a table. These species are the ones most likely to be wiped out of the sky, and since these species are likely in low numbers, population impacts could accrue. Remedy - A table needs to be created in the DEIS, not in the appendices only, but in the main text under operation impacts to birds, with species in one column, percent of time birds were seen in the rotor-swept area (zone of risk) the number of birds and the total number of 'groups". Sort by highest percent in rotor-swept area first. Supplemental DEIS (complete redo is better) with this information and others should be issued for comment and review. [LTR 178, CMT 103]*

**Response**: The species observed flying in the rotor-swept area were identified as potential species that could be killed during operation, and would be documented during post-construction mortality monitoring.

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**Comment**: *[Referring to a]ll general bird surveys. Although over 200 data sheets exist, more information should be given about the locations these birds were observed. [LTR 178, CMT 104]*

**Response**: A complete list of avian species observed by season is presented in the WEST 2009 Wildlife Baseline Report. Additionally, the use by birds at each site is tabulated. The raw data is not included because the use comparison among wind developments is the basis for understanding avian risk at the proposed wind development.

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**Comment**: *[In] Section 3.4.1.6, [f]or all bird species combined, use of the project site by avian species was slightly higher during the summer breeding season than during the fall migration period. There was no fall migration assessment for birds or any other wildlife in this DEIS. All comments to bird migration need to be removed from the document [LTR 178, CMT 105]*

**Response**: The fall migration period bird use in the Project Area was assessed during point count surveys, which is the standard method for wind development pre-construction surveys. The fall use estimates were compared with other wind developments in the region to assess the presence of diurnal migratory use, which was low, although nocturnal migration was not assessed (and is not a standard pre-construction survey) so, as noted on DEIS page 3-79, it is unknown what level of nocturnal migration occurs in the Project Area.

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**Comment**: *[In reference to DEIS] Section 3.4.1.6, [s]everal large mammals occur within the project site. No detailed review or study exists on the potential impact to mammal habitats or movement patterns. Remedy - Redo and expand this section and provide for public review through a completely redone DEIS or a supplemental DEIS [LTR 178, CMT 106]*

**Response**: While several large mammals have the potential to occur within the Project Area (as it is stated in Section 3.4.1.6), very few were observed during the three years of avian and bat surveys.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [i]n order to determine which species (including special status species)…..are most at risk for turbine fatalities a relative collision risk…. This analysis is not appropriate for determining risk because it is dependent on observational counts. Uncommon species would never have a high risk. Remedy - Use percent of species observed in rotor swept area. Put in supplemental DEIS or rewritten DEIS. [LTR 178, CMT 113]*

**Response**: We agree that rare species would have low risk simply because risk is primarily related to abundance, not just flight height characteristics. However, the risk index was not meant to predict numbers of fatalities.

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**Comment**: *[Within] Section 3.4.1.5, [s]urveys were conducted in 2003, 2004, 2008, and 2009. NSO surveys were conducted in 2007 as well. During one of the visits in particular, slash burning on Chemawa Hill above this area could have affected obtaining a result. Survey was known to occur in the fall, which according to Bill Weiler, WDFW Biologist, was not the correct time of the year to be conducting owl surveys. Although the design was flawed, those data sheets need to be made available to the public for review. Remedy - Make available to public in supplemental DEIS or rewritten DEIS. [LTR 178, CMT 114]*

**Response**: None of the Northern spotted owl surveys for the Whistling Ridge Energy Project were conducted in the fall, but rather during the protocol period of March 15 through August 31. The reports and survey forms were provided in the DEIS and can be found in Appendix C.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [b]ald eagles, although fairly common in Washington State, are likely uncommon visitors to the project site. The potential for ongoing occurrence of bald eagle on the project site is very low. The potential for bald eagle fatalities as a result of turbine strike is also considered to be extremely low. DEIS has failed to analyze increasing Bald Eagle presence in the Columbia River Gorge mainstem and tributaries. The central gorge with an overwintering population from other parts of the U.S./Canada and a growing resident nesting population, has become much more common in the area and the numbers in the area is expected to increase as the overall recovering bald eagle population increases. DEIS has failed to address the potential use of the area by bald eagles to shortcut across the saddleback through WRE project area between the White Salmon River and the Little White Salmon River. The potential for use of the area and a turbine strike is increasing with increasing populations, particularly in light of the use of airspace in the rotor-swept area. Remedy - Include USFWS data on producing and overwintering populations. Include the likelihood of a fatality should an eagle pass through two strings of turbines as is present on the site. (Survival as calculated in fish, only in this case estimated from available science) If not calculated, use the number generated from percent of observations in rotor swept area relative to the population in the White Salmon to Little White Salmon Rivers and Columbia River between those two rivers. Extrapolate for an increasing population. [LTR 178, CMT 115]*

**Response**: Bald eagle use was found to be extremely low during baseline avian survey. Even if populations increase substantially, little use of the Project Area would be expected as the Project Area does not provide suitable foraging habitat for this species.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [t]wo golden eagles were recorded on the project site considered to be at a relatively low risk for collision with turbines at this site. Every golden eagle that enters the WRE area, like bald eagles, are at risk of being killed by the turbine blades. Golden eagles are quite possibly using the site more than rarely, perhaps a better word to use is infrequently. Because of the timing and nature of this study, little can be said about the frequency of visits, other than, golden eagles were observed during the limited bird surveys. [LTR 178, CMT 116]*

**Response**: Based on four seasons of avian use surveys it was found that golden eagle use of the Project Area is very low, therefore no significant impacts would be anticipated. Studies of golden eagle use at other Project Areas in eastern Washington and Oregon have shown golden eagle use to be be much higher than what has been observed at Whistling Ridge, in the absence of golden eagle fatalities.

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**Comment**: *[Referring to DEIS] Section 3.4.1.7, [t]his includes the occurrence of five individuals, four of which were flying within the rotor swept area. Similar to the golden eagle, this species may be at risk of increased foraging activity in open areas around turbines because they hunt for prey that occurs on the ground in cleared areas. However given their rare occurrence on the project site, the potential for turbine related fatalities for this species is extremely low. First, northern goshawks are not "rare" in the WRE area. Northern Goshawks have been observed flying southeast from the WRE project area into the farmland south of the project area, presumably to hunt. During logging under DNR FPA# 2704293 in June-July 2010 on a unit (named Fern) just below Chemawa Hill (southern A-array), a northern goshawk was observed flying and repeatedly crying for two days just south of where the logging activities were taking place. Quite possibly, a nesting tree may have been removed from the riparian zone with reportedly 100+ year old trees (the riparian zone repeatedly not mentioned by the Applicant) being logged. A request was lodged by an adjacent landowner with the Southeast Regional Office in Ellensberg to have a DNR employee enter the area and check for eggs or chicks that might have survived. The request was refused by DNR stating that they have no rules on the books and are not responsible for regulating any wildlife. Remedy - Change text to acknowledge prevalence of this uncommon bird in the WRE area. Change text to state that the potential for turbine related fatalities is high based on the presence of northern goshawk in the area AND the high percent of observed northern goshawks flying in the rotor swept area. Reissue the DEIS with corrections or a supplemental DEIS for public comment. [LTR 178, CMT 117]*

**Response**: No northern goshawk nests were documented during extensive surveys for this species, and avian use surveys found that this species was very rare in the Project Area. Therefore, no significant impacts to this species would be expected.

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**Comment**: *[In] Section 3.4.1.7, General Relative index using all bird species is not applicable. Remedy - If a relative index is to be used it should be divided into general class of birds, i.e.: raptors. This will give the public a better understanding of which raptor is at greatest risk of turbine caused fatality based on total number of raptors, number of each species observed, and flying in the rotor-swept area. Although a qualifier must be stated that ALL raptors are at significant risk for turbine caused fatality because of their size and hunting behavior. [LTR 178, CMT 118]*

**Response**: The avian use and exposure indices were calculated for all species and for raptors as a group (DEIS page 3-78). Not all raptors have the same risk of fatality from wind turbines, because of behavioral differences and varying habitat selection, among other variables.

**Comment**: *[In] Section 3.4.1.7, [b]ased on this analysis and surveys on the project site, the estimated raptor/vulture fatality rate is zero per MW/year, which is an extremely low estimate compared to many wind projects. The so called analysis does not in any way reflect the risk of raptors/vultures to turbine caused fatality. This distorts and falsely implies that a relative index predicts mortality. The relative risk index only provides an indication of how many of a species were in the rotorswept area relative to other species. In fact, larger birds, because of their larger wing spans and body size, are more likely to be struck than a small bird occupying only a small space in the rotor swept area. Birds spending more time in the rotor-swept area are more likely to be killed. Environmental conditions when birds are in the rotor-swept area can affect fatality, and so forth. The lack of assumptions to account for shortcomings is a fatal flaw in any "study" and certainly is for this one. Remedy - This Study's list of assumptions must be reevaluated and independently confirmed. Remove this and other incorrect statements of non-fact. [LTR 178, CMT 119]*

**Response**: Avian use, rather than the exposure index, was used to predict the level of post-construction avian mortality. The mortality estimate was based on a regression of mortality at other wind developments in the region with the pre-construction use estimate. Passerines (small birds), rather than raptors (large birds), constitute the majority of fatalities at wind developments.

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**Comment**: *[N]onexistent Science based studies require a statement of all assumptions made to design a study and collect, analyze, and interpret data. This is completely nonexistent in the DEIS and Appendices. [LTR 178, CMT 120]*

**Response**: The baseline studies were consistent with USFWS protocols and the WDFW guidelines and both agencies have stated this in writing.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [f]urther, data collected from the project site indicate that the area is not within a major migratory pathway, at least during fall migration. No migration data on any species was collected, only observational counts of animals on different days/seasons. Because migration requires some movement, and movement was not demonstrated in any "study" whatsoever, migration conclusions cannot be made. Remedy - Remove references to "migration" from existing DEIS language until such time actual migration studies are completed and documented. [LTR 178, CMT 121]*

**Response**: This duplicative comment was already addressed in response to Comment LTR 178, CMT 105 above.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [p]ileated woodpeckers were recorded on the site, but not flying. Pileated woodpeckers do fly at rotor-swept height. They do not take the bus. Remedy - A more accurate conclusion is suggested here: "Because pileated woodpeckers were not observed flying, the relative index was zero. Pileated woodpeckers may fly at*

*rotorswept height through the WRE project area and may be killed as a result." [LTR 178, CMT 122]*

**Response**: The recorded numbers of pileated woodpeckers were very small, and the habitat is not highly suitable for this species. Therefore the conclusion was derived based on these facts and it is expected that there will be no impacts to this particular population.

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**Comment**: *[As stated in DEIS] Section 3.4.1.7, Vaux's swifts……were commonly observed flying at rotor-swept heights …. More than SOME deaths should be expected based on the percentages of birds in the rotor swept area. Remedy - Change to "Vaux's swifts….were commonly observed flying at rotor-swept heights, and SIGNIFICANT turbine related mortality may occur." [LTR 178, CMT 123]*

**Response**: Very few Vaux's swifts were observed during baseline surveys. Although some individuals may be killed, it is unlikely that significant impacts to this species would occur as they were not a common migrant or breeding bird in the Project Area.

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**Comment**: *[As stated in DEIS] Section 3.4.1.7, [o]live-sided flycatchers……were commonly observed flying at rotor-swept heights …. More than SOME deaths should be expected based on the percentages of birds in the rotor swept area. Remedy - Change to "Olive-sided flycatchers….were commonly observed flying at rotor-swept heights, and SIGNIFICANT turbine related mortality may occur." [LTR 178, CMT 124]*

**Response**: Please see response to Comment LTR 178, CMT 105 above.

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**Comment**: *[As stated in DEIS] Section 3.4.1.7, [w]estern bluebird……were commonly observed flying at rotor-swept heights …. More than SOME deaths should be expected based on the percentages of birds in the rotor swept area. Remedy - Change wording to "Western bluebirds….were commonly observed flying at rotor-swept heights, and SIGNIFICANT turbine related mortality may occur." [LTR 178, CMT 125]*

**Response**: Please see response to Comment LTR 36, CMT 3 above.

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**Comment**: *Waterfowl, waterbirds, and shorebirds were not observed using lands within the project site during this study, and mortality involving this group is expected to be rare. These species area migratory birds and would not be expected to be seen USING LAND within the project site as there is no large body of water, but the AIRSPACE would be used during migration. Migratory birds, including water using species have been killed during migration by wind turbines at many different projects throughout the U.S. and world. Migratory birds of ALL*

*species are at risk. Migration has NOT been assessed in any study within this DEIS. Remedy - Remove all reference to "migration" from any study and DEIS text. Require a full study on spring and fall migration be conducted according to best experimental design and current research protocols. Included in any assessment of migration by mammal (including bats) and avian species, needs to cover 24 hour time periods when environmental and seasonal conditions are favorable for every species (particularly status species) and for 3 years to account for annual variation. [LTR 178, CMT 126]*

**Response**: Please see response to Comment LTR 178, CMT 105 above.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [t]urkey vultures are known to have very low susceptibility to turbine collisions (Orloff and Flannery 1992). Old Citation based on older, smaller turbines. Provide updated current information to support any assertion. Remedy - Base conclusions on more recent information to reflect the latest generation of industrial wind turbines. Review Canadian and European white and grey papers on turkey vulture and cousin fatalities at wind turbine facilities. [LTR 178, CMT 127]*

**Response**: Using publicly available data from 58 wind energy facilities in the U.S., turkey vultures have comprised only 5.8% of the raptor fatalities, indicating low susceptibility of this species to turbine collisions compared to other raptors, even at modern wind turbines.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [t]he DEIS is deficient because the studies have failed identify the underlying assumptions used in design, data collection, and analysis that could affect extent and validity of conclusions. The assumptions mush be qualified by the authors as to the appropriateness of the study. Because of this lack of assumptions, independent reviewers are unable to confirm the integrity of the methodology and conclusions. Remedy - The reports and the conclusions must be reissued with this information in a SEIS or a replacement DEIS. [LTR 178, CMT 128]*

**Response**: The opinions of the commenter concerning the completeness and adequacy of the Draft EIS are noted. EFSEC and BPA believe that the DEIS contains a reasonably thorough analysis of the potential environmental impacts of the proposed project, as required by SEPA and NEPA. As discussed in the DEIS, environmental information was compiled based primarily on site-specific field studies, literature reviews, and communications with various knowledgeable resource agencies. Any assumptions made in the analysis were explained to the extent appropriate, and every attempt was made to use the most current data and information reasonably available. Specific issues with the DEIS analysis that are raised in these comments are addressed in the appropriate sections of these responses to comments.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [t]hese collisions would likely be rare and it is unlikely that the Project would have any negative impacts on population levels on and near*

*the project site. Actually, the opposite is true. Collisions are very likely to occur. The sheer number of turbines and their configuration along a ridge poses a very high risk to special status and uncommon species, as well as migrating birds and bats of all kinds. Remedy - Compare to other forested ridgetop wind turbine projects in Eastern USA, with the statement that because no turbines have been place in conifer forests of the NW, it cannot accurately reflect numbers only provide general basis of comparison. It MUST be stated that placement of wind turbines along ridges is likely to result in extremely high mortality of resident and migratory birds and bats as has occurred in the Eastern US when placed along forested ridges. [LTR 178, CMT 129]*

**Response**: According to the National Academy of Sciences (2008), there is no evidence that "measurable demographic changes to bird populations in the United States" is occurring from fatalities at wind developments. The text in Section 3.4.2.1 Proposed Action – Operation (on DEIS page 3-79, third paragraph) has been revised to include this reference. Please also refer to the response to Comment LTR 36, CMT 3 above.

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**Comment**: *[As stated in DEIS] Section 3.4.1.7 …in Washington and Oregon indicate that less correlation between preconstruction surveys and turbine-related mortality is observed in non-raptor species. The lack of correlation may be because most fatalities are among nocturnal migrants that are not accounted for during surveys. This statement admits there is a lack of a migration study. Most fatalities are among nocturnal migrants, and most species migrate at night. At no point, during day or night, was any study of bird or bat migration through the project area. Remedy - Require a three year study on bird and bat migration by qualified researchers using scientifically accepted methods and design protocols. Provide results for review by public and governmental entities. [LTR 178, CMT 130]*

**Response**: Please see response to Comment LTR 178, CMT 105 above.

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**Comment**: *The DEIS Fails to Adequately Review the Likely Impacts of the Proposed Development on Natural Resources. The Whistling Ridge project is likely to cause significant adverse impacts to natural resources, including the direct impacts of mortality to wildlife, as well as indirect effects from habitat destruction, displacement, and species avoidance of the project area after construction. Avian species often collide with wind turbines, and bats often die from internal hemorrhaging caused by the massive changes in air pressure near the spinning blades of a wind turbine, a process known as "barotrauma." Also, components of the industrial development, including collector lines, transfer stations, and access roads, can displace wildlife and fragment habitat. The DEIS failed to adequately analyze the likely impacts to wildlife and other natural resources. [LTR 179, CMT 69]*

**Response**: Comment acknowledged.

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**Comment**: *In addition, as demonstrated in the written testimony of Dr. K. Shawn Smallwood (attached herein), the underlying data and environmental analysis relied upon in the DEIS is severely flawed. For example, without any scientific support the DEIS states that the clearcut project area is poor habitat for wildlife. However, Dr. Smallwood points out that "[b]ird species diversity is much greater at Whistling Ridge than at the Altamont Pass, where bird fatalities caused by wind turbines are notoriously high." Whistling Ridge surveys found more than 1 species per hour of searching, whereas surveys at Altamont found 0.036 species per hour. The proponents' ploy to clearcut the land and present a devastated ecosystem immediately before applying for an industrial energy facility is misleading and results in biased conclusions in the DEIS. As Dr. Smallwood concluded, based on independent analysis of the proponent's own surveys, "Whistling Ridge exhibits a very high level of ecological integrity." This is likely a result of the projects location within a largely intact ecoregion where species diversity remains high. This is also why the Klickitat County Energy Overlay Zone excluded forested areas. [LTR 179, CMT 70]*

**Response**: The baseline avian use study was conducted in compliance with the Washington Department of Fish and Wildlife (WDFW) Wind Energy Guidelines (WDFW 2009), and was compared to other regional wind developments where avian use and mortality data was available so a categorical prediction of the level of potential mortality could be calculated. While managed forests in clearcut rotation have wildlife value, they are not considered to have a high level of ecological integrity relative to forests that are not in rotation.

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**Comment**: *Dr. Smallwood also points out contradictions between foundational statements and the conclusions in the DEIS. For both Keen's myotis and Townsend's big-eared bat, the DEIS states that the analysts had insufficient knowledge of the species, but nonetheless concluded that it was unlikely that they would occur at the site. [DEIS Pages 3-59 and 3-60]. It is plainly inappropriate to base conclusions on insufficient information. At best, the DEIS should say that impacts to bat species are unknown and then analyze the worst case scenario given that uncertainty.. The DEIS seriously underestimates the potential impacts of this project, both on an individual basis and when considered cumulatively with other wind energy projects. Dr. Smallwood has determined that the baseline studies to assess impacts were cursory and inadequate, the likely impacts to raptors are significant, the cumulative impacts analysis was biased and unrealistic, and the mitigation measures are inadequate. The DEIS also failed to ensure the protection of wildlife and has failed to adequately review impacts to natural resources in a number of other ways, as described below. [LTR 179, CMT 71]*

**Response**: Please see responses to Comments LTR 161, CMT 5, LTR 161, CMT 7 and LTR 177, CMT 40 above.

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**Comment**: *The DEIS Fails to Include Best Available Science in the Analysis. The avian impacts analysis is inadequate and not based on the Best Available Science. The baseline surveys were too cursory to support a scientifically credible baseline assessment. Failings include an inadequate sample and an inadequate amount of time dedicated to surveys. Avian*

*utilization of a site can vary greatly from year to year, so the limited time span of these baseline surveys introduces large uncertainty into the resulting utilization rates. The sample sizes were grossly inadequate for what is needed for comparing bird utilization among project sites or for guiding wind turbine locations to minimize collision rates. Numerous other methodological errors in the analysis introduce additional biases that undermine the SEPA and NEPA review. Wildlife surveys should be conducted using current state-of-the-art field and analysis protocol. At the least, surveys must take into account survey bias including, but not limited to, searcher efficiency, carcass "life expectancy" or persistence, and scavenger removal. The entire site should be surveyed before and after construction. Both pre-development survey and post-development monitoring should take into account the episodic nature of some bird migrations and nocturnal bird migrations. For example, long or inappropriately timed intervals between searches may miss a significant avian presence. The DEIS fails to account for these factors. [LTR 179, CMT 72]*

**Response**: Please see response to Comment LTR 179, CMT 70. The post-construction mortality surveys will be conducted using standard procedures and will be reviewed by the TAC and USFWS.

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**Comment**: *The DEIS Fails to Adequately Consider Displacement Effects on Avian Populations. The DEIS failed to adequately consider displacement effects on avian populations. Impacts of wind projects on birds are not limited to collisions. When a landscape is industrialized by strings of giant machines, birds and other animals may be driven away rather than killed. And when multiple such strings are concentrated in one area, the impacts on species populations can be substantial. The environmental analysis is incomplete and must be supplemented with specific assessments of cumulative displacement impacts. [LTR 179, CMT 73]*

**Response**: Displacement effects were evaluated in the avian survey report attached in Appendix C of the DEIS. Several studies have found that there is minor displacement of some, but not all bird species, and there is no consistency, among wind energy facilities, about the avoidance levels of a single species from which to draw definitive conclusions. When avoidance has been documented, it has usually been limited to 200 meters or less. To date, no studies of avoidance behavior have been conducted at wind energy facilities in forested landscapes; all have been done in open grassland and shrub-lands. While there are no studies to date that assess avoidance behavior in forest settings, it is possible that the visual obstruction from the trees, as well as familiarity with tall vertical structures, may influence avian avoidance behavior differently than for species that live in vertically unobstructed environments.

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**Comment**: *The DEIS Fails to Ensure Compliance with the Federal Migratory Bird Treaty Act, 16 U.S.C. §§ 703–712. The Migratory Bird Treaty Act ("MBTA") requires that the U.S. Fish and Wildlife Service (USFWS) enforce the MBTA against "any person, association, partnership, or corporation" that "by any means or in any manner," pursues, hunts, takes, captures, kills or attempts to take, capture or kill a migratory bird or any part, nest or eggs of any migratory bird. 16 U.S.C. §§ 703, 707. Under the MBTA, a person may take or kill*

*migratory birds only as permitted under USFWS regulations and based on the USFWS's determination that the take or kill is compatible with the migratory bird treaties. Id. §§ 703, 704. The USFWS's determination must take into account scientific factors such as species abundance and distribution, migratory patterns, and breeding habits, as well as the economic value of birds. Id. § 704. The killing of a single migratory bird is sufficient to create criminal liability. United States v. Corbin Farm Service, 444 F.Supp. 510 (E.D. Cal), aff'd, 578 F.2d 259 (9th Cir. 1978). The killing of a migratory bird does not need to be intentional and the killing can occur "by any means or in any manner." United States v. Moon Lake Electric Ass'n, Inc., 45 F.Supp. 2d 1070, 1075–79 (D. Col. 1999) (upholding the prosecution of a utility for unintentionally electrocuting and killing seventeen birds). The DEIS fails to ensure compliance with the MBTA. [LTR 179, CMT 77]*

**Response**: Comment acknowledged. Enforcement of the MBTA is outside the scope of this EIS; however, BPA will comply with all guidelines set forth by the MBTA (as well as with other Acts, Regulations, and Executive Orders).

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**Comment**: *Failure to demonstrate sufficient protections for non-avian wildlife and insects. The application and threshold determination fail to demonstrate sufficient protections for sensitive and rare wildlife species, including a number of sensitive and rare species that the application notes have been observed within the project site. The DEIS also fails to evaluate potential impacts on insects such as butterflies. Here, the impacts are typically not from direct turbine strikes, but rather from habitat disruption or destruction. There are several species of butterflies of particular concern in this area, particularly the rare Western Oak Dusky Wing (Propertius duskywing). [LTR 179, CMT 79]*

**Response**: As noted throughout the EIS, the Project Area is managed habitat used for commercial forestry. The Project will not alter the disruption of habitat that is already occurring for forestry operations.

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**Comment**: *The DEIS fails to include adequate mitigation measures. The decisions fail to include adequate mitigation measures to protect wildlife. For example, the DEIS include discussion relating to future surveying for wildlife impacts, but fail to include any conditions that would require any concrete actions in response to actual wildlife impacts. [LTR 179, CMT 80]*

**Response**: The Applicant has proposed to comprehensively mitigate potential wildlife impacts identified in the DEIS. A mitigation plan has been developed in consultation with WDFW to replace impacted habitat and has been approved by WDFW. To meet WAC 463-62-040(2)(a)'s objective of no net loss of wildlife habitat or function, the Applicant has agreed will convey a conservation easement interest in approximately 100 acres of oak woodland and coniferous forest habitat in Klickitat County. Klickitat County has tentatively agreed to act as grantee of this conservation easement, subject to completion of negotiations following issuance of the Site Certificate. The mitigation parcel meets important objectives and WDFW supports this approach.

**Comment**: *ESTIMATES OF PROJECT IMPACTS – WIND TURBINE COLLISIONS WEST, Inc. appeared to have relied on several types of empirical evidence to predict wind turbine-caused impacts at the proposed 75 MW Whistling Ridge wind energy project. These lines of evidence included a model based on fatality rates regressed on utilization rates, comparisons of exposure index values among species seen at the site, and a comparison of raptor nest density to nesting densities at other wind project sites. However, these approaches have consistently led to inaccurate predictions of project impacts at other locations, and therefore should be examined carefully before relying on them yet again. Predicted Collision Rates Not only have most predictions of raptor fatality rates at wind projects been proven wrong after the project was developed and monitored for fatalities, but some of the wrong predictions have been very wrong (Table 1). Following construction and monitoring, raptor fatalities were estimated to be twice as high as predicted at Stateline, nearly 5 times higher than predicted at Hopkins Ridge, 3 times higher than predicted at Wild Horse, 6.9 times higher than predicted at Shiloh I, at least 11 times higher than predicted at Klondike II, and about 14 times higher than predicted at Big Horn. Even in the scientific field of wildlife biology, prediction errors of these magnitudes would be considered gross failures. Prediction failures are caused by fundamental shortfalls in the assumptions and methodology used to make the predictions. [LTR 181, CMT 2]*

**Response**: The methods used to conduct the studies and make impact predictions followed standard industry practice as well as WDFW guidelines. The WDFW has stated that the baseline studies were done in compliance with their guidelines. Many of these fatality estimates were made several years ago, when there was little available fatality data to inform predictions. For example, the baseline study for the Klondike project was conducted in 2001 and early 2002. No estimates were made for raptor fatalities at Klondike, except the baseline report stated that they would be "nonexistent to low" based on the raptor use data. Raptor fatalities at Klondike I and III were actually 0 as predicted. We're not sure how the raptor fatality estimate of 0.11 for Klondike II was considered 11 times higher than "low." In addition, the inflated estimates of raptor mortality calculated by Smallwood are flawed (see below) and he used these estimates to compare to predictions. Finally, regardless of what the actual vs. predicted mortality was, all of these projects had low raptor mortality compared to many projects in California noted for having high raptor fatality levels, and the baseline studies all predicted that raptor mortality would be relatively low based on raptor use, as was the case. Please also see response to Comment LTR 36, CMT 8 above.

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**Comment**: *The repeat failures to predict wind project impacts should prompt the States of Washington and Oregon to demand a review of the methods used, and to require new standards, including consequences for wind projects exceeding predicted fatality levels by more than 50%. Predictions of raptor fatality rates at proposed wind projects, and compared to estimated fatality rates following project development. Reported estimates were those appearing in fatality monitoring reports provided by consultants, and the Smallwood estimates were those made by me, using a common set of methods and assumptions, including search detection and scavenger removal rates reported in Smallwood (2007). WEST, Inc. relied on a regression relationship (Figure 8 in App. C-4) that regularly appears in their environmental documentation in support of wind energy projects, and which I have commented on before. Affirming its reliance on the WEST, Inc. approach to assessing potential project impacts, the DEIS (page 3-63) stated, "Mean*

*overall bird use in the study area was low compared to these other wind resource areas studied: ranking 19th compared to 24 other wind resource areas…" and, "Mean annual raptor use was 0.28 raptors per plot per 20-minute survey, which is a standardized way to measure use in order to compare results to avian use at other sites." However, this approach was inappropriate for use as a predictive tool due to multiple fundamental flaws, which are addressed in the following paragraphs. [LTR 181, CMT 3]*

**Response**: Please see response to Comment LTR 181, CMT 2 above.

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**Comment**: *[In reference to] Figure 8 in Appendix C-4. The dotted line fitting the clump of data points at the lower left represents an alternative regression relationship if data from the two California WRAs in the upper right aspect of the graph were omitted. The regression relationship was pseudo-replicated. Sufficiency of survey effort. The vertical dashed arrow in Figure 1 [of LTR 181, CMT 4] represents the utilization rate that WEST, Inc. estimated for raptors at the Whistling Ridge project site. Although a non-biologist might be impressed with the number of bird surveys performed at the Whistling Ridge project site, totaling 261 surveys, biologists familiar with utilization surveys at wind project sites have cause for concern regarding conclusions drawn from the level of effort devoted to Whistling Ridge. The 261 surveys lasted 20 minutes each, so totaled 87 hours. Eighty-seven hours was insufficient time to detect multiple raptor species and many other bird species, especially considering the high levels of visual occlusion due to forest cover surrounding observation stations at Whistling Ridge, along with the large volumes of airspace that would have been occluded due to mountainous terrain and cloudiness. Even the large amount of survey time invested in the Altamont Pass WRA -- where no forest occluded views -- failed to detect multiple species that are killed by APWRA wind turbines, including threatened and endangered species such as brown pelican and peregrine falcon, and many hours were needed to detect only one individual of many species. For example, 774 hours of survey at Vasco Caves Regional Preserve in the Altamont Pass WRA4 failed to detect peregrine falcon even though this species was twice documented as killed by Altamont Pass wind turbines. At Vasco Caves, it took 387 hours per merlin observation, even though this species is killed by Altamont Pass wind turbines. It took all 774 hours to detect one redshouldered hawk, and it took 70 hours per Cooper's hawk observation and 55 hours per Swainson's hawk observation, even though members of these species have been killed in the Altamont Pass. [LTR 181, CMT 4]*

**Response**: The regression analysis is a guide for helping to provide a predicted range of mortality of raptors (0 to 0.25/MW/year; page 3-79 of the DEIS, Appendix C-4). Please also see response to Comment LTR 36, CMT 8 above.

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**Comment**: *Just because a species goes undetected in the minimal survey efforts that have been directed to birds at wind project sites does not mean that that species will avoid collisions with wind turbines. An earlier study in a different part of the Altamont Pass WRA involved 980 hours of bird surveys. In that study the number of hours required per observation was 490 for Cooper's hawk, 980 for white-tailed kite, 163 for rough-legged hawk, 7 for loggerhead shrike (a*

*commonly killed species), 43 for cliff swallow (another commonly killed species), and 2 for golden eagle. Even though in the Altamont Pass we invested more than 11 times the hours committed to Whistling Ridge, we were unable to detect any significant relationships between fatality rates and utilization rates among rows or larger plots of wind turbines. [LTR 181, CMT 5]*

**Response**: Please see response to Comment LTR 36, CMT 8 above.

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**Comment**: *My colleagues and I concluded that not only were relatively small sample sizes an impediment to detecting a relationship between fatality rates and utilization rates, but there was the interference of a substantial bias caused by declining survey detection rates with increasing distance from the observer, especially for smaller-bodied bird species. The survey effort at Whistling Ridge was grossly insufficient for informing decision-makers about the impacts of the project that will be caused by wind turbine collisions with birds. The surveys were diurnal. The utilization surveys at Whistling Ridge did not record any birds flying at dawn, dusk, or at night, so they inadequately characterized the suite of bird species that uses the project area. (Utilization surveys are different from protocol-level call-back surveys used to detect northern spotted owls, and the data are recorded differently and used differently, including for wind turbine siting.) No nocturnal owl species would have been detected unless an owl flushed in daylight hours for some reason, and multiple other species would have been missed if they flew at night. This shortfall can be applied to most survey efforts that have been performed at wind project sites throughout the USA, so it was not unique to Whistling Ridge. This shortfall should be acknowledged and the level of uncertainty attributed to conclusions of impacts should be increased. [LTR 181, CMT 6]*

**Response**: To date no large-scale mortality of night migrating passerines similar to that seen at communication towers has been documented at wind energy facilities. Most mortality to nocturnally migrating passerines occurs at lighted communication towers over 500 feet tall and with guy wires used to support the towers (Longcore et al. 2005). Wind turbines are less than 500 feet tall and do not have guy wires. In addition, several studies have examined bird and bat fatality rates in relation to turbine lighting and have found that turbine lighting does not increase songbird or bat fatality rates. Finally, The Wildlife Society (Arnett et al. 2007) reviewed available information and concluded that fatalities of passerines from turbine strikes generally are not significant at the population level (Arnett et al. 2007). The need for long-term monitoring should be based on results of the first two years of monitoring, which will account for inter-annual variation in bird use of the site. Please also see response to Comment LTR 181, CMT 2 above.

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**Comment**: *Variation in visibility of surveyed airspace.—Survey observation stations are typically located on prominent aspects of the study area so that the observers can scan for birds in as much of the airspace as possible. The surveyed airspace is that airspace between the observer and the maximum survey radius (a maximum distance from the observer), and between the ground and to whatever elevation above the ground (ceiling) the surveyor is scanning for*

*birds. WEST, Inc. routinely uses an 800-m maximum survey radius. However, at least some of the airspace between the observer and the maximum survey radius is usually hidden from the observer, due to hills, the slope of the hill upon which the observer stands, trees, and the prevalence of fog or clouds. In hilly or mountainous terrain, observers stationed on prominent locations might be able to see a smaller proportion of the available airspace between 40 and 100 m away due to the slope dropping away from the observer. These observers might be able to survey a larger volume of airspace between 100 and 250 m away because those distances overlap canyon bottoms into which the observer might be able to see and over which there is more airspace due to a larger elevation range extending from below the observer (canyon bottom) to whatever elevation ceiling the observations might extend (assuming there is a ceiling). In other words, prominent locations tend to provide surveyors with variable volumes and proportions of volumes of airspace as functions of distance from the observer, due to the manner in which the ground surface slopes away from the observation station. The ground surface area of a flat circle within 800 m of the observer at a single station equals 2.01 km2. Assuming the WEST, Inc. survey team can see birds as high as they seem to think they can see them in distance, the volume of airspace surveyed on perfectly flat and unobstructed landscapes would be 1.61 km3, which in my opinion is a huge volume of airspace in which to expect to see more than a small fraction of the available birds. In the Altamont Pass my colleagues and I did not believe we could reliably detect most birds flying as high as 800 m, so we selected a ceiling of 140 m above the elevation of the observer, excluding birds above that ceiling from utilization rate estimates. This 140-m ceiling above flat terrain would have the surveyors searching 0.28 km3, which is still a volume I consider unmanageable, but which is much smaller than within an 800-m ceiling. However, flat ground is rarely where bird surveys are performed in WRAs, especially in the Pacific Northwest. From station to station, and from project site to project site across the US, the visible volume of airspace surveyed will vary greatly due to variability in topography and forest cover surrounding each station. [LTR 181, CMT 7]*

**Response**: The 800 meter radius used during surveys of Whistling Ridge refers to horizontal distance from the observer, not height above the observer. The protocol used to collect avian use data at Whistling Ridge was similar to protocols used at over 50 wind energy projects in the U.S. With this protocol, large birds such as raptors, waterfowl, etc. are recorded out to 800 meter horizontal distance, and efforts are made to place survey stations where visibility out to 800 meter is either unhindered or encompasses most of the plot circle. Because all studies are conducted in the same manner, it is appropriate to compare avian use rates among studies. The purpose of the survey is not to count the absolute number of birds but to obtain an index to bird use that can be used to assess risk at the site compared to other facilities where similar data have been collected using an 800 meter plot. Therefore, correcting for visible airspace is not required in these studies.

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**Comment**: *To illustrate the influence of this variability, Lee Neher and I constructed a digital elevation model (DEM) of the Vasco Caves Regional Preserve in the Altamont Pass and we calculated the volume of airspace visible from each of 15 observation stations ([LTR 181, CMT 7] Figure 2). Our results demonstrated that bird observations need to be related to visible volumes of airspace to avoid confounding any comparison that would be made of utilization rates among observation stations or wind project sites. Change in mean and station-specific*

*percentage of visible volume of airspace within 140-m ceiling and within specific radial bands from the observer (x-axis) among 15 observation stations at Vasco Caves Regional Preserve in the Altamont Pass. Note that our maximum survey radius was 2009 feet, or 600 m, whereas WEST, Inc. uses a maximum survey radius of 800 m, including at Whistling Ridge. Projecting the trends in this Figure to 800 m, we might expect a mean of 60% of the airspace to be visible, ranging about 20% to 94% among the stations, and this variation did not include airspace hidden by forest surrounding observation stations at Whistling Ridge. Without accounting for this source of variation in utilization rates, comparing utilization among sites within a project area could be misleading, and comparing utilization rates among wind project sites across the US might qualify as very misleading. 800 m maximum survey radius was too far. --Lee Neher and I quantified the effect of variable distances of birds from the observer, using our DEM of a project area in the Altamont Pass ([LTR 181, CMT 7] Figures 3 and 4). We calculated detection functions from the patterns depicted in Figures 3 and 4 (see [LTR 181, CMT 7] Table 2), enabling me to project our detection rates to visible volumes of airspace within the maximum survey radii used by other investigators. Raptor utilization rates within an 800 m maximum survey radius would be reported at about 81% of the rate within a 600 m maximum survey radius, at 60% of the rate within a 400 m survey radius, and 22% of the rate within a 100 m survey radius. Without accounting for the effect of distance from the observer, utilization rates cannot be compared among wind projects, nor can utilization rates be compared appropriately among species. First detections/hr/km3 of visible airspace regressed on distance from observer within radial boundary increased from 30 m to 600 m at Vasco Caves Regional Preserve, California. [LTR 181, CMT 8]*

**Response**: Please see response to Comment LTR 181, CMT 7 above.

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**Comment**: *Pseudoreplication.--The regression relationship in Figure 8 of App. C-4 likely exemplifies psuedoreplication in correlation analysis, which is a fundamental experimental design flaw that is routinely warned against in statistics textbooks. The regression is based on two clusters of data, one from wind projects located mostly in the Pacific Northwest and the other from two projects located nearby each other in California. If the variation in the graph was more representative of the two regions -- Washington/Oregon versus Central California – than of the individual project sites, then the sampling units were really the regions and not the project sites. In presenting their graph, Johnson and Erickson (2008, 2010) presented a value for the coefficient of determination, r2, but they neglected to present an error term. Furthermore, they presented the relationship as significant, and the DEIS repeated that conclusion along with the prediction, based on the regression, that 0 raptors would be killed by Whistling Ridge wind turbines ([DEIS]page 3-79). [LTR 181, CMT 9]*

**Response**: Please see response to Comments LTR 181, CMT 4 and LTR 36, CMT 8 above.

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**Comment**: *Within specific 100-foot radial bands, mean first detections/hour/km3 of visible airspace decreased with increasing distance from the observer for golden eagle, red-tailed hawk, turkey vulture, northern harrier, prairie falcon, common raven, American kestrel, burrowing*

*owl, and all raptors as a group in Vasco Caves Regional Preserve, 2006-2007. Horizontal dashed lines represented detection rates expected of each species assuming spatial distributions were most accurate within the closest 100 or 200 feet to the observer. [LTR 181, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *Cumulative mean first detections/hour increased with increasing distance from the observer for golden eagle, red-tailed hawk, turkey vulture, northern harrier, prairie falcon, common raven, American kestrel, burrowing owl, and all raptors as a group in Vasco Caves Regional Preserve, 2006-2007. The solid line in the lower right graph depicts the exponential increase in cumulative detections of raptors, assuming the spatial distribution of raptors was unaffected by the locations of observation stations and detection rate was most accurate within the closest 100 feet. The coefficient of determination is an index of both response and precision, but the reader must be familiar with regression analysis to visually assess the degrees to which variability or precision contributed to r2. A more direct measure of precision is the root mean square error (RMSE) of the regression, otherwise known as standard error. In my experience, RMSE can serve as a diagnostic tool for deciding whether r2 was influenced more by leveraging from outliers or from psuedoreplication. [LTR 181, CMT 11]*

**Response**: Please see response to Comment LTR 181, CMT 4 above.

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**Comment**: *Another diagnostic test is to omit data from one of the clusters to learn whether the regression slope would change significantly. In fact, omitting the two data points from Central California project sites converted a strongly positive slope to a negative slope (see dotted line in Figure 1 [of LTR 181]), and the revised regression line was a better fit to the data, based on RMSE (RMSE = 0.0567, which was a third of the value for the pseudoreplicated regression slope). In cases like this, when two data points determine whether an estimated regression slope is strongly positive or negative, the analyst should not use the regression equation to make predictions. It was inappropriate for the DEIS to predict that 0 raptors would be killed by Whistling Ridge. [LTR 181, CMT 12]*

**Response**: Please see response to Comment LTR 181, CMT 4 above.

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**Comment**: *Accuracy of fatality rates.—Where able, and in the time I had before preparing this comment letter, I used data available in reports to independently estimate fatality rates at project sites across the western USA. My estimates averaged 2.44 times higher than reported for all birds as a group (N = 23 reports), 1.34 times higher for all raptors as a group (N = 23), and 2 times higher for all bats (N = 20). Probably the principal reason for my higher estimates was the difference in fatality estimator. Most of the monitoring reports I reviewed had utilized the following estimator of fatalities per MW per year, FA: eqn. 1 where FU is unadjusted average number of carcasses observed per MW per year, t is mean number of days until carcass removal,*

*and is estimated by scavenger removal trials, p is proportion of carcasses found by fatality searchers during searcher detection trials, and I is average search interval in days. The other estimator in use, and the one I use, is derived from the Horvitz and Thompson (1952) estimator: Eqn. 2 where RC is the average proportion of carcasses remaining since the last fatality search and is estimated by scavenger removal trials. I assume carcasses are deposited at a steady rate from wind turbines, so I take the average proportion of carcasses remaining each sequential day between searches: Eqn 3 where Ri is proportion of carcasses remaining by the ith day following the initiation of a scavenger removal trial. Thus, the expected proportion of carcasses remaining by the next fatality search should be RC corresponding with the fatality search interval, I. A key difference between the two estimators is the use of t in eqn. 1 and the use of RC in eqn. 2. The sample size of placed carcasses contributing to RC never changes from start to finish of a removal trial, as none of the carcasses need to be censored. On the other hand, the sample size contributing to t starts small and increases quickly as the trial grows longer (Figure 5, left graph [LTR181]). If 10 carcasses were placed to obtain RC, then 10 carcasses will contribute to RC after 1 day, 10 days, or 30 days. If 10 carcasses are placed to obtain t , then it may be that none of them will contribute to t after a day because none had been removed by then, and so all had to be censored from the calculation. If 4 carcasses were removed after 10 days, then only these 4 would contribute to the calculation of t . If 7 carcasses were removed after 30 days, then only these 7 would contribute to the calculation of t . Thus, t increases exponentially with the sample size used to calculate t because the increasingly large sample is also composed of carcasses that have persisted longer into the trial (Figure 5, right graph [LTR181]). Furthermore, t increases nonlinearly with number of days into a trial (Figure 6 [LTR181]), indicating a bias. Perhaps the main bias, however, is the use of t , which is derived from a time period that is necessarily much longer than the average search interval of the fatality monitoring (see text that follows). [LTR 181, CMT 13]*

**Response**: The fatality rate independently estimated by Smallwood for Whistling Ridge was 0.44 raptors/MW/year. Raptor fatality rates at 13 facilities in the Pacific Northwest have ranged from 0 to 0.29 and averaged 0.09/MW/year. Smallwood states that bird and bat fatality rates are underestimated due to a bias in the estimator used by the Applicant's consultant (WEST), which is known as the Shoenfeld estimator. Smallwood did not elaborate on what estimator was used or what the bias was, but it is assumed Smallwood used what a “novel” approach as outlined in Smallwood et al. (2010). One likely assumption in the use of the estimator that Smallwood presumably used is that a carcass, if missed by a searcher during the first search, no longer has any chance of being found during subsequent searches. It has been demonstrated in studies that fatalities that are missed the first time have a good chance of being picked up in subsequent searches (Arnett et al. 2009). Not accounting for this probability of finding carcasses during multiple searches leads to an overestimate of fatality rates in Smallwood’s estimator.

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**Comment**: *Sample sizes used to calculate mean days to carcass removal decline with shorter trial duration, and mean days to removal increases exponentially with sample size at Vasco Caves Regional Preserve, Altamont Pass, California. Mean days to carcass removal increases with longer duration of the carcass removal trial at Vasco Caves Regional Preserve, Altamont Pass, California. When censoring remaining carcasses, t cannot be calculated unless at least one carcass has been removed. If no carcasses are removed during a trial, then t will be*

*undefined, whereas RC would equal 1 and the fatality rate could still be estimated. To prevent a trial result in which no carcasses are removed, and hence t cannot be calculated, investigators can place larger numbers of carcasses or they can perform longer trials. Placing larger numbers of carcasses can potentially swamp the vertebrate scavengers, thereby increasing mean days to removal. The option to perform longer trials might help explain why many of the trials intended to obtain t have been conducted for 40 to 64 days, or from nearly twice as long to more than four times longer than the average search interval used in the corresponding fatality monitoring. Values of t derived from such long trials will be larger than those derived from trials lasting no longer than the fatality search interval, and the fatality rates will be underestimated. I must also point out that my estimates, relying on eqn. 1, remain conservative because I have yet to account for declining searcher detection rates as the search interval increases (searcher detection trials are based on a search interval of less or equal to one day). I also have not accounted for crippling bias – the non-detection of mortally wounded birds that leave the search area on their own volition before perishing – because there is no means to account for this bias. [LTR 181, CMT 14]*

**Response**: Please see response to Comment LTR 181, CMT 13 above.

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**Comment**: *Underestimates of fatality rates in the Pacific Northwest might be partly caused by reliance on mean days to carcass removal as an adjustment for scavenger removal rates (Smallwood 2007), but some of the scavenger removal trials were sufficiently flawed that I had to replace their results with national averages in Smallwood (2007). Under-estimated fatality rates have been used to predict fatality rates of planned projects, which may be one reason why predicted fatality rates have so often been wrong. The regression analysis appearing in Figure 8 of App. C-4 was based on inaccurate fatality rate estimates. [LTR 181, CMT 15]*

**Response**: Please see response to Comments LTR 181, CMT 4 and LTR 181, CMT 13 above.

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**Comment**: *Accounting for inter-annual variation. — The data presented in Figure 8 of App. C-4 were derived mostly from one-year monitoring programs. However, inter-annual variation in fatality rates and utilization rates can be very high at a given project site. For example, fatality rates varied 5.7-fold from low to high over 8 years within a 10-year period in the Altamont Pass WRA. They varied nearly 2-fold over a 3-year period at Foote Creek Rim and nearly 3-fold over a 4-year period at Buffalo Ridge. Given this range of variation, single-year estimates are mere snapshots of fatality rates and unlikely to reveal meaningful relationships between fatality rates and utilization rates among wind projects. Inter-annual estimates of raptor fatality rates in the Altamont Pass WRA. Regression relationship based on selective inclusion of data. — Figure 8 of App. C-4 was based on only some of the wind projects for which there exists fatality rate and utilization rate estimates. Including more of the estimates available, the regression slope reported by Johnson et al. in the Whistling Ridge DEIS no longer applies. Fatality rate estimates regressed on utilization rate estimates after including data from additional WRAs to those used by WEST, Inc. Consistency of regression relationship. — WEST,*

*Inc. has been inconsistent in its utilization rates and fatality rates used to construct the regression model in Figure 8 of App. C-4. [LTR 181, CMT 16]*

**Response**: The studies were conducted in compliance with the WDFW windpower guidelines, as one full year of avian baseline data were collected to cover all four seasons. In addition, the avian baseline studies were conducted in 2004, 2006, 2008 and 2009 which accounts for inter-annual variation. Please also see response to Comment LTR 181, CMT 4 above.

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**Comment**: *For example, in the environmental review documents prepared for Windy Point, Windy Flats, and Hatchet Ridge, data representing the two extreme California wind projects (Diablo Winds and High Winds) indicated 30% higher utilization rates than depicted in the Whistling Ridge DEIS. Also, the fatality rate representing Diablo Winds was half as great in the Windy point, Windy Flats, and Hatchet Ridge documents compared to the Whistling Ridge DEIS. Compared to the regression model presented in the environmental review documents for Windy Point, Windy Flats, and Hatchet Ridge, the regression slope was more than twice as steep in the model presented for Whistling Ridge. These inconsistencies should be explained. Fitted regression line intercepts 0 fatalities before it intercepts Y-axis. — The DEIS (page 3-79) predicted that Whistling Ridge will cause 0 raptor fatalities because its estimated utilization rate appeared to the left of the Y-axis 0-intercept in Figure 8 of App. C-4. This prediction was unrealistic and inconsistent with the very data that contributed to the estimated regression line. In fact, one of the wind projects that contributed to Johnson et al.'s regression model also appeared to the left of the Y-axis 0-intercept, but it was represented as having killed 0.09 raptors/MW/year (my estimate of the fatality rate of this project was twice as high, however). [LTR 181, CMT 17]*

**Response**: Please see response to Comment LTR 181, CMT 4 above.

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**Comment**: *In addition to this inconsistency in the use of the regression, omitting the two Central California wind projects from the analysis flips the regression slope from positive to negative, potentially leading to an opposite conclusion – that Whistling Ridge will kill more raptors than any other wind project in Washington or Oregon. However, for multiple reasons discussed below, I advise against using my revised regression line or the Johnson et al.'s regression line for predicting fatality rates. Calculation of utilization rates. — Utilization rates contributing to the regression model were often calculated as means among seasonal totals, rather than annual total observations per year or weighted averages. Weighted averages should be used if surveys were performed regularly across all seasons, where the weightings are based on duration of each season. Without weighting, simple averaging among seasonal total utilization rates likely under-represents the contributions of longer seasons with higher bird use. [LTR 181, CMT 18]*

**Response**: Please see response to Comment LTR 181, CMT 4 above.

**Comment**: *Summary of fatality rates regressed on utilization rates. The consultants who prepared the supporting documents for the DEIS have been unable to accurately predict raptor fatality rates, as demonstrated above. In fact, their predictions have been much too low, and the same problem can be demonstrated for bats and other bird species. Upon examination, the methods used to predict fatality rates appear to be ineffective, as raptor fatality rates failed to correlate with nesting densities, utilization rates, and exposure index values. The methods used by the consultants simply do not work. The predictions of fatality rates in the Whistling Ridge DEIS cannot be relied upon. Exposure index values. On page 3-77, the DEIS summarizes the calculation of the exposure index (also see App. C-4), which it said was used to assess the risk of collision of each bird species. In fact, on the same page and on subsequent pages the DEIS did just that – it offered conclusions about the likelihoods of collision-caused fatalities based on values of the exposure index. [LTR 181, CMT 19]*

**Response**: Please see response to Comments LTR 36, CMT 8 and LTR 181, CMT 2 above.

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**Comment**: *However, I have never seen a test of the relationship between fatality rates and exposure index. Based on my own experience attempting to relate fatality rates to variables similar to the exposure index, I am skeptical that WEST, Inc. has actually generated a hypothesis test result that would support the use of the exposure index as a predictive tool. Therefore, I tested for a relationship using data from the Big Horn and Wild Horse Wind Projects. I found no hint that fatality rates could be predicted by the exposure index. [LTR 181, CMT 20]*

**Response**: The exposure index was not used to predict fatality rates for the Whistling Ridge Energy Project.

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**Comment**: *Furthermore, between the two projects 27 species (23%) were not detected during utilization surveys at one or both project sites but were killed by wind turbines at the same project site. Of the 22 species that were detected during utilization surveys at one or both project sites and that were also killed by wind turbines, only 4 of them (18%) were given exposure index values >0. In other words, there was no correspondence between the exposure index and fatality rates. The exposure index appears to be completely ineffective as a predictor of fatality rates caused by wind projects. Nesting densities. I collected reports of raptor nesting densities and raptor fatality rates from wind projects throughout the western states. I found no trend in the relationship between fatality rates and nesting density that would suggest that nesting density explains some of the variation in raptor fatality rates. Relationship between fatality rates and exposure index values for each bird species documented in utilization surveys and fatality searches at the Big Horn and Wild Horse Wind Energy projects. I omitted bats and unidentified birds such as sparrow, falcon, or passerine. I included only estimates for individual, named species, totaling 115 estimates between the project sites (some species appear twice, once for each project site). Raptor fatality rates did not correlate significantly with raptor nest densities recorded on project sites and usually within a 2 mile buffer of the project boundaries. Raptor nesting density did not appear to predict raptor fatality rates at wind projects. [LTR 181, CMT 21]*

**Response**: Please see response to Comment LTR 181, CMT 20 above. Nesting density is surveyed to determine what species are nesting near proposed developments, but are not meant to provide a correlation with fatality.

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**Comment**: *ESTIMATES OF PROJECT IMPACTS – COLLISIONS. The DEIS predicted 0 raptors would be killed by the Whistling Ridge wind turbines, but this conclusion did not comport with the record of fatalities documented at existing wind energy projects. There have been only two wind projects that documented 0 raptor fatalities, but those estimates were based on one year of monitoring, which was insufficient. Based on reports of fatality monitoring at 23 wind projects in Washington, Oregon and California, the average fatality rates projected to 75 MW of rated capacity would predict 33 raptor fatalities per year, 422 bird (including raptor) fatalities per year, and 86 bat fatalities per year. However, the Whistling Ridge project site differs from all the others because it would be in a mountainous and forested environment that is also often enveloped by clouds. Given the absence of existing wind farms in these conditions in the Pacific Northwest, I cannot provide reliable estimates of collision rates at Whistling Ridge, but I caution that fatality rates could be much higher than listed in. [LTR 181, CMT 22]*

**Response**: Please see response to Comments LTR 36, CMT 8 and LTR 181, CMT 2 above.

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**Comment**: *Furthermore, the fatality rate projections in Table 3 [of LTR 181] are interim rates before I update Smallwood (2007) to improve the adjustment factors for searcher detection error and scavenger removal rate. My 2007 paper was based on available searcher detection and scavenger removal trials available at the time, but hundreds of trials have been performed since then. I have integrated the data from these hundreds of trials, and I have observed much faster removal rates for most taxonomic groups, especially for bats, as well as lower searcher detection rates. I have not had time yet to finalize my analysis of these data from newer trials. I anticipate that my fatality rate estimates will be higher once I have updated Smallwood (2007). [LTR 181, CMT 23]*

**Response**: Comment acknowledged.

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**Comment**: *Regional Population Estimates. -- Johnson and Erickson (2010) neglected to mention that there exist relatively large standard errors associated with the mean detections per BBS route. I used the standard errors to calculate 95% confidence intervals, which yielded very large ranges of population size for each species addressed in Johnson and Erickson (2008). For example, the lower bound estimate for ferruginous hawk was less than 0, and the differences between one side of the confidence interval and the mean population estimate ranged 29% (American kestrel) to 65% (ferruginous hawk) of the magnitude of the mean. Without addressing the large error terms in the data, Johnson and Erickson (2008) inadequately informed the reader about the suitability of their population estimates for assessing biological significance of "cumulative impacts." [LTR 181, CMT 25*]

**Response**: The Breeding Bird Survey (BBS) data was used by Partners in Flight to estimate population size for avian species, and is the only available source for population estimates. While the standard errors are large, the population estimates use the best available science and therefore necessary for the basis of cumulative effects. The raptor mortality from wind developments would be a very small proportion of total natural mortality, unless the population sizes for raptors were substantially overestimated.

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**Comment**: *More importantly, Johnson and Erickson (2008) dismissed strong criticism of a review of the Partners in Flight approach. Thogmartin et al. (2006) reviewed the population estimation approach of Partners in Flight, and found the approach to be an inappropriate use of BBS data. The BBS was designed for detecting long-term population trends, but not for estimating population size. Thogmartin et al. (2006) also pointed out several potential biases in the Partners in Flight use of BBS data. The most likely and most substantial bias is the extrapolation of detection rates from roadways across large expanses of potential habitat lacking roads. Having performed many years of bird surveys both along roadways and far from roads, I cannot agree more with Thogmartin et al.'s conclusion that this was a serious bias, and one that likely inflated population estimates of the species addressed in Johnson and Erickson (2008). American kestrels, red-tailed hawks, and ferruginous hawks congregate along roadways because utility poles occur along roadways and are used for perching, especially on agricultural and shrub-steppe landscapes lacking natural tall perch structures. [LTR 181, CMT 26]*

**Response**: The population estimates used in the cumulative impacts analysis were developed by Partners in Flight (Blancher et al. 2007). Partners in Flight (PIF) is a cooperative effort involving partnerships among federal, state and local government agencies, philanthropic foundations, professional organizations, conservation groups, industry, the academic community, and private individuals. The mission of PIF includes 1) helping species at risk, 2) keeping common birds common, and 3) voluntary partnerships for birds, habitats and people. PIF felt it was important to generate estimates of bird populations across the U.S., which were lacking for most species and most regions. They used relative abundance counts from the North American Breeding Bird Survey (BBS) to form the basis of their bird population estimates. Although PIF acknowledges that the BBS was not designed specifically to produce population estimates, and there are difficulties to overcome as a result, there are important advantages. The main ones are that data from across much of North America have been collected according to a single standardized method, surveys employ random start points and directions thus enhancing regional representation of the avifauna (roadside bias notwithstanding), and the data are readily available for the bulk of North American landbirds. According to PIF, the population estimates are rough approximations for landbirds breeding in the U.S. and Canada, and the results and the underlying data of this first effort to estimate population numbers for all North American landbirds can be used for several different purposes (*http://www.partnersinflight.org/*). In order to prepare a cumulative impact analysis, estimates of population sizes are required. Otherwise, it is impossible to determine how raptor fatalities associated with wind energy development could affect populations and therefore lead to cumulative impacts. The only population estimates available for most bird species in the Pacific Northwest are those estimates calculated by PIF. Although these estimates may not be completely accurate for all species, they are the only ones available and therefore represent the best available science for this use. Use of the best available

science to make informed decisions is standard practice in ecology and wildlife biology. In the United States, many of the laws governing conservation and management stipulate that the best available science be used as the basis of policy and decision making. One such law, the Endangered Species Act, requires that decisions on listing a species as threatened or endangered be made on the basis of the "best scientific and commercial data available". Similarly, National Standard 2 of the Magnuson-Stevens Fishery Conservation and Management Act states that conservation and management measures shall be based on "the best scientific information available." In addition, the U.S. Environmental Protection Agency has emphasized the role of best available science in implementing the Clean Water Act (Sullivan et al. 2006). Therefore, use of the PIF population estimates, given that they represent the best available science, is a clearly accepted practice and is in fact mandated by many U.S. laws for making informed policy decisions. Finally, estimated raptor fatality rates in the cumulative impacts analysis (Johnson and Erickson 2010) suggest that raptor mortality associated with 6,700 MW of wind energy comprises a small proportion of the population and further comprises a very small proportion of natural mortality. Therefore, actual bird population sizes in the analysis area would have to be substantially lower than estimated by PIF before conclusions regarding the lack of cumulative effects would not be considered valid.

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**Comment**: *Furthermore, on agricultural landscapes, foraging habitat often occurs as strips between roads and disked fields. Extrapolating densities from roadways will produce absurdly inflated numerical estimates of numerous bird species, especially for American kestrels because their densities were estimates only within 200 m of BBS routes (the usual radius used by Partners in Flight was 400 m). A later version of Johnson and Erickson's cumulative impacts analysis (Johnson and Erickson 2010), which was mysteriously not the analysis used in App. C-11, dismissed Thogmartin et al.'s review because no other regional population estimates exist for the Columbia Plateau. This rationale was unscientific. Johnson and Erickson (2008) did not provide a Partners in Flight estimate of the population size for golden eagles on the Columbia Plateau Ecoregion within Washington and Oregon because golden eagle fatalities had yet to be documented among wind turbines on the Columbia Plateau. [LTR 181, CMT 27]*

**Response**: Please see response to Comment LTR 181, CMT 26 above.

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**Comment**: *However, golden eagle fatalities were subsequently documented, so the 2010 version of Johnson and Erickson's cumulative impacts analysis included a golden eagle population estimate, which was 1,700. For this number of golden eagles to occur on the Columbia Plateau within Washington and Oregon, the population density would have to be nearly as high as recorded in the Altamont Pass, or nearly one nesting pair per 19 km2. The Altamont Pass golden eagle density was characterized by Hunt et al. as one of the highest ever recorded. Therefore, for the Johnson and Erickson estimate to be true, the Columbia Basin would require an Altamont-level density to extend across the entirety of the Plateau, which is highly unlikely based on my understanding of animal density and distribution. Furthermore, the baseline studies performed by Johnson and Erickson and their WEST, Inc. colleagues have universally reported much lower golden eagle observations per hour among project sites in the*

*Columbia Plateau Ecoregion as compared to the utilization rates documented in the Altamont Pass. As examples, WEST, Inc. reported 0 golden eagle observations during baseline surveys at Big Horn, 0.07/hour after 90 hours at Wild Horse, 0.033/hour after 270 hours at Golden Hills, 0.024/hour after 126 hours at Hopkins Ridge. For comparison, representative observation rates from the Altamont Pass have been 0.278/hour and 0.314/hour. The golden eagle population on the Columbia Plateau cannot be just as dense as in the Altamont Pass while at the same time trained observers count them at rates that are 0%, 8%, and 24% of the rates observed in the Altamont Pass. [LTR 181, CMT 28]*

**Response**: To date no studies of wind power facilities have shown a population level decline of any species, but only one study has been conducted to examine this issue. Hunt (2002) conducted a 4-year radio telemetry study of golden eagles at the APWRA and found that the resident golden eagle population appeared to be self-sustaining despite high levels of fatalities, but the effect of these fatalities on eagle populations wintering within and adjacent to the APWRA was unknown. All 58 territories occupied by golden eagle pairs in the APWRA in 2000 remained active in 2005 (Hunt and Hunt 2006). The Wildlife Society prepared a landmark publication on wind energy and wildlife and concluded that fatalities of passerines from turbine strikes generally are not significant at the population level (Arnett et al. 2007). We believe that the reason no other studies have been conducted to determine if wind projects have caused any population declines of any bird species is that measured fatality levels have been low enough that no agencies have expressed concern over population level impacts and required such studies.

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**Comment**: *As for Swainson's hawk, Johnson and Erickson (2008) estimated 10,000 breeding Swainson's hawks reside on the Columbia Plateau within Washington and Oregon. My model of nesting density projected only 579 pairs, or 1,158 adults. My projection was extended beyond all the population density estimates that were available to contribute to the model, so to be conservative I can rationalize doubling my estimate to 2,315, which is still a much smaller population size than estimated by Johnson and Erickson. Johnson and Erickson estimated the breeding American kestrel population to be 170,000 on the Columbia Plateau within Washington and Oregon. This number would amount to 7% of the entire North American breeding population that was estimated 28 years ago, and it would be a much larger percentage of today's North American breeding population. It would have me believe that at least 7% of North America's American kestrel population resides on 0.55% of North America's land mass, or nearly 13 times more densely other than expected in the Columbia Plateau Ecoregion. [LTR 181, CMT 29]*

**Response**: Please see response to Comment LTR 181, CMT 26 above.

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**Comment**: *This regional population estimate also would have me believe there resides 1 breeding American kestrel for every 0.79 km2, or one pair per 1.58 km2. This density across such a large area would be highly unlikely. Furthermore, Johnson and Erickson (2008) claimed that the level of mortality likely to be caused by wind turbines following desired build-out in the Columbia Plateau would be sustainable and therefore of no significant population impact. This*

*conclusion was not supported by a scientifically acceptable analysis, and it was inconsistent with the overall declining trend of American kestrels across North American and within Washington, specifically. [LTR 181, CMT 30]*

**Response**: Please see response to Comment LTR 181, CMT 26 above.

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**Comment**: *Fatality Rates. -- Johnson and Erickson (2008, 2010) compared fatality rates among Oregon and Washington wind farms, and then extrapolated the mean fatality rates to the projected build-out of 6,700 MW of wind power capacity in the Columbia Plateau Ecoregion. The fatality rates in their Table 2 (Table 1 in the 2010 analysis) were too low (Table 4). For example, using the same data, I found their estimates to be low for Big Horn, Wild Horse, and Stateline. The raptor fatality rate reported for Big Horn was 0.15 deaths/MW/year, whereas I estimated the rate to be 60% higher. [LTR 181, CMT 31]*

**Response**: Please see response to Comment LTR 181, CMT 13 above.

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**Comment**: *The raptor fatality rate at Wild Horse was reported to be 0.09 deaths/MW/year, but I estimate the rate to be 178% higher. The raptor fatality rate at Stateline was reported to be 0.091 deaths/MW/year, but I estimated the rate to be 43% higher. Extrapolating my Wild Horse fatality rate estimates to 6,700 MW of cumulative capacity yielded 1,688 raptors per year and 27,230 total birds per year. Extrapolating my Big Horn fatality rate estimates to 6,700 MW of cumulative capacity yielded 1,625 raptors per year and 23,568 total birds per year. The average of the extrapolations from these two projects yielded 1,656 raptors per year and 25,399 total birds per year. These extrapolations are 3.2 times greater for all raptors and 1.4 times greater for all birds than forecast by Johnson and Erickson (2008, 2010), and I have yet to consider the confidence intervals around the fatality rate estimates, which are very large. [LTR 181, CMT 32]*

**Response**: Please see response to Comment LTR 181, CMT 13 above.

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**Comment**: *As for American kestrel, Johnson and Erickson (2008, 2010) forecast 162 deaths/MW/year, but my average estimates between Wild Horse and Big Horn, extrapolated to 6,700 MW, indicates the cumulative toll will be 1,381 deaths/MW/year, or 8.5 times greater than forecast by Johnson and Erickson (2008, 2010). [LTR 181, CMT 33]*

**Response**: Please see response to Comment LTR 181, CMT 13 above.

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**Comment**: *I also compared cumulative annual fatalities predicted by WEST, Inc. (and included in the DEIS) to my predictions based on my independent estimates of fatality rates using data in the same reports (Table 4 [of LTR 181]). Compared to the predictions made by*

*WEST, Inc., my predicted cumulative annual fatalities caused by the projected build-out of wind energy facilities in the Columbia Basin Ecoregion were 6.3 times greater for raptors, 2.6 times greater for all birds as a group, and about the same for bats (Table 4 [of LTR 181]). Most of the difference in predictions between those made by me and WEST, Inc. can be explained by the estimators used, and specifically whether scavenger removal rates of carcasses were characterized by mean days to removal or by proportion of carcasses remaining at the ith day into a removal trial (see earlier discussion). [LTR 181, CMT 34]*

**Response**: Please see response to Comment LTR 181, CMT 13 above.

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**Comment**: *Differences in predicted fatality rates across neighboring Klickitat County and across the Columbia Basin Ecoregion, where the predictions were made by WEST, Inc. and by my use of the same data in available reports. Note that Whistling Ridge is not part of the Columbia Basin Ecoregion, but the DEIS nevertheless relied on a cumulative impacts analysis directed toward wind projects in the Columbia Basin Ecoregion. In either case, the WEST, Inc. estimates of fatality rates were much lower than my estimates, based on the same data. [LTR 181, CMT 35]*

**Response**: Please see response to Comment LTR 181, CMT 13 above.

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**Comment**: *Avian Use Rates. -- It was inappropriate to compare avian use rates among wind farms without accounting for differences in maximum survey distances from the observer and in volumes of visible airspace from observation stations. Topography varies from place to place, and so does the proportion of the survey area that is visible from the observation stations. Also, detection rates of birds decline rapidly with distance from the observer, more so for smaller-bodied birds, so comparing use rates between wind farms will be substantially biased when the maximum survey distance was 800 meters in one wind farm and only 400 meters in another, or when few birds of one species will be detected beyond 300 m whereas most birds of another species will be detectable to 800 m. Without accounting for species-specific detection functions and variation in visible airspace due to topographic occlusion, comparisons of use rates cannot be reliable. [LTR 181, CMT 36]*

**Response**: Please see response to Comment LTR 181, CMT 7 above.

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**Comment**: *It appeared that overall impacts of wind power projects on wildlife would likely be greater in forested environments. According to the DEIS (page 3-46), "Although [golden eagles] soar at high altitudes, they drop down to the ground to capture prey." This characterization can be misleading. Golden eagles typically hunt while flying low to the ground, using a flight behavior termed 'contour flying.' In fact, the summary of the two golden eagles seen flying on the project site (same page, 3-46) indicated the eagles were at heights above ground typical of the heights used during contour flights. This contour flying appears to be a*

*behavior that predisposes golden eagles to wind turbine collisions, and it is not a behavior that this species will change. Table 2 in Young and Poulton (2007) summarized "Mean annual mortality" estimates from various wind power projects in the region. However, most of the cited estimates were for one year only and not multiple years as the heading, "Mean annual mortality," would lead readers to believe. Making the argument that background mortality causes fatality rates to be over-estimated at wind project sites, Young and Poulton (2007: page 14) claimed they found 0.33 bird carcasses per turbine plot equivalent per year in background fatality monitoring at two wind project sites, one in Montana and one at Buffalo Ridge, Minnesota. However, Young and Poulton (2007) neglected to mention that background mortality searches have been performed at multiple wind project sites by multiple investigators over the past decade, and those searches turned up very few or zero naturally occurring bird carcasses (Table 5). The average among reported background mortality surveys (0.0108 dead birds per turbine plot-equivalent) was 32 times lower than claimed by Young and Poulton (2007). In the case of Buffalo Ridge, which was one of the two project sites cited by Young and Poulton (2007), another WEST, Inc. team (Johnson et al 2000) conducted 2,482 searches in reference plots and found one naturally occurring fatality for every 78 person-hours spent searching. They concluded, "The amount of natural mortality occurring in the study area is so small that attempting to correct fatality estimates for natural mortality is not warranted." Results of background mortality surveys in which fatality searches were performed in similar environments as occurred amongst the project's wind turbines, but where there were no wind turbines. The turbine plot equivalent was 0.5625 ha, or the area within a typical square search plot used at modern wind turbines of 75 m per side. Anderson et al. (2005) also performed background mortality searches, but their searches were nearby the wind turbines of the Tehachapi Pass, and appeared to have likely included birds killed by the wind turbines. [LTR 181, CMT 38]*

**Response**: Please see response to comments 36-8, 181-2 and 181-13.

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**Comment**: *There is no established relationship between raptor nest density and wind turbine collision rates. I concur with the need for post-construction fatality monitoring, but I would set the minimum to three years instead of two years, and I would require that all the turbines are searched for fatalities over the first three years and that a subset of the turbines be searched through the life of the project. [LTR 181, CMT 40]*

**Response**: The avian baseline report did not state that there was any relationship between nest density and fatality rates. The post-construction monitoring protocols will be established by the Technical Advisory Committee (TAC).

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**Comment**: *In truth, there is little if anything that can be done to reduce bird and bat fatalities once the wind turbines are installed. There is no evidence that any measures have been implemented to reduce bird fatalities at modern wind energy projects, and so no evidence that any measures were effective […] [LTR 181, CMT 42]*

**Response**: Numerous measures, including habitat manipulation and curtailment, have been shown effective at some sites to reduce fatalities of birds and bats.

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**Comment**: *Recommended Mitigation Measures. Once the wind turbines are installed, there is little, if anything, that can be done to reduce fatality rates. Therefore, it is very important to carefully plan the installation of wind turbines, including tower height and wind turbine siting. Lee Neher and I have developed spatial models to predict hazard zones for specific species of raptor in the Altamont Pass, relying heavily on behavior and utilization surveys. Sufficient sample sizes of birds displaying specific flight behaviors, e.g., hovering, contouring, fly-catching, are needed to inform the models, which also rely on a resolute digital elevation model of the project area so that slope and wind conditions can be measured and related to bird flight patterns. Our models are being implemented in two repowering projects. Our approach or a similar approach should be utilized at Whistling Ridge, if the project is developed. [LTR 181, CMT 44]*

**Response**: Altamont pass is unique for its very high mortality of birds, especially golden eagles, so additional research to inform re-powering as discussed in this comment will assist in understanding how to reduce avian mortality. For the proposed Project, the pre-construction avian survey data suggest high levels of mortality would not occur, and the risk to golden eagles is low, so additional research into flight behavior of birds is not warranted nor is it an industry standard. Rather, post-construction mortality monitoring would provide the species and numbers of birds killed, and based on that data, the TAC would be able to develop appropriate mitigation measures in response to the mortality data.

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**Comment**: *Once wind turbines are carefully sited, tower heights are decided upon to minimize encounters with birds, and the electrical distribution system is designed to minimize impacts, the wind turbine-caused fatalities should be low enough to establish a reasonable nexus between the project's impacts and the benefits gained through compensatory, offset mitigation. [LTR 181, CMT 45]*

**Response**: Comment acknowledged.

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**Comment**: *Fatality monitoring and post-construction utilization monitoring should be performed for at least three years following project installation. The monitoring is needed to learn of successes and failures of the project planning so that the lessons can be applied to future wind energy projects. It is also needed to inform compensatory mitigation. [LTR 181, CMT 46]*

**Response**: Monitoring will be performed in conformance with the WDFW Wind Power Guidelines. According to the Wind Turbine Guidelines Advisory Committee (2010), two or more years of post-construction fatality monitoring are only recommended if pre-construction

studies indicate the potential for high mortality or mortality to ESA listed species, and results of initial monitoring indicate fatality levels are high or ESA listed species are found as fatalities. If these situations do not occur, one year of monitoring is considered adequate. The pre-construction studies did not indicate fatality levels would be high relative to other wind energy facilities, and impacts to ESA listed species are not anticipated. Therefore, two years of monitoring are considered adequate for this site. The need for further monitoring will be determined after results of the first two years of monitoring are available. The TAC organized for this Project will be the group responsible for determining the need for additional monitoring after two years.

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**Comment**: *All wind turbines should be included in the fatality monitoring to ensure adequate sample sizes are obtained. Fatality searches should be performed no less frequently than every two weeks, and two teams should perform searches independently of each other so that detection rates can be estimated without performing independent searcher detection and scavenger removal trials, which are fraught with biases and sources of uncertainty. [LTR 181, CMT 47]*

**Response**: Please see response to Comment LTR 181, CMT 46 above.

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**Comment**: *SUMMARY. Collision Impacts. The analysis of direct impacts caused by bird and bat collisions with wind turbines was incorrect and misleading. It relied on the same methodology that has most often resulted in predicted fatality rates being proven by post-construction monitoring to have been much too low. Measured raptor fatality rates have been up to 14 times higher than predicted fatalities. The impacts assessment relied on raptor fatality rates regressed on utilization rates, but this regression was fundamentally flawed in multiple ways. The regression between fatality rates and utilization rates was pseudoreplicated, meaning the effective study units were not the study units implied in the graph – they were regions instead of wind projects. The positive regression slope was strongly leveraged by two California wind projects, the omission of which reverses the direction of the regression slope. The effort directed toward avian utilization surveys totaled 87 hours, which was grossly insufficient for characterizing utilization rates of many species, especially golden eagle and other raptors. The utilization surveys were diurnal, so were not designed to detect species active in the early morning, evening, or at night. The utilization surveys were extended to 800 m from the observer, which ensured that most flying birds would be undetected during each survey session, and no attempt was made to account for the proportion of the sky over the survey area that was occluded by terrain and forest. [LTR 181, CMT 48]*

**Response**: This regression analysis referred to is only a guide for helping to provide a prediction and range of mortality. The data collected to date clearly indicate that lower raptor use sites generally have lower raptor mortality and high raptor use indicates higher raptor mortality. The Applicant's consultants have generally reported a range of mortality for predictions, as was done in the baseline report for Whistling Ridge, where the 90% prediction interval around the estimate was 0 to 0.25 raptor fatalities/MW/year. This prediction interval has

been added to the FEIS. The raptor regression graph is just one component used in predicting mortality.

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**Comment**: *For these reasons, the utilization survey results were not comparable to other wind farms or among plots within the Whistling Ridge project site. The regression slope between fatality rates and utilization rates relied on fatality rates that were biased low in most of the available monitoring reports. Most of the fatality rates in the Pacific Northwest were derived from an estimator that relies on mean days to removal of placed carcasses in carcass removal trials, but carcasses in these trials must be censored from the calculation of the mean if the carcasses have not been removed by the end of the trial. This means the trials must extend for much longer periods than the average search interval of the fatality monitoring, and that mean days to removal is biased high and the resulting fatality estimates biased low. The regression between fatality rates and utilization rates was based mostly on monitoring that lasted only one year, but the inter-annual variation measured at other wind projects revealed up to nearly 6-fold differences in low to high fatality rates between years. This high inter-annual variation warrants a much larger sample size before any validity can be given to the regression used in this DEIS. [LTR 181, CMT 49]*

**Response**: Please see response to Comment LTR 181, CMT 48 above.

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**Comment**: *The prediction of zero raptor fatalities at Whistling Ridge was fallacious because the prediction was based on the regression slope intercept being to the right of Whistling Ridge on the continuum of utilization rates among wind farms. In the very same graph, the slope intercept was also to the right of other wind farms where fatality rates were greater than zero. [LTR 181, CMT 50]*

**Response**: Please see response to Comment LTR 181, CMT 48 above.

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**Comment**: *The DEIS also appeared to rely on an exposure index value to assess collision impacts of individual species. However, I tested the relationship between fatality rates and this exposure index at other wind farms, and found no relationship whatsoever. [LTR 181, CMT 51]*

**Response**: The purpose of the model is to provide some insight into which species observed on the site might be the most likely to collide with turbines; it is not meant to accurately predict which species will occur as fatalities and was not used to predict the level of bird fatalities. In the baseline avian survey report it was acknowledged that the index considers relative probability of exposure based on abundance, proportion of daily activity spent flying, and proportion of flight height of each species within the ZOR for turbines likely to be used at the wind-energy facility. The exposure index analysis is based on observations of birds during the daylight period and does not take into consideration flight behavior (e.g., during foraging or courtship) or abundance of nocturnal migrants. It also does not take into consideration habitat selection, the

ability to detect and avoid turbines, and other factors that may vary among species and influence likelihood for turbine collision. For these reasons, the actual risk for some species may be lower or higher than indicated by this index.

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**Comment**: *The DEIS appeared to rely on a comparison of raptor nesting densities among wind project sites, but I was unable to find a significant relationship between fatality rates and raptor nesting densities. [LTR 181, CMT 52]*

**Response**: Please see response to Comment LTR 181, CMT 26 above.

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**Comment**: *Based on mean fatality rates estimated at other wind projects throughout Washington, Oregon and California, the minimum numbers of annual fatalities at Whistling Ridge would likely be 33 raptors, 422 birds (including raptors), and 86 bats, but actual rates would likely be much higher because unlike the other wind projects used to calculate the means. Whistling Ridge is located in a forested environment that is also frequently enveloped by clouds. [LTR 181, CMT 53]*

**Response**: The fatality rate independently estimated by Smallwood for Whistling Ridge was 33 raptors/year, or 0.44 raptors/MW/year. Raptor fatality rates at 13 facilities in the Pacific Northwest have ranged from 0 to 0.29 and averaged 0.09/MW/year. The raptor use data collected at the Whistling Ridge site do not suggest raptor mortality would be higher at Whistling Ridge than other projects with similar raptor use estimates, and not as high as what Smallwood predicted. Smallwood states that bird and bat fatality rates are underestimated due to a bias in the estimator used by the Applicant's consultant (WEST), which is known as the Shoenfeld estimator (Shoenfeld 2004). Also, one of the projects Smallwood selected to show how fatality rates were underestimated was the Bighorn project. That project was analyzed by another consultant (Northwest Wildlife Consultants) who used a different estimator, known as the Huso estimator (Huso 2010). Huso (2010) has demonstrated that that estimator is generally unbiased. Hugo also has shown that the Hugo estimator and the Shoenfeld estimator give similar results when the search intervals are large (e.g. 14 - 28 days), which is the case for most of the studies in the Pacific Northwest. Smallwood did not elaborate on what estimator was used or what the bias was, but it is assumed Smallwood used a “novel” approach as outlined in Smallwood et al. (2010). One likely assumption in the use of the estimator that Smallwood presumably used assumes that a carcass, if missed by a searcher during the first search, no longer has any chance of being found during subsequent searches. It has been demonstrated in studies that fatalities that are missed the first time have a good chance of being picked up in subsequent searches (Arnett et al. 2009). Not accounting for this probability of finding carcasses during multiple searches leads to an overestimate of fatality rates in Smallwood’s estimator.

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**Comment**: *Other Impacts. The impacts assessment directed to habitat fragmentation was also fallacious because the DEIS characterized the site as biologically impoverished, whereas*

*the mere 87 hours of avian surveys there revealed a much higher avian species diversity than occurs in the Altamont Pass – the site of the most notoriously dangerous wind energy project on Earth to birds. Furthermore, all but one of 90 bird species were endemics, indicating a high level of ecological integrity at the site. [LTR 181, CMT 54]*

**Response**: The studies were conducted in compliance with the WDFW windpower guidelines, as one full year of avian baseline data were collected to cover all four seasons. In addition, the avian baseline studies were conducted in 2004, 2006, 2008 and 2009 which accounts for inter-annual variation.

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**Comment**: *Impacts to northern spotted owl were inappropriately dismissed, because this conclusion relied too much on interpreting US Fish and Wildlife Service protocols and not enough on wildlife biology and common sense. Cumulative Impacts. The cumulative impacts analysis in the DEIS was fundamentally flawed in several ways. First, the DEIS relied on a cumulative impacts analysis of the Columbia Basin Ecoregion, but Whistling Ridge occurs in a forested environment outside this Ecoregion. Second, the analysis relied on a Partners in Flight web site to estimate regional population sizes of bird species, but the Partners in Flight estimator did not pass scientific scrutiny in the scientific literature and the population estimates used in the DEIS were absurdly large. Third, reported avian fatality rates have been underestimated, so low fatality rates were compared to absurdly large population sizes to arrive at erroneous conclusions of no significant cumulative impacts. The cumulative impacts analysis cannot be taken seriously. [LTR 181, CMT 55]*

**Response**: Although similar avian use data have not been collected in habitats comparable to those at Whistling Ridge, the data have been collected in a variety of habitat types, including grasslands, shrub-steppe, and croplands in both the western and Midwestern U.S. To date, the relationship between raptor use and mortality has been fairly consistent across habitats and locations, and there is no reason to believe that the relationship between raptor use and mortality would be different at Whistling Ridge just because the habitat is different. Because no similar data exist for constructed wind energy projects in coniferous forest habitats that might help inform impact predictions for Whistling Ridge, these data represent the best available science for predicting avian impacts at Whistling Ridge. This will remain the case until several wind energy projects have been constructed in western coniferous forests and post-construction fatality data are available to compare to pre-construction data on avian use. In addition to Whistling Ridge, a handful of wind energy projects have been proposed on coniferous forest landscapes in Washington, some of which are planned for unmanaged, natural forests. It is likely that additional projects will be proposed in forested landscapes across the West in the future. Because it is generally acknowledged that even-aged, managed forests provide far less suitable habitat for most avian species than uneven aged, natural forests (e.g., Buchanan 2005), construction of a wind energy facility at Whistling Ridge would have a much lower potential for wildlife impacts than construction of a wind energy facility within natural forests. Therefore, the Whistling Ridge Project provides an optimum location to obtain data on wildlife impacts that might be used to inform decisions and impact predictions for wind energy facilities proposed for other managed as well as unmanaged, natural forests.

**Comment**: *Based on means from available reports of fatality monitoring at wind projects in the western US, build-out of 6,700 MW in the neighboring Columbia Basin Ecoregion could be expected to annually kill at least 2,935 raptors, 37,674 birds, and 7,658 bats, far exceeding the annual death toll at the notorious Altamont Pass. [LTR 181, CMT 56]*

**Response**: The WEST cumulative impacts study for the Columbia Plateau Ecoregion (CPE) only addressed cumulative impacts associated with wind energy development. The WEST report acknowledged that wind energy development is only one factor affecting wildlife populations in the CPE, and is likely minor compared to other past, present, and future actions in the CPE, including large-scale conversion of native shrublands and grasslands to crop land; expansion of urban areas and rural subdivisions; road and highway construction; other forms of energy development, including fossil fuels and dams for hydropower; and increases in other infrastructure, such as communication towers and power lines. The ability to estimate wind energy development impacts on wildlife is unique because several studies have been conducted to quantify bird and bat impacts. Similar quantitative estimates of bird and bat impacts due to direct mortality and loss or fragmentation of habitat caused by other activities are not available, which makes quantitative estimates of cumulative impacts difficult. The DEIS acknowledged that due to the difference in habitat types between the Project Area, which is located in the Eastern Cascades Ecoregion, and the Columbia Plateau Ecoregion, the results of the direct impact analysis for the Whistling Ridge Project cannot be directly applied to the results of WEST's cumulative effects analysis for the CPE. Therefore, results of the WEST report were not used to formulate the cumulative effects analysis in the DEIS. They were simply considered relevant in considering the added impacts of the Proposed Action to the overall cumulative biological impacts of all wind energy projects in the region.

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**Comment**: *Post-construction monitoring should last at least 3 years for all turbines and throughout the life of the project for a subset of turbines. Fatality searches should be no less frequent than twice per month. [LTR 181, CMT 59]*

**Response**: Please see response to Comment LTR 181, CMT 46 above.

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**Comment**: *Wind turbines should be carefully sited, and the siting should be based on adequate bird surveys, the results of which are related quantitatively to a resolute digital elevation model of the project site. [LTR 181, CMT 61]*

**Response**: Comment acknowledged.

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**Comment**: *Tower heights and the low and high reaches of the rotor plane should be based on an analysis of adequate avian survey data. [LTR 181, CMT 62]*

**Response**: Comment acknowledged.

**Comment**: *Much more effort should be directed toward pre-construction bird and bat surveys, and adequate analysis of the data should be performed. The methods used to predict impacts need to be replaced by scientifically defensible methods. The cumulative impacts analysis needs to be replaced, and the new one should include the impacts of siting wind turbines in the forested environments of Skamania County. The section on mitigation needs to be revised to avoid misleading readers about the effectives of turbine design features and adaptive management. [LTR 181, CMT 63]*

**Response**: The level of effort conducted for pre-construction exceeds the industry standard level of effort for a proposed Project of this scale, and accommodates the unique forested habitat not currently present at other Washington wind developments. Statistically defensible use estimates were calculated for birds, to estimate the relative mortality that could be expected following construction. Bat pre-construction surveys were conducted, and the level of presence was compared with the levels observed at other wind developments. The cumulative effects section includes analysis of known proposed wind developments in the region.

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**Comment**: *The TAC needs to consist of qualified scientists, and the post-construction monitoring needs to be strengthened. [LTR 181, CMT 63]*

**Response**: The TAC may include, but need not be limited to, representatives from WDFW, U.S. Fish and Wildlife Service, EFSEC, Skamania County, DNR, and the Certificate Holder. EFSEC, at its discretion, may add additional representatives to the TAC from local interest groups as well as state, local, federal and tribal governments. Both post-construction monitoring and the convening of a TAC to evaluate the mitigation and monitoring program were included as mitigation measures in the DEIS. See Section 3.4.3 Mitigation Measures.

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**Comment**: *A statement from the Bat Acoustic Studies for the Whistling Ridge Wind Resource Area Skamania County, Washington June 4th – October 25th, 2009 (WEST, Inc., 2009) captures our approach to evaluating the entire project: "However, no data on bat mortality levels associated with wind energy developments in western coniferous forests are available to help predict risk to bats at the WRWRA. Bat fatality patterns may differ from those in open habitats as well as in eastern deciduous forests…" We feel that this statement can be extended to address the potential impacts to avian species as well, since, and reiterating from our May 14, 2009 response to the project, … "…other new wind projects in the Pacific Northwest are in shrub-steppe and agricultural habitats; not coniferous forest…" [LTR 183, CMT 2]*

**Response**: Although similar avian use data have not been collected in habitats comparable to those at Whistling Ridge, the data have been collected in a variety of habitat types, including grasslands, shrub-steppe, and croplands in both the western and midwestern U.S. To date, the relationship between raptor use and mortality has been fairly consistent across habitats and locations, and there is no reason to believe that the relationship between raptor use and mortality would be different at Whistling Ridge just because the habitat is different. Because no similar data exist for constructed wind energy projects in coniferous forest habitats that might help

inform impact predictions for Whistling Ridge these data represent the best available science for predicting avian impacts at Whistling Ridge. This will remain the case until several wind energy projects have been constructed in western coniferous forests and post-construction fatality data are available to compare to pre construction data on avian use.

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**Comment**: *Additionally, the data illustrated in [F]igures 7 and 8 on pages 57 and 58 in Appendix C, Final Wildlife Report, are confusing in that the coniferous-forested Whistling Ridge site is compared to other U.S. wind energy facilities regardless of habitat types. This same type of comparison is also shown for All Birds in [F]igure 9 on page 59. Again, regardless of habitat type. [LTR 183, CMT 3]*

**Response**: In addition to Whistling Ridge, a handful of wind energy projects have been proposed on coniferous forest landscapes in Washington. It is likely that additional projects will be proposed in forested landscapes across the West in the future. Because it is generally acknowledged that even-aged, managed forests provide far less suitable habitat for most avian species than uneven aged, natural forests (e.g., Buchanan 2005), construction of a wind energy facility at Whistling Ridge would have a much lower potential for wildlife impacts than construction of a wind energy facility within natural forests. Therefore, the Whistling Ridge Project provides an optimum location to obtain data on wildlife impacts that might be used to inform decisions and impact predictions for wind energy facilities proposed for other managed as well as unmanaged, natural forests.

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**Comment**: *Raptor migration routes along the east Cascades are documented at the Bonney Butte, Oregon, Hawk Watch raptor banding and counting stations. The Final Report compared the Whistling Ridge project to other wind energy project through such statements as: "The annual rate was low relative to raptor use at 36 other wind-energy facilities that implemented similar protocols to the present study and had data for three or four different seasons." "A 90% prediction interval around this estimate is zero to 0.25 fatalities per megawatt per year." WDFW would like to emphasize that fluctuations in raptor populations, as well as other avian species, may result in greater mortality than what is predicted in the Final Report. As a result, operational controls may be necessary to address avian mortality that exceeds predicted mortality. [LTR 183, CMT 4]*

**Response**: The TAC will review and analyze post-construction mortality data and determine appropriate mitigation measures to offset any wildlife effects caused by the wind development.

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**Comment**: *Specifically, WDFW recommends that operational controls be a condition of the site certification, if issued, so that individual turbines or strings of turbines can be shutdown as a result of individual species and cumulative avian and bat fatalities in excess of the predicted mortality. [LTR 183, CMT 5]*

**Response**: The TAC will evaluate post-construction mortality and will be able to recommend mitigation measures, if needed, to reduce avian mortality. If there is an unacceptable level of mortality to any species, the USFWS has the authority to require curtailment or moving of turbines.

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**Comment**: *In closing, WDFW would like to acknowledge that the applicant has submitted a preliminary mitigation plan that we are currently reviewing. The preliminary mitigation plan encompasses approximately 100 acres in Klickitat County 12 miles due east of the project site. The mitigation site is forested with Oregon White Oak with some Douglas fir and Ponderosa pine and shares a portion of its northern boundary with 40 acres of WDNR land and. [LTR 183, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *This mitigation site provides habitat for several PHS entries including Western gray squirrels. [LTR 183, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *Because wind power technology and configuration of wind turbines in the project area are still relatively new, and their impacts on birds and bats within forested sites remain unclear; effective adaptive management will be important to reduce and mitigate the project impacts. [LTR 189, CMT 5]*

**Response**: The TAC will review and analyze post-construction mortality data and determine appropriate mitigation measures to offset any wildlife effects caused by the wind development.

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**Comment**: *There is no evidence that the installation and operations of the proposed facility will have any significant impacts on sensitive or special status animal or plant species. The data and analysis by qualified third parties indicates that no significant impact will occur. [LTR 191, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The DRAFT states on [P]age 2-7 – Proposed Alternatives and Actions; "The basic design for the tower would depend on the style selected. Most towers are un-guyed lattice towers at heights equal to the hub heights of the proposed wind turbines. The location for the*

*permanent meteorological tower would be determined during the micrositing process. The selected site would be based on a meteorologist's recommendations for an on-site location that best represents the site's meteorological conditions. [In reference to Section] 2.1.3.5, Meteorological Tower Greg Neely Comment – Jun 16, 10: ["]As the Meteorological Towers will be micro-sited amongst the wind turbines, where bird perching and collisions issues are paramount.["] [LTR 193, CMT 2]*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4. Based on pre-construction surveys, the expected mortality of bird species is expected to be relatively low compared to many other wind developments that have higher pre-construction avian use.

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**Comment**: *As one of the first wind power projects to be considered for a forested landscape in Washington state, this environmental review needs to include a more detailed analysis of several issues that make this proposal different from other wind power projects located on agricultural and/or shrub steppe habitat; experience and knowledge gained from existing projects in the state may not be "transferable" to a project such as this being proposed for a very different environment. [LTR 196, CMT 2]*

**Response**: While the habitat is significantly different that the habitat of other wind developments in the region, the approach of estimating pre-construction species use and estimating the potential mortality is a relationship that is maintained across habitats. Where discrepancies may occur, post-construction mortality monitoring will provide the TAC and USFWS with data to help determine appropriate mitigation.

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**Comment**: *Baseline Avian Use. The DEIS does not adequately address the issue of comparable avian use data. It is vital that the FEIS include an evaluation of the species variety and abundance in the project vicinity in relation to baseline avian use data from other locations with similar landscape and climate features – mountainous conifer forests with cool, wet conditions. The DEIS makes comparisons of bird survey results from Whistling Ridge to data from other wind projects, either in eastern U.S. deciduous forests or shrub-steppe habitat in the Pacific Northwest (DEIS p 3-63, 3-64); such comparisons provide limited benefit for evaluating the potential impacts of this project. Seattle Audubon noted this problem in our scoping comments and we continue to be concerned that the environmental review for this project needs a more appropriate avian use comparison. DNR and the Forest Service each are land managers with significant amounts of forest habitat comparable to the project site; either or both agencies may have / know of avian use survey data that could be used, as could other resource agencies or academic institutions. In order for the public (and the decision-makers regarding permits for Whistling Ridge) to have an accurate understanding of the potential impacts of this project on birds, the FEIS should include a meaningful "apples-to-apples" comparison of avian species. Without such an evaluation, any conclusions regarding the variety and concentration of bird species at the project site are likely to be misleading. In addition, the FEIS should more clearly and specifically describe the results of the avian surveys conducted. While calculations such as*

*the "mean annual bird use" and a "relative index to collision risk" do provide some useful information, the DEIS fails to identify the actual total number of birds detected during the study, nor does it reveal the number of birds and bats that were detected passing within the proposed rotor swept area, instead couching the data in terms of percentages. (DEIS p. 3-64) For instance, Table 3.4-5 should be modified to indicate the specific number of each species observed by season rather than burying that data solely in the Appendix. (DEIS p. 3-62, 3-63). [LTR 196, CMT 5]*

**Response**: According to the Wildlife Society, fatalities of passerines (song birds) from turbine strikes generally are not significant at the population level (Arnett et al. 2007). Because raptors are of primary concern with wind energy development, the avian surveys for the Whistling Ridge Project were designed to maximize detections of raptors. Survey points were placed in areas where viewsheds were maximized to increase visibility of raptors (e.g., ridge tops, clearcuts, cleared transmission line rights-of-way), the survey plot radius where birds was recorded was large (i.e., 800 m), and the survey period was long (20 minutes). In contrast, survey methods to document bird use in forested areas are significantly different; the primary focus is usually passerines and other small birds such as woodpeckers; the survey plots are typically placed within the interior of forest stands; the survey plot radius is generally 100 m or less (usually 50 m); and the survey time periods are much shorter (e.g., 5-8 minutes in duration). Because of these differences, data collected for preconstruction wind energy project assessments are not directly comparable to most other forms of avian survey data collected in forested areas and it would be inappropriate use of the data to make these comparisons. Even if such comparisons could be made, and it was found that avian use at Whistling Ridge differed substantially (e.g., higher or lower) from avian use in similar environments elsewhere, the comparisons would not help with a risk assessment as in general there is a low correlation between avian abundance (excluding raptors) measured during preconstruction studies and post-construction avian fatality rates.

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**Comment**: *Olive-sided Flycatcher and Vaux's Swift. The olive-sided flycatcher is a federal species of concern and the Vaux's swift is a state candidate species for listing. Both species were detected at the project site during multiple avian surveys with the majority of detections within the rotor swept area. (DEIS p. 3-56, 3-57) Both forage for insect prey on the wing and would likely utilize the cleared areas associated with the project turbines. The DEIS does not adequately address the potential turbine-related mortality of these sensitive species, simply asserting that collisions would likely be rare and that it is unlikely that the project would have any negative impacts on population levels. (DEIS p. 3-79) The FEIS should more fully evaluate this issue and document the facts underlying these type of statements. In addition, the FEIS should specifically identify the "appropriate mitigating measures" BPA will ensure are employed to minimize and avoid the anticipated project-related impacts on these sensitive species under the Migratory Bird Treaty Act. (DEIS p. 4-5) [LTR 196, CMT 6]*

**Response**: The Wildlife Society examined the issue of passerine fatalities at wind energy facilities and concluded that fatalities of passerines from turbine strikes generally are not significant at the population level, although exceptions to this could occur if facilities are sited in areas where migrating birds or rare species are concentrated (Arnett et al. 2007). Given the

number of surveys conducted and the small numbers of olive-sided flycatchers or Vaux's swifts (technically not a passerine but similar life history) recorded during the surveys, the data do not suggest the site is in an area where these species are concentrated. Therefore, no population impacts would be expected for these two species. Also, the National Academy of Sciences (NAS 2008) recently reviewed wind energy impacts on birds, and came to the following conclusion: at the current level of wind-energy development (approximately 11,600 MW of installed capacity in the United States at the end of 2006, including the older California turbines), the committee sees no evidence that fatalities caused by wind turbines result in measurable demographic changes to bird populations in the United States, with the possible exception of raptor fatalities in the Altamont Pass area. The available information does not suggest population impacts to birds are likely.

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**Comment**: *Size, Number and Type of Turbines. The DEIS states that the number of wind turbines at the project site already has been minimized to the extent practicable and that if any turbines are removed from the project design, other locations must be found to replace those turbines to maintain the viability of the project. (DEIS p. 1-14) It also states that the project would consist of up to 50 wind turbine generators that would range in size from 1.2 to 2.5 MW and have a total nameplate capacity of up to 75 MW. (DEIS p. 1-9) Yet if the project proponent were to select the 2.5 MW turbines, the number needed could be reduced by 40% without reducing the project capacity. Reducing the number of turbines offers the potential to significantly reduce some of the adverse environmental impacts of the project. The amount of habitat permanently impacted could be reduced, including avoiding the loss of any suitable or potential NSO habitat. Turbine locations in close proximity to the DNR HCP lands could be removed from the project, lessening the potential to disturb NSO in the area. The FEIS should include at least one additional alternative that provides a detailed analysis of how different combinations of turbine sizes and numbers can best meet the identified minimum necessary project capacity while minimizing the habitat disruptions. In addition, the FEIS should identify the specific turbine type that would be used at Whistling Ridge. Different turbine types can have different blade tip speeds as well as utilize either an upwind or downwind style. Research at other wind power projects indicates that these differences can have a direct correlation to avian mortalities (DEIS Appendix B, Wildlife Reports). An evaluation of the specific turbines to be used at the project is essential to the environmental review each of your agencies are responsible for completing. [LTR 196, CMT 7]*

**Response**: Since the publication of the DEIS, The Applicant has proposed the use of 2 MW or larger turbines, which would reduce the number of turbines to a maximum of 38. In doing so, strings E and F would be eliminated and the A1-A7 section of string A would be reduced from seven turbines to five turbines. However, the EIS provides analysis on the proposed Project consisting of up to 50 wind turbines that could each range in size from 1.2 to 2.5 MW as originally proposed.

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**Comment**: *Monitoring. Seattle Audubon appreciates the inclusion of a post-construction avian mortality study. (DEIS p. 3-82) More details on the protocol to be used for this study*

*needs to be included in the FEIS in order to understand whether the proposed "two year minimum" is adequate to evaluate the ongoing impact of project operations on avian species. As the Wind Power Guidelines point out, the duration and scope of the monitoring depends in part on the availability of existing monitoring data at projects in similar habitat types. (WDFW p. 6) In accordance with RCW 80.50.040, EFSEC must prescribe the means for monitoring the effects of project operation in order to assure compliance with the certification. (DEIS p. 1-3) The FEIS should include greater detail on how EFSEC will meet this requirement. In addition, the FEIS should evaluate the potential for use of canine detection for carcass surveys. The Center for Conservation Biology at the University of Washington has demonstrated the precision and efficiency of dogs in locating wildlife in forested settings (for more details, see http://conservationbiology.net/conservation-canines) as one of Washington's first wind power projects in a forested landscape the Whistling Ridge project is an excellent candidate for looking at applying this methodology to post-construction mortality studies. Beyond monitoring the direct avian mortalities caused by the project, it is important to also study the indirect project impacts such as species displacement from territory and cumulative impacts. (WDFW p. 6) The FEIS should require specific project monitoring strategies that include postconstruction avian use surveys of live birds in the project area. It is not enough to just monitor the number of birds directly killed by project operations; post-construction monitoring should also look at how project operation impacts ongoing avian use of the site and adjacent areas. As with our comments regarding mitigation above, a detailed monitoring program should be developed prior to project approval, not left to be determined after the fact. [LTR 196, CMT 10]*

**Response**: The TAC will review and analyze post-construction mortality data and determine appropriate mitigation measures to offset any wildlife effects caused by the wind development. A TAC comprised of federal and state agencies as well as other stakeholders will develop a comprehensive monitoring protocol to be implemented for the Project.

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**Comment**: *It is not suited for the proposed location. The Whistling Ridge site is in a forest, and is in owl habitat. It is a very different location compared to agricultural fields where prior developments have been sited. Forest sites have an order of magnitude greater wildlife population density, and wind farms are incompatible with them. [LTR 201, CMT 3]*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4. Based on pre-construction surveys, the expected mortality of bird species is expected to be relatively low compared to many other wind developments that have higher pre-construction avian use. The Project has received a concurrence letter from USFWS that the Project "may affect, but is not likely to adversely affect" northern spotted owls.

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**Comment**: *To take away from the beauty of the Columbia Gorge would be an outrage; and also all the wildlife disturbance. So I am definitely opposed to any wind turbines going up in that area. [LTR 207, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The location of the project should not be too close to scenic wilderness areas. Primarily, areas which would affect the spotted owl and others species in wildlife. We should take pains not to disrupt their livelihood and habitat. [LTR 208, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Frankly, I am also concerned of the increase in traffic, where congestion and the building of roads disrupt wildlife habitat. This includes not only land animals, but aquatic ones too. [LTR 208, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I have been to meetings and listened to the talk about how safe for birds these mills are. The [N]ative Americans told us that they could not imagine how a bird could fly into these blades. About 2 weeks later, front page of the Oregonian, Golden eagle killed by wind turbines at Goodnoe Hills. How many Golden Eagles are there in the gorge? At least one is dead. We were told that up to 7000 bats would be killed if the Whistling Ridge project goes in. How many hawks and eagles will die because of this? [LTR 225, CMT 2]*

**Response**: The bat data collected at met towers in 2009 in the area most likely to be developed for wind energy does not suggest bat mortality would be excessive at this site. The estimated raptor mortality rate is 0 to 0.25/MW/year.

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**Comment**: *The wildlife effects would be disastrous. [LTR 233, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *And, of course, there's the little matter of the snowy owls. [LTR 233, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Now they are trying to incite the people, saying the project is in a avian migration path! This kind of mis-information can only further prolong the financial help this project can bring to our community. [LTR 235, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Bald Eagles are observed flying overhead in our area, including the proposed Whistling Ridge project site. The central Columbia River Gorge and its tributaries are becoming havens for the recently delisted Bald Eagle. This area in the central gorge is increasingly utilized by overwintering eagles from northern regions. Some eagles have found the area to be suitable for nesting and rearing young. The extent of use of the area, and the long term potential impacts of this project to those individuals and to the breeding and overwintering eagle population as a whole is not enumerated or discussed in the DEIS. Before the full impacts of the WRE project can be assessed by the decision makers, it is imperative that the a careful and honest analysis is performed. Obviously, the Applicant was not able to perform this task, so please see that qualified experts are involved in this issue. The future of the Bald Eagle, once on the brink of extinction is dependent on this. The Bald Eagle is our nations symbol. [LTR 248, CMT 1]*

**Response**: No bald eagle nests occur on site and bald eagle use of the Project Area was extremely low. Likely due to differences in foraging behavior (bald eagles forage and fish and scavenge carcasses, whereas golden eagles hunt terrestrial prey), bald eagles have not been found to be as susceptible to turbine collisions as golden eagles. Therefore, no significant impacts to bald eagles are anticipated. Please also see response to Comment LTR 36, CMT 9 above.

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**Comment**: *I am also concerned about the environmental impacts on the area and wildlife. [LTR 250, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Not in the middle of a forest where animals become endangered. [LTR 255, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The location of the site is significant. The site is on a ridgeline bordered to the east by the White Salmon Wild and Scenic River and to the south by the Columbia River Gorge National Scenic Area. These rivers and the ridgeline the project would be on are known areas*

*frequented by raptors, including bald and golden eagles. Raptors are known to be susceptible to wind power blade strike because they are looking down for prey. [LTR 256, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *Is this how important bird habitat is encroached upon or lost? Yes, this is exactly how it happens. The bird studies we have reviewed over the years are typically faulty or the conclusions are the opposite of what the information actually suggests. This is not just our opinion, it is the opinion of Washington Department of Fish and Wildlife and the Fish and Wildlife Service, both of whom have repeatedly been extremely critical of the bird "studies" for wind power proposals. Some of those studies have recently come home to roost in Klickitat County immediately to the east of the proposed project site. WDFW recently placed the first monitor on an eagle and it was immediately killed by a wind machine to become the first (known) eagle to be killed by a wind machine in the NW. Quite a coincidence! Then an independent study was done to determine bird kills on a Klickitat County wind power project, and the result was that eight to sixteen times more birds were killed than predicted. Since bird kill projections are Important to securing permits for projects, we believe this to the tip of the ice berg on deflated bird kill projections. We suggest that you increase the projected kills by eight to sixteen times. This means that most projects would not be allowed. [LTR 256, CMT 13]*

**Response**: Avian use data collected on the site do not suggest mortality would be any higher than 0.25 raptors/MW/year, and would likely be less. An evaluation of wind energy impacts on birds conducted by the Wildlife Society and the National Academy of Sciences found that population impacts have not been documented, with the possible exception of raptors at Altamont Pass, where over 5,000 turbines occur. The avian baseline data and results of other studies suggest that population impacts would not be expected for raptors or other bird species at Whistling Ridge.

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**Comment**: *Proponents like to tout the long list of mitigation measures that they must comply with. After reviewing many such lists we have been hard pressed to discover how any of the mitigation measures will save even one bird. The hard fact is that mitigation is a fraud. There is no mitigation for improperly sited wind power projects, and any project sited in or near the Gorge is an improperly sited project. [LTR 256, CMT 20]*

**Response**: Comment acknowledged.

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**Comment**: *The Gorge and the cascades are major bird flyways, and projects here are bound to have major impacts, especially as cumulative affects set in, as we believe they already are. [LTR 256, CMT 21]*

**Response**: Please see response to Comment LTR 76, CMT 8 above.

**Comment**: *If you still believe that the wildlife agencies will step in to prohibit significant and unnecessary loss of birds to NW wind power, then considers the following true account that demonstrates what is actually occurring. National Audubon Society has designated the Columbia Hills in Klickitat County an Important Bird Area. The Important Bird Area program is National Audubon's plan for saving critical bird habitat areas with proven significant bird populations. It is not easy to secure the IBA designation, the review process is strictly run by NAS bird scientists. Federal and State wildlife agencies have repeatedly warned the wind power industry away from developing on the Columbia Hills, but even though they know the significance of the area for birds these agencies are allowing border to border wind power development of the Columbia Hills Important Bird Area. The next project for the Columbia Hills would involve the creation of huge holding dams that would allow wind power to store energy during periods that transmission lines are fun. We thought things could not get worse on the Hills, but these man-made lakes would prove us wrong when they attract even more birds to their doom. [LTR 256, CMT 24]*

**Response**: Comment acknowledged.

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**Comment**: *The agencies are failing in their duties to protect huge areas of very significant habitat, and they know It. And the wind power industry knows that if they can develop in this IBA, they can develop just about anywhere. The much touted claim that proper siting is the key to green wind power is just another fraud. [LTR 256, CMT 25]*

**Response**: Comment acknowledged.

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**Comment**: *BPA has responsibilities to assure that the power they transmit is coming from responsibly sited projects that are not unnecessarily killing significant numbers of birds. How can BPA claim that power from the Columbia Hills ISA is environmentally responsible power? They cannot. Federally protected birds are being killed, and BPA looks the other way. We beg you to not add yet another bird killing wind energy "farm" to the thousands of machines already up. [LTR 256, CMT 27]*

**Response**: Comment acknowledged.

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**Comment**: *WDFW has carefully reviewed the habitat evaluation prepared by the applicant. The Whistling Ridge Wind Resource Area (WR WRA) is a forested site managed for over 100 years. [LTR 260, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The pre-project assessment and avian/bat use surveys are consistent with standard protocols utilized throughout the U.S. and are consistent with the WDFW Wind Power Guidelines (WDFW 2009). Because the relationship between avian use and mortality has been reasonably consistent across other habitat types and locations, it is likely that the relationship between avian use and mortality would be similar to that evaluated in other projects. While no similar data exist for constructed wind energy projects in managed coniferous forest habitats that might help inform impact predictions for Whistling Ridge, as we previously confirmed in the attached letters, WDFW confirms that these data represent the best available science for predicting avian impacts at Whistling Ridge. Therefore, if the WRWRA is constructed, WDFW anticipates the opportunity to better understand the relationship between wind energy development in western coniferous forests and wildlife response. [LTR 260, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *WDFW would like to emphasize that fluctuations in raptor populations, as well as other avian species, may result in greater mortality than what is predicted in the Final Report. As a result, operational controls may be necessary to address avian mortality that exceeds predicted mortality. [LTR 260, CMT 4]*

**Response**: The TAC will review and analyze post-construction mortality data and determine appropriate mitigation measures to offset any wildlife effects caused by the wind development.

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**Comment**: *In closing, WDFW would like to acknowledge that the applicant has submitted a preliminary mitigation plan that we are currently reviewing. This mitigation proposal was developed consistent with the WDFW Wind Power Guidelines at a 2:1 replacement ratio. The preliminary mitigation plan encompasses approximately 100 acres in Klickitat County 12 miles due east of the project site. The mitigation site is forested with Oregon White Oak with some Douglas fir and Ponderosa pine and shares a portion of its northern boundary with 40 acres of WDNR land and. This mitigation site provides habitat for several PHS entries including Western gray squirrels. Additionally, the site includes the fish-bearing Silva Creek, a tributary to the Klickitat River. [LTR 260, CMT 5]*

**Response**: As stated in the WDFW letter, the applicant has submitted a preliminary mitigation plan that was developed consistent with the WDFW Wind Power Guidelines at a 2:1 replacement ratio. The preliminary mitigation plan encompasses approximately 100 acres in Klickitat County 12 miles due east of the Project Area.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 265, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am commenting on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, along the Skamania and Klickitat county lines. This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 266, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am a retired Fish and Wildlife Service biologist. I have studied impacts from wind turbines power lines on wildlife resources. I believe the location proposed by the developer for the Whistling Ridge Energy Project is ill advised, and potential impacts are not adequately analyzed in the DEIS. Ridgeline and forested boundaries would make this area highly hazardous for resident and migratory bird populations turbine construction and operation is allowed to go forth. Wind turbine Impacts to bats are only beginning to be addressed through research and are not adequately assessed in the DEIS. I can only surmise that land ownership and political considerations are driving this proposal at this location. Such projects should be located in open country to the east, where potential wildlife impacts are considerably reduced. [LTR 267, CMT 1]*

**Response**: Pre-construction bird studies were conducted to assess the use of the Project Area so the relative risk of bird mortality could be evaluated. Based on these studies, the level of bird mortality compared with other wind developments is anticipated to be relatively low. Post-construction bird mortality monitoring will be conducted to determine what level of mortality is occurring, and the TAC will determine what mitigation measures to implement.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 270, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Wildlife Concerns. There are wildlife concerns that need further study and have been addressed by other opponents to this project. I'm not a biologist, but the impacts on just bat populations by wind turbines has been sited by the USGS in this article: http://www.fort.usgs.gov/batswindmills/. "Dead bats are turning up beneath wind turbines all over the world. Bat fatalities have now been documented at nearly every wind facility in North America where adequate surveys for bats have been conducted, and several of these sites are estimated to cause the deaths of thousands of bats per year. This unanticipated and unprecedented problem for bats has moved to the forefront of conservation and management efforts directed toward this poorly understood group of mammals." These affects on bats and the other 300 species of birds in the Gorge, migratory birds, and other wildlife should be studied further before blindly accepting the notion that wind (turbines are "green". Obviously this point isn't limited to just the Whistling Ridge project, but is relevant to all current technology wind farms including this one. [LTR 273, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *The perceived economic shortcomings of some of these possible alternatives is not reason enough to fail to analyze and compare to see if a smaller size or different configuration might be less harmful to wildlife. Economics change with changing conditions, whereas the needs of wildlife are seldom so flexible. [LTR 276, CMT 2]*

**Response**: The EIS includes analysis of the proposed alternatives that were developed by the applicant. No additional alternatives were developed for analysis.

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**Comment**: *In looking at the avian survey section ([DEIS pages] 3-30 to 3-65), it is not possible to determine how many of which species were found. Therefore, we have no idea of the value of this site to many birds, especially the songbirds. Rufous hummingbirds were found in the spring and summer, but how many? Were they males or females? During the migration season, how many warblers passed through? Were they in the strike zone of the blades? Percentages are not useful for analysis without knowing what they were percentage of. Further, it would be more useful to be able to compare the use and species composition, in numbers, of this site to the use and species composition, in numbers, of the nearby Forest Service and Department of Natural Resources land. The northern spotted owl has been declining in Washington about seven percent a year. Therefore it is no wonder that many historical nest sites are no longer used. There are fewer birds to use them. It stands to reason, however, that to eliminate historical nest sites is to eliminate that chance for a pair of owls to use that site ever again. How, then, is the population to recover? The fact that nearby owl habitat areas are no longer used does not mean that they should be dismissed as potential owl habitat. They must be taken into consideration. It should have been noted that all DNR land in the state is covered by a Habitat Conservation Plan that includes the northern spotted owl along with salmon and many other species. The fact that Vaux's swifts were seen during the fall migration is of concern. Yet, there is inadequate discussion of mitigation measures to avoid mortality of swifts, as well as songbirds and other small birds during migration. We concur with the Seattle Audubon Society*

*in their observation of the weakness of the cumulative impact analysis in the DEIS. In addition, considering that any kind of development causes loss of habitat, the DEIS should have considered, not only potential future wind power development in forested areas, but the impact of many other types of development, such as housing, that permanently destroys habitat. We appreciate the opportunity to comment on this DEIS. [LTR 276, CMT 3]*

**Response**: The avian use surveys followed standard protocols used at well over 100 proposed wind energy projects across the country and followed the WDFW Wind Turbine Guidelines (WDFW 2009) and Wind Turbine Guidelines Advisory Committee (2010). Metrics such as mean annual bird use are standard metrics used industry wide to characterize avian use of a wind resource area. These surveys are not designed to determine the absolute number of any given bird species in a Project Area. They are designed to sample the Project Area and provide an index of bird use of the site to determine if bird use is considered low, moderate, or high relative to other wind energy facilities. Without having individually marked birds, it is not possible to quantify the number of birds in a survey area. For example, it is not known if 15 observations of Vaux's swift represent 15 observations of the same individual or single observations of 15 different individuals. According to the Wind Turbine Guidelines Advisory Committee (2010), point counts are a recommended method to provide estimates of bird use, which are assumed to be indices of abundance in the area surveyed. Absolute abundance is difficult to determine for most species and is not necessary to evaluate species risk (Wind Turbine Guidelines Advisory Committee 2010). The FWS has reviewed the Project and concurred that significant impacts to northern spotted owl are not likely to occur. Additionally, please see the response to Comment LTR 267, CMT 1 above relating to the relative risk of bird mortality.

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**Comment**: *How would they [the new transmission lines] affect wildlife and wildlife habitats? Habitat fragmentation? These are only some of the questions that BPA should have addressed in the Whistling Ridge DEIS. They did not and this is a fatal flaw in the DEIS. [LTR 279, CMT 6]*

**Response**: As described on page 1-10 of the DEIS, the electrical collector system will use a system of underground cables. The Project collector substation and interconnection were described in Section 1.4.1.3 (on DEIS pages 1-10 and 1-11). The transmission interconnection would be placed adjacent to existing lines in areas already cleared and maintained as cleared areas for the existing transmission lines. No new habitat impacts are anticipated.

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**Comment**: *The concept of locating such a facility on ridge lines of dense old growth forested land is ill conceived for numerous reasons. It is of great importance that the approval of such a facility would have far reaching precedential repercussions, encouraging the deforestation and development of thousands of acres of both habitat and scenic resources. Developers are already viewing the potential for the development of similar facilities to the west, which could result in facilities scattered from the western Columbia Gorge to Portland, despoiling the natural ambiance of the area and reducing habitat, carbon sequestration and tourism. [LTR 283, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Approval of the proposed WRE project would exacerbate this effect due to its established migratory paths as well as the non migratory bat and avian populations, not to mention the wildlife habitat devastation that would result from the sheer amount of deforestation required. [LTR 283, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *I voiced some concerns about birds and bats in my previous comments on Chapter 3 and cumulative effects, but I wanted to voice even more concern and trepidation about the cumulative effects and impacts that regional wind farms, and BPA energy production facilities en toto, have on migratory species. [LTR 284, CMT 1]*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.14.3.5.

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**Comment**: *The Migratory Bird Treaty Act, see Reference #1, below, is mentioned in the DEIS but I am very concerned that the topic of migrating avian species should have more in-depth and thorough regional data presented in the DEIS. [LTR 284, CMT 2]*

**Response**: To date, there have been no large-scale mortality events of migrating birds at wind power facilities in the U.S. Unlike communication towers, which are often over 500 feet, use guy wires for support, and are lighted along their entire length, wind turbines are less than 500 feet tall, do not use guy wires for support, and studies have shown lights on turbines do not attract birds (see Kerlinger, P. J. Gehring, W. Erickson, R. Curry, J. Guarnaccia and A. Jain. 2010. Night Migrant Fatalities and Obstruction Lighting at Wind Turbines in North America). The Wilson Journal of Ornithology 122(4):744-754). Therefore, impacts to migrating birds are not anticipated.

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**Comment**: *Will there be "taking" by the wind turbines? How will "taking," basically killing of an avian, be addressed? What type of monitoring will be done throughout the life of the project to collect data on "taking"? Where are the migratory bird maps for the region? I did not find them in the DEIS. [LTR 284, CMT 5]*

**Response**: The TAC will review and analyze post-construction mortality data and determine appropriate mitigation measures to offset any wildlife effects caused by the wind development.

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**Comment**: *Are there other species, besides avian, that migrate through the area and might be affected by the regional wind farms and BPA's energy generation infrastructure? Apparently, the MBTA was amended to include other species: "The 1974 statute (P.L. 93-300) amended the MBTA to include the provisions of the 1972 Convention between the U.S. and Japan for the Protection of Migratory Birds and Birds in Danger of Extinction.["] This law also amended the title of the MBTA to read: "An Act to give effect to the conventions between the U.S. and other nations for the protection of migratory birds, birds in danger of extinction, game mammals, and their environment." [LTR 284, CMT 6]*

**Response**: Based on the avian point count data, bird use in the Project Area is considered too low to identify the site as a flyway or concentrated migration route. Birds are migrating through the Project Area, but not using it as a primary route. Additionally, Section 3.4.1.5 discusses the potential for Keen's myotis and Townsend's big-eared bats to occur within the Project Area. Furthermore, BPA will comply with all guidelines set forth by the MBTA (as well as with other Acts, Regulations, and Executive Orders).

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**Comment**: *I do think that the Whistling Ridge DEIS is extremely deficient in data on migration pathways for avian species. This lack of regional data must be addressed or the DEIS is incomplete. It is an established fact that wind farms kill birds. How many is hotly debated. However, that does not mean that we should not attempt to gather data so that we can better understand the regional cumulative impacts and effects of wind farms and energy production infrastructures on avian species, and, of course, on other species. [LTR 284, CMT 8]*

**Response**: Please see response to Comment LTR 284, CMT 2 above.

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**Comment**: *[In reference to DEIS Section 3.4.1.2, Habitats; PDF pg. 53-54] - Just because "the project site is not located within any known wildlife corridor, flyway, foraging area, or migratory route" does not mean that these do not exist on site. The whole Columbia Gorge region is a well known bird migration route so why would this area be exempt. Flying predators love ridges and ridges are where SDS proposes to put whirling death blades which probably won't do the predators much good. I'm sure the Audubon Society will be glad to provide SDS and BPA with facts and figures on migrating birds. [LTR 286, CMT 37]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to DEIS Section 3.4.2.1, Proposed Action; PDF pg. 88] - "…the area is not within a major migratory pathway, at least during fall migration."?!? What is this supposed to mean? That it might be a migratory pathway during other seasons. The entire Columbia River Gorge and its environs is recognized by Audubon and other reasoning people as a migration corridor for a large number of species. Ridges attach raptors. Turbines are sited*

*on ridges. Turbines kill raptors. Not good. This contradictory DEIS statement should be clarified. [LTR 286, CMT 42]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to DEIS Section 3.4.2.2, No Action Alternative; PDF pg. 91] - This is a totally inadequate (how many times will I have to use this word when referencing this very inadequate DEIS!) "No Action Alternative" analysis. SDS doesn't know that other generation facilities would be constructed and operated in the region—based on this DEIS, which might be a Waterloo moment for wind generation and wind farms in the region—it is also likely that wind power and its unpredictability might be reassesses and other methods of conservation found and used. There would be not "increased avian or bat fatalities from turbine operations, but there would also be less pesticide use, less impermeable surfaces built on erosion-prone ridges, less fragmentation of the environment, less impact on wildlife, less impact on humans, etc. There would be many more LESSES if this project wasn't built!!*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4. One other wind development has been proposed, and is analyzed in the cumulative effects section. Based on pre-construction surveys, the expected mortality of bird species is expected to be relatively low compared to many other wind developments that have higher pre-construction avian use. Bat mortality may be low, but is difficult to predict at this site.

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**Comment**: *[In reference to DEIS Section 3.4.4, Unavoidable Adverse Impacts; PDF pg. 92] - This is a really insufferably dataless, inane statement! "Anticipation" is not science. SDS doesn't know what level of mortality would be sufficient to affect or not affect any single species. Until they gather more data and do a thorough analysis of the regional effects of wind farms on species mortality, the DEIS is incomplete and flawed in regard to bird and bat mortality rates; and, the stated non-effects of turbine collisions on species viability is totally unfounded and unsupported by any data. [LTR 286, CMT 44]*

**Response**: Detailed data on potential levels of mortality is provided in Section 3.4 and in the wildlife reports included in Appendix C of the DEIS.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 287, CMT 2]*

**Response**: Comment acknowledged.

**Comment**: *The proposed project could cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 288, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This current proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 289, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *In addition, this proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 290, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 291, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 292, CMT 2]*

**Response**: Comment acknowledged.

**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 293, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridge line in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 294, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat. [LTR 297, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Although we are supportive of finding alternative ways of producing energy, we are concerned by the clearing of the forest landscape necessary for this project as well as the potential for interference with bird and wildlife migration, nesting, and foraging. [LTR 302, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The project is likely to cause significant adverse impacts to the natural resources of the area because of the considerable forest land clearing that must be undertaken for the 50 + wind turbines that will be sited in this location. Some of the effects include direct impacts to wildlife habitat, wildlife displacement, avian death, fragmentation of wildlife migration corridors, and severe edge effects to intact interior forest habitat. [LTR 302, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Clearing traditionally forested land close to an intact forest boundary (i.e. the Gifford Pinchot National Forest (GPNF)) can create severe edge effects including increased disease incursion on the edge environments, noxious weed invasion, significant changes in microclimates, increase risk of fire, and increase nest predation for birds nesting in traditionally interior habitat. [LTR 302, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The most glaring failure of this DEIS is the lack of adequate data on potential effects this land clearing will have on barred owl and spotted owl competition. This project will clear forest land near historic activity centers for spotted owl and within the White Salmon spotted owl special emphasis areas (SOSEA). Although the DEIS discusses these areas and claims that destruction of the forested landscape will have little if any effect on spotted owl (DEIS, Page 3-49 - 3-56) it does not discuss or analyze the effects this large clearing can have on increased competition on spotted owl habitat on the edges of this cleared land. [LTR 302, CMT 3]*

**Response**: The Project Area is located on managed forest lands that are currently in logging rotation, so no old-growth forest would be affected. The SOSEA will continue to have more than 40% of its habitat maintained above the habitat threshold that is associated with supporting a viable spotted owl center, should one return to the area. Neither of the two spotted owl centers near the Project Area have had any activity since 2002.

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**Comment**: *The DEIS also fails to properly assess this area for wildlife migration corridors. [LTR 302, CMT 5]*

**Response**: The wildlife studies were conducted according to the WDFW 2009 guidelines and were in compliance with these guidelines. Avian use surveys did not suggest the area was used as a migratory corridor for raptors.

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**Comment**: *While the DEIS does specifically look at some species of concerns like the western gray squirrel and indicates that other wildlife were present in the area (DEIS, Page 3-69) it fails to properly assess the loss of this habitat or any potential use as migration corridor from the Gorge to the Gifford Pinchot National Forest. Clearing these areas will significantly affect use of the area by large mammals like bear and cougar as migration routes and will significantly alter use by deer and elk especially if forge is not available for the ungulate species. [LTR 302, CMT 6]*

**Response**: The Whistling Ridge Project Area is has been heavily managed for commercial forestry for approximately 100 years. The timber is harvested on a regular rotation which results in cleared areas until reforestation takes place. Land to the north is owned and managed by

Washington Department of Natural Resources, and that land is also managed for commercial forestry. The Project Area is crossed horizontally by two BPA transmission corridors that are kept clear of high vegetation. Migration corridors between the Gorge and the Gifford Pinchot National Forest would cross these two existing cleared transmission corridors. The proposed Project will require approximately 56 acres of the total of 1,152 acres of the site. The turbine strings are proposed to be oriented in a north-south direction on the top of ridgelines and would not add an additional east-west clearing. Please refer to Figure 2-1 which depicts the arrangement of the proposed turbine strings.

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**Comment**: *The DEIS fails to properly assess direct and indirect impacts to wildlife because it neglects to analyze an important need of many predator and herd species: migration corridors. [LTR 302, CMT 7]*

**Response**: Please see response to Comment LTR 302, CMT 6 above.

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**Comment**: *Establishing a wind turbine facility in an important migratory passageway such as the Gorge could significantly increase the risk to the population. [LTR 302, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS fails to look at the direct and indirect impacts this wind project can and will have on the surrounding forest environments including on the GPNF. [LTR 302, CMT 10]*

**Response**: Please see response to Comment LTR 302, CMT 6 above.

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**Comment**: *The wildflowers, birds and mammals will be affected by this project…The nearby wind project in Klickitat County is killing hundreds of birds and bats every year. The ridge top would be even more destructive to birds. [LTR 305, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 307, CMT 2]*

**Response**: Comment acknowledged.

**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 308, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area. [LTR 309, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Habitat fragmentation? [LTR 311, CMT 14]*

**Response**: Comment acknowledged.

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**Comment**: *In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns" which is pertinent to the DEIS and I believe was NOT adequately addressed. [LTR 314, CMT 2]*

**Response**: Assuming the comment is whether or not the site is used for hunting and fishing, the answer is that there are no fish-bearing streams on the Project Area and no evidence of the presence of fish. The property owner permits access for hunting, which is subject to landowner approval.

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**Comment**: *Wind turbines kill birds. [LTR 317, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *There does not seem to be mention or analysis of the land being designated as a deer and elk winter range. The property directly south is designated deer and elk winter range,*

*and I saw no discussion of the impact of this project on that range. I personally would like to understand what's going to happen with deer and elk. [LTR 317, CMT 29]*

**Response**: Comment acknowledged.

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**Comment**: *Why isn't barotraumas discussed? [LTR 317, CMT 36]*

**Response**: Barotrauma is tissue damage to air-containing structures caused by a change in air pressure associated with moving turbine blades. Baerwald (2008) found that 90% of bats necropsies showed signs of internal hemorrhaging consistent with barotrauma at a wind facility in Alberta, but another study in Illinois found that barotrauma accounted for at most 6% of the fatalities (Rollins, K.E., D.K., Meyerholz, G.D. Johnson, A.P. Capparella, and S.S. Loew. 2011. Cause of Bat Mortality at Wind Farms: Barotrauma vs. Collision. Presented at the Society for Integrative and Comparative Biology annual conference, January 2011, Salt Lake City, UT.)

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**Comment**: *The project uses the phrase "loss of habitat" I would argue it is a "change" in habitat. PUD has animals that live at the substations. [LTR 317, CMT 48]*

**Response**: Comment acknowledged.

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**Comment**: *The EIS does not identify the number of bat species in the area or go into in-depth analysis on how bats are killed by being in proximity of the low pressure zone of moving blades. [LTR 317, CMT 56]*

**Response**: The bat reports in DEIS Appendix C presents tables showing bat species expected to occur in the area. Please also see response to Comment LTR 317, CMT 36 above.

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**Comment**: *What impact will the wind towers have on the bat population? [LTR 317, CMT 57]*

**Response**: In addition to what is discussed in Section 3.4.2 Impacts, please see response to Comment LTR 74, CMT 8 above.

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**Comment**: *The DEIS states there are no population level impacts to wildlife. There is no evidence whatsoever to substantiate that. There are no studying of population level impacts, there is no safe threshold. [LTR 317, CMT 72]*

**Response**: Please see response to Comment LTR 36, CMT 3 above.

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**Comment**: *There is no independent plan included. There needs to be a much broader look at the impacts that could be sustained by this project. [LTR 317, CMT 73]*

**Response**: Comment acknowledged.

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**Comment**: *This project is located in forested habitat, the potential for impacts is higher in forested habitat. It is located within a designated spotted owl special emphasis area. And will impact two states, Washington and Oregon. [LTR 317, CMT 90]*

**Response**: Please see response to Comments LTR 36, CMT 8 and LTR 79, CMT 6 above.

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**Comment**: *Need to make sure that the bird surveys and collision risk models address a forested landscape. [LTR 318, CMT 5]*

**Response**: The bird surveys followed WDFW 2009 wind power guidelines and the methods were appropriate for the managed coniferous forested habitats in the Project Area.

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**Comment**: *May need to update the Washington State guidelines for siting and mitigation to be appropriate for this habitat (current focus is Easter Washington Habitats). [LTR 318, CMT 6]*

**Response**: Comment acknowledged. Please note that neither the State of Washington EFSEC nor BPA is responsible for updating guidance that is set forth by the State of Washington WDFW.

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**Comment**: *Our concern is mitigation. We would like to see an Audubon representative on the tech advisory committee. Also, we do not feel that a 2 year post-mortality study is adequate. We would like to see a longer post-mortality study and possibly some changes to those. [LTR 318, CMT 7]*

**Response**: According to the Wind Turbine Guidelines Advisory Committee (2010), two or more years of post-construction fatality monitoring are only recommended if pre-construction studies indicate the potential for high mortality or mortality to ESA listed species, and results of initial monitoring indicate fatality levels are high or ESA listed species are found as fatalities. If these situations do not occur, one year of monitoring is considered adequate. The pre-construction studies did not indicate fatality levels would be high relative to other wind energy

facilities, and impacts to ESA listed species are not anticipated. Therefore, two years of monitoring should be adequate for this site. The TAC organized for this Project will be the group responsible for determining the need for additional monitoring after two years.

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**Comment**: *I have been up to where there are wind towers to watch the harm to birds. There was none, the flew above and around them. They do not go though them. I don't think the towers affect the birds. [LTR 318, CMT 22]*

**Response**: Comment acknowledged.

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**Comment**: *Migratory birds have been historically effective at circumnavigation these wind farms [LTR 318, CMT 29]*

**Response**: Comment acknowledged.

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**Comment**: *Bats being very small cannot fly during the high wind speeds needed to operate these turbines. Thus they will be operating at different times. I many places fatalities have been reduced up to 60 percent by compromising when the turbines will be operating and when they will not. The use of radar has also worked towards reducing fatalities from 40 to 60 percent in many locations. [LTR 318, CMT 31]*

**Response**: Comment acknowledged.

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**Comment**: *The EIS is globally insufficient in the evaluations of wildlife. It does a poor job of covering bat evaluations, lacks significant bird-bat dispersal data, and has no mention of large animals. Why is there not a mitigation and monitoring program already in place? [LTR 318, CMT 37]*

**Response**: A mitigation plan has been prepared and a monitoring program will be developed by the TAC. The wildlife evaluation was conducted according to WDFW guidelines and the WDFW has stated that surveys conducted for the Whistling Ridge Project have met their guidelines.

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**Comment**: *It is inappropriate to state that no impacts are anticipated to wildlife species - We do not have data that determines the effect wind turbines have on forest dwelling species. [LTR 318, CMT 40]*

**Response**: Please see response to Comment LTR 79, CMT 6 above.

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**Comment**: *What effect with storm cloud layers (from when it is storming on the coast) that build up behind Underwood Mountain have on birds and aviation? [LTR 318, CMT 50]*

**Response**: Storm clouds would likely result in decreased activity by birds. Migrating birds may fly at lower altitudes when storm clouds are present, or may cease migration.

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**Comment**: *The statement that there will be no harm to wildlife is a hoax. Raptor mortality from wind projects in Klickitat County is time times what the EIS predicted. [LTR 318, CMT 53]*

**Response**: Comment acknowledged.

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**Comment**: *I suggest employing a security guard, they would be able to provide real facts about birds flying into the wind turbines. [LTR 318, CMT 62]*

**Response**: Comment acknowledged.

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**Comment**: *Impact on Raptors – The wind turbines will negatively impact raptor habitat, some of which are listed as endangered species. [LTR 33, CMT 4]*

**Response**: There are no endangered raptor species known to occur within the proposed Project Area, and the construction of turbines will not change Project Area habitat in the area immediately around the turbines. Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4.

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**Comment**: *The DEIS underestimates the impacts of wind projects on long-lived raptor species. Research on wildlife-turbine interactions in the Pacific Northwest and elsewhere has focused almost exclusively on estimating mortality rates. Although studies dealing with impacts on rare and endangered species are scarce, there is growing evidence that wind projects increase the extinction probability of long-lived species through incremental increases in mortality rates. In other words, while wind turbines may kill a relatively small number of individual birds during any given year, for rare and endangered species this increase can quickly add up to population extinction. A recently published study found that even though wind projects may cause only slight reductions in the survival of birds living in an area associated with wind turbines, those reductions can strongly impact the population viability of long-lived species-and can greatly reduce the time to extinction for those species. [LTR 36, CMT 3]*

**Response**: Without a citation, it is not possible to review and comment on the article being referenced. Pre-construction raptor use was estimated, and determined to be low relative to other wind developments in the region. Low use estimates are positively correlated with low post-construction mortality. The cumulative effect of the sum of regional wind projects was analyzed in the cumulative effects section. See also response to Comment LTR 36, CMT 3 above.

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**Comment**: *That is the situation we are currently seeing in Klickitat County with species such as ferruginous hawks. Wind projects have already killed at least three ferruginous hawks locally, and there are very few of these animals remaining. There have been no studies in Skamania County, Klickitat County, or anywhere else in the Pacific Northwest to determine the long-term impact of wind projects. Such studies are necessary in order to determine the cumulative impacts of continued industrial wind energy development at the scale now being proposed for Klickitat County. As mentioned above, wind projects pose a threat to long-lived raptors that are already rare or endangered. There are ways to mitigate this problem, as pointed out in the scientific study cited above: "Unlike other non-natural causes of mortality difficult to eradicate or control, wind-farm fatalities can be lowered by powering down or removing risky turbines and/or farms, and by placing them outside areas critical for endangered birds." The applicant has provided insufficient evidence to determine that the project will not have any impact on species viability. Currently, the Whistling Ridge proposal includes no provisions for temporary or permanent shutdowns of problem turbines, nor does it place turbines at a reasonable distance from important bird areas such as Spotted Owl Special Emphasis Areas. These provisions must be included to ensure that long-lived raptors and other species of concern are not driven to extinction locally. In response to unavoidable impacts to wildlife, the applicant proposes "mitigations" including raptor nest surveys, post-construction monitoring studies, and the formation of a Technical Advisory Committee to oversee these activities. None of these actions qualify as mitigation measures. Mitigations are measures that remedy a problem. The applicant is merely proposing to study the problem, not to remedy it. Mitigation cannot be left to a Technical Advisory Committee that is organized and overseen by the developer. I have served on several Technical Advisory Committees, and while such committees may recommend mitigation measures they are not typically empowered to require implementation of any of these measures. 4. Pre-construction estimates of avian and bat fatalities have not proved reliable. Although no scientists have done a thorough comparison of pre-construction and post construction mortality estimates, there is plenty of anecdotal evidence that post construction mortalities often greatly exceed pre-construction estimates made using the same methodology as has been employed for the Whistling Ridge wind project. For example, the Environmental Impact Statement (EIS) prepared prior to adoption of the Energy Overlay Zone in Klickitat County grossly underestimated the level of wildlife fatalities likely to result from wind development. At all of the wind projects in Klickitat County where monitoring has been completed or is under way, reports prepared by wildlife consultants show that fatalities of raptors and bats are far in excess of what was anticipated by the EIS. Whistling Ridge is using the same consultants and methodology as Klickitat County for its pre-construction fatality estimates. At Big Horn, the first large wind project built in Klickitat County, the developer's wildlife consultants did a full year of monitoring at 100 percent of the turbines, which makes this one of the most comprehensively monitored wind projects anywhere in the United States. The*

*results of that monitoring study show that raptor fatalities are at least eight times higher than what the developer, PPM/Iberdrola, projected. [LTR 36, CMT 7]*

**Response**: There were no ferruginous hawks observed within the Project Area, and they are not known to occur in Project Area habitat. There are no other wind developments in Project Area habitat for comparison, as Whistling Ridge would be the first one. The TAC will be formed to evaluate post-construction mortality and will be able to recommend mitigation measures, if needed, to reduce avian mortality. If there is an unacceptable level of mortality to any species, the USFWS has the authority to require curtailment or moving of turbines. There is a growing body of data available to conduct pre-construction avian use estimates with post-construction mortality, and the pre-construction use estimates show a positive correlation with avian mortality. The methods used to show a disparity between pre-construction estimates and elevated post-construction mortality are being contested as not accurate. All predictive modeling involves judgment calls based on a host of factors in order to make a prediction. It is scientifically and factually incorrect to state that any prediction that is not borne out by the actual event is the result of a fundamental shortfall in an assumption or methodology. A variety of factors can and does influence the actual outcome of a predicted event. Both the WDFW wind power guidelines and prior siting conditions of the EFSEC embrace the concept of adaptive management to ensure that the predictions that were modeled are, in fact, monitored over time and evaluated in order to adaptively manage the situation in response to the facts as they are borne out on a Project.

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**Comment**: *This wind farm, if built, would not only have scenic impact, but also would potentially have adverse long-term impact on bird habitat and wildlife in the region. No other wind farm project to date has been sited in such a densely forested area in proximity to endangered species - including the Northern Spotted Owl and Northern Goshawk. [LTR 46, CMT 2]*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4. Based on pre-construction surveys, the expected mortality of bird species is expected to be relatively low compared to many other wind developments that have higher pre-construction avian use. The Project has received a concurrence letter from USFWS that the Project "*may affect, but is not likely to adversely affect*" northern spotted owls. Site habitat following construction will not be suitable for the northern goshawk, so no mortality is anticipated for this species.

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**Comment**: *Although a two-year bird mortality monitoring study after construction is mentioned, no concern for documenting bat mortality is evidenced as no provisions for such are listed on Page 3-82, Section 3.4.82 under Mitigation Measures. This, despite the possibility that two federal bat Species of Concern, Townsend's big-eared bat and Keen's myotis, are reported to "likely occur in the project area." The bat echolocation studies that were conducted at the project site were unable to determine bat species, but stated that "we expect that the potential risk to bats from turbine operations to be somewhat higher than the rates observed at other*

*western facilities placed in non-forested environments. One estimate from Buffalo Ridge, Minnesota data set a predicted a mortality range from 2.2 to 20.8 individuals per year which, over time, certainly could have an impact upon a species of concern's breeding population numbers. The bat echolocation study consultants, Western EchoSystems Technology, Inc., recommended that "The post-construction monitoring program should be designed to accurately estimate the level of bat mortality." Why is it not included? [LTR 76, CMT 9]*

**Response**: Post-construction mortality monitoring for bats is planned. The TAC will be involved in the development of the monitoring plan. If elevated mortality or mortality of protected species occurs, the study will be extended. No Townsend's big-eared bats or Keen's myotis have been documented as fatalities at any wind developments in the U.S.

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**Comment**: *By comparison, the wind energy industry makes much of birds killed by plate glass windows, cats and vehicle grills, but how many eagles, falcons and hawks are killed by these objects? Wind energy is very selective in its bird mortality and raptors are some of our most threatened bird populations. I would not want to be a raptor trying to negotiate the mid-Columbia landscapes these days, would you? And the US Fish & wildlife Service wants to reintroduce the California Condor to its former range in the Gorge? What a joke! [LTR 77, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS underestimates the impacts of wind projects on long-lived raptor species. Research on wildlife-turbine interactions in the Pacific Northwest and elsewhere has focused almost exclusively on estimating mortality rates. Although studies dealing with impacts on rare and endangered species are scarce, there is growing evidence that wind projects increase the extinction probability of long-lived species through incremental increases in mortality rates. In other words, while wind turbines may kill a relatively small number of individual birds during any given year, for rare and endangered species this increase can quickly add up to population extinction. A recently published study found that even though wind projects may cause only slight reductions in the survival of birds living in an area associated with wind turbines, those reductions can strongly impact the population viability of long-lived species-and can greatly reduce the time to extinction for those species. (Large Scale Risk-Assessment of Wind-Farms on Population Viability of a Globally Endangered Long-Lived Raptor Species. Martina Carrete, Jose A. Sanchez-Zapata, Jose R. Benitez, Manuel Loban, and Jose A. Donazar in Biological Conservation 142:2954-2961, 2009). That is the situation we are currently seeing in Klickitat County with species such as ferruginous hawks. Wind projects have already killed at least three ferruginous hawks locally, and there are very few of these animals remaining. There have been no studies in Skamania County, Klickitat County, or anywhere else in the Pacific Northwest to determine the long-term impact of wind projects. Such studies are necessary in order to determine the cumulative impacts of continued industrial wind energy development at the scale now being proposed for Klickitat County. As mentioned above, wind projects pose a threat to long-lived raptors that are already rare or endangered. There are ways*

*to mitigate this problem, as pointed out in the scientific study cited above: "Unlike other non-natural causes of mortality difficult to eradicate or control, wind-farm fatalities can be lowered by powering down or removing risky turbines and/or farms, and by placing them outside areas critical for endangered birds." The applicant claims there will be no population-level impacts on any species but has provided has provided insufficient evidence to support this assertion. Currently, the Whistling Ridge proposal includes no provisions for temporary or permanent shutdowns of problem turbines, nor does it place turbines at a reasonable distance from important bird areas such as Spotted Owl Special Emphasis Areas. These provisions must be included to ensure that long-lived raptors and other species of concern are not driven to extinction locally. In response to unavoidable impacts to wildlife, the applicant proposes "mitigations" including raptor nest surveys, post-construction monitoring studies, and the formation of a Technical Advisory Committee to oversee these activities. None of these actions qualify as mitigation measures. Mitigations are measures that remedy a problem. The applicant is merely proposing to study the problem, not to remedy it. Mitigation cannot be left to a Technical Advisory Committee that is organized and overseen by the developer. I have served on several Technical Advisory Committees, and while such committees may recommend mitigation measures they are not typically empowered to require implementation of any of these measures. [LTR 161, CMT 6]*

**Response**: Pre-construction raptor use was estimated, and determined to be low relative to other wind developments in the region. Low use estimates are positively correlated with low post-construction mortality. The cumulative effect of the sum of regional wind projects was analyzed in the cumulative effects section, and included analysis of the other known wind development proposed for northwestern conifer forests. The article referenced (Carrete et al 2009) did show long-term population reduction of a long-lived raptor from wind developments, but primarily was focused on wind developments in territorial breeding grounds of this species. The proposed Project is not located within a territory of a long-lived raptor species. There were no ferruginous hawks observed within the Project Area, and they are not known to occur in Project Area habitat. There are no other wind developments in Project Area habitat for comparison, as Whistling Ridge would be the first one, but since avian use was low, it is anticipated that bird mortality will be low relative to other wind facilities with higher use estimates. The TAC will be formed to evaluate post-construction mortality and will be able to recommend mitigation measures, if needed, to reduce avian mortality. If there is an unacceptable level of mortality to any species, the USFWS has the authority to require curtailment or moving of turbines.

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**Comment**: *The DEIS underestimates potential impacts on northern spotted owls and other avian species. The proposed project falls within critical habitat for the northern spotted owl, a species that is not only endangered but has continued to decline since the adoption of the Washington Department of Natural Resources' Habitat Conservation Plan for the species. This species has continued to decline on federal lands, which makes the state's HCP more important than ever. There are only an estimated 500 northern spotted owl pairs remaining in all of Washington State. Even as the state's Habitat Conservation Plan is failing miserably, the applicant is proposing to undermine that plan by allowing commercial-scale energy development within a Spotted Owl Special Emphasis Area. A commercial wind energy project is not*

*appropriate for habitat that is designated as a nesting, roosting and "foraging area for a federally endangered species.["] In materials distributed to the public prior to the mid-June 2010 hearings, SDS Lumber writes: "After years of timber harvest, there's no suitable habitat for the bird." It is ironic that the applicant is pointing the finger at its own destructive timber practices to justify further risk to northern spotted owls. Regardless of whether spotted owls are currently nesting on or near this property, as they did in recent history, this area is designated as prime potential habitat for the species. The fact that Washington's Habitat Conservation Plan for spotted owls is not increasing the numbers of reproductive pairs makes it all the more important to restore this species' habitat-not to damage it even further. The Environmental Impact Statement commissioned by Klickitat County for its Energy Overlay Zone stated (on page 2-15 of the Final EIS) that "forested areas host higher concentrations of owl and other sensitive species habitats,["] (Klickitat County Energy Overlay Final Environmental Impact Statement, September 2004.) The EIS recommended that areas with high concentrations of forested habitats be excluded from the Energy Overlay Zone because of their "higher potential for use by sensitive species and avian species likely to be impacted by wind turbines." This sensitive forested habitat is exactly what is being proposed for development at Whistling Ridge. Spotted owls are not the only species likely to be significantly impacted by the proposal. Klickitat County's Energy Overlay EIS also found high use of forested habitats by other raptors. The SDS map for the proposed project shows ridge-top locations for turbines, and these are typically the worst possible locations from an avian perspective- i.e., likely to result in the highest number of bird collisions. [LTR 161, CMT 8]*

**Response**: The wind development is proposed for construction along the ridgelines rather in valleys, where spotted owls spend the majority of their time and along which they would travel. The Project would not cause suitable habitat loss within the spotted owl site center in the White Salmon SOSEA above 40 percent, which is the viability threshold. A biological assessment of the effect of the proposed Project on the spotted owl was prepared and reviewed by the USFWS, who concurred with the determination that the Project "*may affect, but is not likely to adversely affect*" northern spotted owls. Use estimates for the Project Area were low relative to other wind developments, so it is likely that mortality will be lower the levels observed at sites with moderate or high use.

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**Comment**: *State agency wildlife species review is typically done by WDFW. DNR biologists looked at impacts to those species protected under our DNR forest land HCP in the range of the northern spotted owl, not other eastern Washington wildlife species. See also DNR comments as to Forest Practice Rule requirements related to spotted owls in the next DNR comment section. Whistling Ridge Energy Project Draft EIS, Page 3-50 states surveys were conducted for northern spotted owl presence in 2008-2009 using the 1992 USFWS survey protocol. No spotted owls were detected during these surveys. Page 3-52 states that the longstanding absence of any northern spotted owls at the historic 2 site centers suggest that these site centers likely no longer qualify for special protection. Page 3-53 states that the Turnstone and DNR/NCASI surveys affirmatively documented the absence of northern spotted owl site centers in these historic sites. They also state that surveys conducted in and near the project area indicate that spotted owls are not present. Additional surveys were conducted during three daytime site visits over the seasonal breeding window in 2009 to determine if spotted owls may be in the vicinity but were*

*not vocalizing due to the presence of barred owls. No spotted owls were detected. Comment: It is widely understood that one of the most serious threats facing the northern spotted owl is the recent range expansion of another closely related owl species, the barred owl, Strix varia. Because barred owls may attack and kill spotted owls, spotted owls are known to vocalize less when around batted owls. This poses a serious problem when the primary means of establishing spotted owl presence is spotted owl vocal response to simulated calls. Hence, vocalization survey results may be unreliable as spotted owls are unlikely to vocalize due to the presence of barred owls, which was the case during the surveys for this project. Request: Please note that DNR biologists do not believe that three daytime visits over one season is sufficient evidence to determine that spotted owls are not in the vicinity and are just not vocalizing. Vocalization survey results may be unreliable. Whistling Ridge Energy Project Draft EIS, Page 3-56 "A review of USFWS habitat conservation plans issued in the Pacific region indicates there are no spotted owl-related habitat conservation plans applicable in or near the project area." (USFWS 2009b) Literature citation: U.S. Fish and Wildlife Service (USFWS). 2009b. Conservation Plan and Agreement Database. Accessed via the Internet at: http://ecos.fws.gov/conserv plans/public.jsp Comment: DNR accessed this website and found the Washington Dept. of Natural Resources HCP identified with 5 listed species covered under this HCP. One of the listed species identified is the northern spotted owl. The mea covered under the Washington Dept. of Natural Resources HCP conservation strategy for the northern spotted owl covers DNR managed land directly adjacent to the Whistling Ridge Energy Project to the north. Hence, the information provided in the Whistling Ridge Energy Project Draft EIS that "... there me no spotted owl-related habitat conservation plans applicable in or near the project area" is incorrect. Comment: This project may interfere with a spotted owl's ability to disperse from the DNR HCP conservation area to other areas in the vicinity. The state trust lands HCP Amendment #1 Administrative Amendment to the Northern Spotted Owl Conservation Strategy for the Klickitat HCP Planning Unit, April 2004 has designated areas for northern spotted owl Nesting, Roosting, and Foraging (NRF) habitat management located directly adjacent to this project's northern boundary. The DNR conservation objective for the northern spotted owl is to provide habitat that makes a significant contribution to demographic support, maintenance of species distribution and facilitation of dispersal. Request: Please correct the DEIS text concerning DNR HCP location. You might also reconsider and reword your conclusion that no project impacts are expected to spotted owls. [LTR 172, CMT 6]*

**Response**: In an effort to obtain additional strategies to increase response rates from spotted owls in the presence of barred owls, the USFWS suggested that in addition to the three night site visits, the activity center cores be surveyed in the daytime using broadcasting spotted owl calls at a reduced volume and looking for the physical presence of spotted owls, spotted owl sign, juveniles and nests. Three daytime site visits in 2009 and two daytime site visits in 2010 were conducted, and a single non-breeding male was observed. The USFWS reviewed the 2010 survey data, and concurred that the Project "may affect, but is not likely to adversely affect" northern spotted owls. The text in Section, 3.4.1.5 Habitat Conservation Plans (on DEIS page 3-56) has been revised as follows: Habitat Conservation Plans. A review of USFWS habitat conservation plans issued in the Pacific region indicates that there is one spotted owl-related habitat conservation plans (HCP) applicable in or near the Project Area (USFWS 2009b). The HCP covers DNR managed land directly to the north of the Project Area, but not the Project Area itself.

**Comment**: *Introduction, p. 3-45: The introductory paragraph states that "[t]wo additional special status species, Keen's myotis (Myotis keenii) and Townsend's big-eared bat (Corynorhinus townsendii), may occur but have not been identified in prior surveys." A more accurate statement would be that these two species could occur at the site, but surveys conducted at the site were incapable of identifying these or any other bats, except the hoary bat, to the species level. [Footnote 11: On page 3-59 states: "Bat surveys conducted during 2007, 2008, and 2009 (Appendices C-8, C-9, and C-10) did not have the ability to detect individual species of bats. Instead, bats were grouped into species with either 'high frequency' calls or 'low frequency' calls."] Northern Spotted Owl, Historical Activity Centers, p. 3-52: This section should be revised to discuss and analyze a May 2010 record of a Spotted Owl in one of the owl circles north of the site. The remaining section addressing Spotted Owl issues should be updated to reflect this finding. Northern Spotted Owl, Conservation Support Area, p. 3.54: Although managed forest is not optimal for spotted owls, it is likely better than wind towers which pose greater mortality risk than young even-aged stands of trees. To that end, the project can only be contrary to the purpose of the CSA. It may be just 0.27% of the area, but it is still a loss that should be disclosed in the discussion (including cumulative impacts). Northern Spotted Owl, Spotted Owl Special Emphasis Centers, p. 3-56: The discussion on this point is obtuse and would benefit from illustration on a map. The footnote to this discussion indicates that DNR reports that the Mill Creek site has 48 percent of the recommended 40 percent minimum suitable habitat for a spotted owl special emphasis center. The discussion in this section should be expanded to identify what fraction of that suitable habitat occurs where the 1.4 mile circle overlaps with the northwest corner of the project site. [LTR 177, CMT 32]*

**Response**: Post-construction mortality monitoring for bats is planned to occur for two years, and if elevated mortality or mortality of protected species occurs, the study will be extended. No Townsend's big-eared bats or Keen's myotis have been documented as fatalities at any wind developments in the U.S. As noted on DEIS page 3-75, the Project has been sited to avoid habitat areas deemed critical to the northern spotted owl or essential to its recovery. Surveys conducted pursuant to the USFWS protocol indicate that spotted owls are not present in or near the Project Area. The Project has received a concurrence letter from USFWS that the Project "*may affect, but is not likely to adversely affect*" northern spotted owls. Since the historic activity centers at Moss Creek and Mill Creek have had no detections of spotted owls since 2002, both sites are considered unoccupied.

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**Comment**: *Procedures for Responding to Avian and Bat Mortality Events: The mitigation measures should include the adoption of procedures specifying how the project will respond to large scale avian or bat mortality events or a take of a Bald Eagle or other species subject to protection under Federal or State law. These procedures should include timeframes for notifying relevant authorities (EFSEC, the TAC, and appropriate local, state and federal authorities) and measures to be taken to ensure no additional environmental harm occurs pending investigation of such an event, including curtailment of operations. Consistent with WDFW Wind Power Guidelines, the Applicant should contact the USFWS to determine appropriate measures to resolve unauthorized take of Endangered Species Act listed species or other species covered by other federal regulations. [LTR 177, CMT 44]*

**Response**: Section 3.4.3, Mitigation Measures, describes the convening of a Technical Advisory Committee (TAC) to evaluate the mitigation and monitoring program and determine the need for further studies or mitigation measures. Mortality monitoring will be conducted for at least two years, and in the instance of a large mortality event or mortality of a BGEPA or ESA protected species, the USFWS would be notified immediately. The USFWS and TAC would review the mortality and determine additional mitigation measures, which could include curtailment or movement of turbines associated with high mortality.

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**Comment**: *[In Section] 3.4.4, Unavoidable Adverse Impacts, [t]his section concludes with the statement "[the potential for ongoing occurrence of either golden or bald eagles is considered extremely rare." This statement is misleading. While both of these species appear to be rare at the site, surveys have documented their presence at the site. Moreover, both of these species are known to range widely in search of food, and bald eagles have been appearing in increasing numbers during the winter in a location that is only two miles away. Under these circumstances, the DEIS should state that periodic occurrences (in low numbers) of these species at the project site are predictable and are to be expected. [LTR 177, CMT 47]*

**Response**: Table 3.4-5 documents that both bald eagles and golden eagles have been observed in the Project Area. On DEIS page 3-74, it is stated that bald eagle use is considered infrequent and sporadic. It is further stated that removal of grass-forb stand or shrub habitat would decrease the amount of foraging habitat available to golden eagles. Lastly, as currently stated in Section 3.4.4, Unavoidable Adverse Impacts, "the potential for ongoing occurrence of either golden or bald eagles is considered extremely rare."

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, Special Status Species, [the following are n]ot discussed under "special status species": Fringed myotis, Long-legged bat, pallid bat, and Western pipistrelle. These four other bats each have some status as detailed on Table 3.4-6. Remedy - Discuss under special status species or state why their status on the table not qualify them for special status. [LTR 178, CMT 21]*

**Response**: Table 3.4-2 includes only those species listed as threatened, endangered or candidates for listing under the State or Federal Endangered Species Act, or the Bald Eagle Protection Act, and which have the potential to occur near the Project Area. Table 3.4-6 lists bat species with potential to occur near the Project Area based upon range maps and not on actual surveys.

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**Comment**: *[In reference to DEIS] Section 3.4.1.5, [f]orest practices within a SOSEA are therefore allowed to proceed so long as they do not affect the 40 percent suitable habitat threshold. Forest practices will not continue in the area as outlined in…… because the forest may never be allowed to grow trees of a marketable size. This represents a forest conversion in a SOSEA. This permanently and effectively reduces the SOSEA size and creates more fringe area*

*relative to the SOSEA area. Remedy - Don't allow Turbines anywhere near, established SOSEA's, regardless of whether recent Spotted Owl activity has not been "observed." [LTR 178, CMT 91]*

**Response**: Spotted Owl Special Emphasis Areas (SOSEA) are discussed on Page 3-56. The SOSEA limitations on habitat use or modifications do not restrict use of the Project Area as a wind turbine energy facility. Forest practices within a SOSEA are allowed to proceed as long as they do not affect the 40 percent suitable habitat threshold.

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**Comment**: *This is the only project proposed within a designated Special Emphasis Area for the federally listed Northern Spotted Owl. [LTR 179, CMT 2]*

**Response**: The Project has received a concurrence letter from USFWS which states that the Project "may affect, but is not likely to adversely affect" northern spotted owls.

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**Comment**: *To date the northern spotted owl habitat conservation plan is not succeeding in recovering northern spotted owl populations. Since this project would permanently convert forest land within a Spotted Owl Special Emphasis Area (SOSEA) to non-forestry use, the DEIS must undertake additional analysis of how the industrialization of portions of the SOSEA will affect spotted owl populations within the entire SOSEA and the region. [LTR 179, CMT 54]*

**Response**: The Project has received a concurrence letter from USFWS which states that the Project "may affect, but is not likely to adversely affect" northern spotted owls. The SOSEA will be managed to maintain more than 40 percent of the home range circle as suitable spotted owl habitat as required to support a level of viable habitat required for each site circle.

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**Comment**: *The DEIS Fails to Ensure Compliance with the Federal Endangered Species Act of 1973 ("ESA"), 16 U.S.C. §§ 1531–1544. Under the ESA, "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." 16 U.S.C. § 1532(19). Section 9 of the ESA prohibits both acts that would "take" a species, as well as acts that would cause an act that constitutes a "taking." The Ninth Circuit has held that "a habitat modification which significantly impairs the breeding and sheltering of a protected species amounts to 'harm' under the ESA." Marbled Murrelet v. Babbit, 83 F.3d 1060, 1067 (9th Cir. 1996). The DEIS failed to demonstrate that the project will be in compliance with Section 9 of the ESA. The DEIS does state that there has been ongoing consultation with U.S. Fish and Wildlife Service. [As stated in the] DEIS at 1-20, Pursuant to NEPA regulations the BPA is supposed to perform this consultation requirement "concurrently with and integrated with" preparation of the Draft EIS, not after the Draft EIS is complete. 40 C.F.R. § 1502.25. The results of this consultation process should have been included in the DEIS. In Section 2.20.2.2 of the Amended Application, the Applicant states that a Biological Assessment will be prepared. The DEIS fails to make good on this promise. BPA and EFSEC*

*must ensure that a biological assessment is prepared, to better inform the agencies about potential adverse impacts to threatened and endangered species. [LTR 179, CMT 74]*

**Response**: BPA has conducted informal consultation with USFWS and the Project has received a concurrence letter from USFWS that the Project "*may affect, but is not likely to adversely affect*" northern spotted owls, and through concurrence from the USFWS has complied with Section 9 of the ESA. The last sentence in Section 4.2 on DEIS page 4-4 has been deleted and replaced with this information. Furthermore, as noted on DEIS pages 4-1 and 4-4 of Section 4, in Section 4.2: "A federal agency is required to consult with USFWS and/or NOAA Fisheries if it is proposing an action that may affect listed species or their designated critical habitat. If listed species or designated critical habitat are present and could be affected by the Proposed Action, Section 7 requires that the federal agency prepare a biological assessment to analyze the potential effects of the action on listed species and critical habitat and make an effect determination for each species." BPA has performed informal consultation with USFWS and has received USFWS's concurrence.

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**Comment**: *The DEIS Fails to Ensure Compliance with the Bald Eagle Protection Act, RCW Chapter 77.12, and Regulations Promulgated Pursuant Thereto, Located at WAC 232-12-292. The DEIS fails to ensure compliance with the state Bald Eagle Protection Act, despite the presence of bald eagles and their habitat within and near the project site. There is no evidence that the Washington Department of Fish and Wildlife has been consulted pursuant to the Bald Eagle Protection regulations. [LTR 179, CMT 75]*

**Response**: WDFW was consulted during both the preparation of the EFSEC Application for Site Certification and preparation of the DEIS. While comments from WDFW do not specifically mention Bald Eagle Protection regulations , the agency staff participated in numerous meetings from 2004 to 2009 (see DEIS page I-16 of the Application for Site Certification; Appendix A). All wildlife reports were provided to the department, including those reports that discuss the presence of bald eagles (Baseline Avian Use Surveys).

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**Comment**: *The DEIS Fails to Ensure Compliance with the Federal Bald and Golden Eagle Protection Act, 16 USC § 668–668d. The DEIS fails to ensure compliance with the federal Bald and Golden Eagle Protection Act ("BGEPA"), again despite the presence of bald eagles and their habitat within and near the project site. The BGEPA prohibits any person, association, partnership or corporation from taking a bald or golden eagle at any time or by any manner without a permit. 16 USC § 668(a). A permit may be issued only if the taking would be compatible with the preservation of the species. Id. § 668a. [LTR 179, CMT 76]*

**Response**: Please see response to Comment LTR 179, CMT 75 above.

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**Comment**: *Inadequate review of impacts to northern spotted owl populations. The DEIS states that construction of the proposed facility will not directly impact spotted owl habitat. However, the DEIS fails to address whether the project will adversely affect dispersal habitat and migration corridors that are essential to sustaining genetic diversity of owl populations. For example, the Columbia River Gorge is a likely crossing location for owls moving north and south between Oregon and Washington. The project could also affect the eastwest movement of spotted owls between valleys. The DEIS fails to adequately address whether a major industrial energy facility sited within spotted owl territory will adversely affect the species. The DEIS also fails to address the permanent loss of forested lands within the White Salmon Spotted Owl Special Emphasis Area (SOSEA). The DEIS claims that the project would meet Washington state standards for the retention of sufficient habitat within the SOSEA, but it does not adequately review the impacts of permanently converting forest land to an industrial use, and how that permanent conversion would affect the longterm viability of spotted owl habitat within the SOSEA. [LTR 179, CMT 78]*

**Response**: The proposed Project is proposing construction of wind turbines along the ridgelines rather than in valleys, where spotted owls spend the majority of their time and along which they would travel. The Project would not cause suitable habitat loss within the spotted owl site center in the White Salmon SOSEA above 40 percent which is the viability threshold. Lastly, the Project has received a concurrence letter from USFWS which states that the Project "*may affect, but is not likely to adversely affect*" northern spotted owls.

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**Comment**: *Northern Spotted Owls. The DEIS contains important information regarding northern spotted owls (NSO), including a description of survey history in the project vicinity. Subsequent to the completion of the DEIS, however, an NSO survey on state Department of Natural Resources (DNR) land adjacent to the proposed project site detected an NSO in May 2010. The presence of an NSO calls into questions many of the conclusions in the DEIS regarding NSO, including the statement that "Given the extensive survey record confirming the absence of northern spotted owls, the proposed the Project [sic] will not pose a risk of taking northern spotted owls under the Endangered Species Act Section 9 and its regulations." (DEIS at 3-49) The FEIS should add a fresh analysis of the potential impacts on NSO, including: a) An evaluation of the potential for NSO to fly through the project's turbine string corridor. While the potential for an NSO to collide with a wind turbine (blade or tower) is likely low, the FEIS should include life history information on NSO behavior in comparable landscapes, including flight patterns in cleared areas and maximum height of flying (i.e. within the rotor-swept area). Telemetry data should be available from the U.S. Fish and Wildlife Service regarding radio tags studies on NSO that can provide information on NSO flight patterns in matrix lands with a combination of forested and commercially harvested lands. b) An evaluation of the specific amount and location of potentially suitable NSO habitat in the proposed project site. While the DEIS states that no forests with suitable structure for NSO nesting or roosting are present within the project site (DEIS p. 3- 49), the map of Harvesting Schedule (DEIS Figure 2-3) indicates forest parcels over 70 years old inside the Mill Creek Core Area. In addition, there are multiple reference made to "suitable habitat" and "northern spotted owl habitat" located in the proposed project site (DEIS p. 3-50, 3-52). The FEIS should provide a much clearer and more detailed inventory of the existing NSO habitat conditions on both the project site and within the*

*historic NSO activity centers (including information on stand age, tree species diversity, snags per acre, etc.). In addition, while the DEIS notes that the Mill Creek site center contains 48 percent suitable habitat (DEIS p. 3- 56), Seattle Audubon is concerned that this calculation by DNR is based on outdated data. The FEIS should detail the specific process used for that calculation and ensure that it is based on up-to-date habitat mapping of the site center. c) An evaluation of the potential for existing "degraded" habitat in the proposed project site to develop into suitable NSO habitat during the projected 30 year life span of the project. Although NSO may currently be absent from the project lands, the FEIS should evaluate the potential for NSO to utilize those lands in the future. One of the guiding principles in the 2009 Wind Power Guidelines states "From a wildlife conservation perspective, a species in decline may be absent from an area … yet the habitat remains important for the conservation or recovery of that species." (WDFW, p 2) d) An evaluation of the likely NSO utilization of existing habitat in the project vicinity with the presence of project facilities (turbines, roads, etc.). The DNR land where the NSO was detected is covered by the state's Habitat Conservation Plan (HCP) and is intended to serve as habitat for NSO. If the project is built, would it displace NSO from this habitat on DNR land as they sought to avoid the project facilities? We appreciate that this option was rejected from further consideration due to comments from the public and DNR's reluctance to consider leasing the site. This decision gained significantly increased importance with the May 2010 detection of an NSO on this DNR land. [LTR196, CMT 4]*

**Response**: As stated in the letter (dated July 19, 2010) responding to a request for consultation under section 7(a)(2) of the Endangered Species Act. WDFW convened a review panel of three spotted owl biologists to review owl interactions with turbine blades or towers of the Whistling Ridge Energy Project. Based on their knowledge of spotted owl flight behaviors and habitat preferences they concluded that the risk of spotted owl collisions with turbines at this site is low. The suitable habitat calculation for the Mill Creek site center was conducted by DNR. There are no suitable nesting or roosting habitats within the proposed Project footprint. The references to potentially suitable habitat where broadcast surveys were conducted were in reference to dispersal habitat. No suitable roosting or nesting habitat is present within the Project Area, and 70-year old stands within a core area would be protected from harvest. No harvesting is proposed within the Mill or Moss Creek cores which encompassed a 1/2 mile radius which is approximately 500 acres around the nest site. Lastly, the Project has received a concurrence letter from USFWS which states that the Project "*may affect, but is not likely to adversely affect*" northern spotted owls.

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**Comment**: *It [referring to the Project] would destroy important wildlife habitat, including for the northern spotted owl. [LTR 240, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Just up the ridge and to the north is DNR land that has been identified by the DNR as significant habitat for spotted owls. DNR recently "forgot" that fact and were forging an agreement with SDS that was to allow them to extend their wind power project onto those*

*public lands. It seems the development on public lands was necessary to make the proposal on the SDS land economically viable. Then members of the public, including CGAS, reminded DNR of their commitment to the spotted owl, and the SDS project on DNR lands was dropped. We believe this to be yet another example of how this powerful corporation seeks to manipulate agencies. Would the proposed Whistling ridge wind power project negatively impact the nearby spotted owl habitat on DNR lands? We believe it would. If the project was built of SDS lands, would the fact that a project is up and running so close to the DNR spotted owl protection zone make that zone less desirable as critical habitat? We believe that argument could be made. [LTR 256, CMT 11]*

**Response**: Please see response to Comment LTR 196, CMT 4 above.

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**Comment**: *I've heard that the Whistling Ridge project site is located in very important northern spotted owl habitat; and, considering the continuing decline of the spotted owls, this argues strongly against citing the project. [LTR 280, CMT 2]*

**Response**: The Project has received a concurrence letter from USFWS which states that the Project "*may affect, but is not likely to adversely affect*" northern spotted owls. Please also see response to Comment LTR 196, CMT 4 above.

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**Comment**: *[In reference to DEIS Section 3.3.4, Unavoidable Adverse Impacts] - I am not an expert on the spotted owl issue, but wasn't there a lawsuit filed in Washington, D.C., by the American Forest Resource Council, in 2009, challenging the Department of Interior's (DoI) U.S. Fish and Wildlife Service (USFS) 2008 Northern Spotted Owl critical habitat designation? The U.S. DoI had made a court motion asking the court judge to remand and vacate the owl's critical habitat designation and to remand the recovery plan on which the designation was made. The government's action was basically seeking to set aside the 2008 critical habitat designation. It was DoI Secretary of Interior Ken Salazar who announced the withdrawal of the Western Oregon Plan Revisions (WOPR) Records of Decision (RODs) on July 16 2009; at this same time he also announced the government would also seek to have the critical habitat designation vacated. What is the status of this lawsuit as it regards to the spotted own critical habitat in this region? BPA must do cumulative impact analyses on the effects of its regional infrastructure and energy production facilities on the critical habitats of the spotted owl (and other species). The DEIS, as far as I was able to see, does not address BPA's impacts on critical spotted habitat. This needs to be remedied. [LTR 286, CMT 33]*

**Response**: The May 13, 2008, Final Recovery Plan for the Northern Spotted Owl has been remanded by the courts. On September 15, 2010, a Draft Revised Recovery Plan for the Northern Spotted Owl was made available for review and public comment until December 15th, 2010. It is possible that the August 13, 2008, Revised Designation of Critical Habitat for the Northern Spotted Owl, also will be remanded. Although the recovery plan and critical habitat designation are undergoing review and revision, the proposed Project has received a concurrence letter from the USFWS which states that the Project "*may affect, but is not likely to adversely*

*affect*" the northern spotted owl. The service reviewed the 2010 observations of a single owl and based its determination on owl behavior as well as the proposed Project's location and habitat.

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**Comment**: *[In reference to DEIS Section 3.4.1.5, Special Status Wildlife Species] - So, bald eagles and golden eagles, both under protection from the Federal government, were observed in the project area. They could be subject to lethal harm from the whirling blades of the turbines. Where is the de minimis analysis of any "taking" that would result from this project? There is a troubling attitude among some of the public and among some officials that it's okay if birds get killed because energy is being produced and we humans need energy. Well, it's not okay if birds get killed. There are cumulative impacts to the entire food chain when predators are killed off. Trophic cascade effect anyone? We humans do not exist on this planet in a vacuum. Everything and all life and life's processes are interconnected. [LTR 286, CMT 38]*

**Response**: No bald eagle has been documented as a mortality from any wind facility in the U.S. There were very few golden eagle observations, and very little suitable hunting or scavenging habitat will be present in the proposed Project Area following construction.

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**Comment**: *[In reference to DEIS Section 3.4.1.5, Special Status Wildlife Species] - This is inadequate data and analysis and should be redone using the best available science techniques to gather enough data on this particular species so that a thorough analysis of its habitat and numbers can be made. [LTR 286, CMT 39]*

**Response**: The pre-construction bat surveys rely on standard monitoring procedures, which are limited because species identification is not possible for the Townsend's big-eared bat. Post-construction mortality monitoring for bats is planned to occur for at least two years following construction. To date, no Townsend's big-eared bats have been documented as fatalities at any wind developments in the U.S.

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**Comment**: *In addition, the project is proposed in a forest zone where three special-status wildlife species are documented presently including the northern spotted owl, western gray, and northern goshawk. Please do not allow this project to continue. [LTR 296, CMT 2]*

**Response**: Wildlife effects were analyzed in detail during the EIS development process, and include specific species discussions in Section 3.4. The Project has received a concurrence letter from USFWS which states that the Project "*may affect, but is not likely to adversely affect*" northern spotted owls. No effect from construction or operation of the wind development on western gray squirrel is likely to occur because of the paucity of suitable habitat in the proposed Project Area. Northern goshawk had very low presence and mortality is not likely because suitable habitat will not be present in the area of the turbines during operation.

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**Comment**: *By forcing barred owl into other locations through loss of their current foothold habitats in this area and creating environments more suitable for barred owl encroachment will create unsuitable spotted owl habitat and force spotted owls out of current occupied territory. By failing to analyze this effect of loss of forest habitat the DEIS fails to properly assess the true effects of this project on spotted owl. [LTR 302, CMT 4]*

**Response**: The habitat present on the ridges and high plateau where the proposed turbine strings would be located does not currently contain high quality nesting or roosting habitat for spotted or barred owls, although 2 barred owls were heard during pre-construction surveys within 0.25 miles of the proposed turbine locations. Please also see response to Comment LTR 196, CMT 78 above.

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**Comment**: *The DEIS does measure the risk to Bald and Golden Eagles as relatively low (DEIS, 3-77) however wind facilities have notoriously killed more birds then predicted in their DEIS. Siting turbines in canyons and on ridge lines increases the risk of fatalities for migrating birds. Studies done in Montana and California have found greater increases in bird fatalities along migratory passways when siting occurred at low and high points. (Harmata et. al (2000), Smallwood and Thelander (2005), and Thayer (2007). The siting of turbines in the locations as planned are likely to have a higher impact then what is estimated in the DEIS. [LTR 302, CMT 9]*

**Response**: Pre-construction avian use surveys currently provide an accurate representation of species and density of bird presence by season, and have provided a general correlation with post-construction mortality in areas where there is not high avian use (as in migratory corridors). The use data suggests the Whistling Ridge Project Area has low bird use, and that it is not in a migratory corridor.

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**Comment**: *Two observations. 1. Wind turbines and transmission lines are incompatible with forests. Maintenance requires roads, clear cutting and ongoing brush removal. [LTR 17, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *One comment. It is not the highest use of our forested environment in the Cascade mountain range to dedicate land to energy production if that means it will never have the potential again to produce a forest. [LTR 17, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Fire dangers will increase in this forest area. [LTR 26, CMT 6]*

**Response**: The Applicant will be required to have a fire prevention plan in place prior to operation.

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**Comment**: *The ecology of this area is typical of a highly altered timber management property. Timber management operations will continue in this area for decades to come which is also evidence that the area is not currently or will it every evolve to a significant ecological resource area. It is a timber management area for industrial forest practices. [LTR 28, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *We are asking that you don't make the Whistling Ridge Energy Project in Skamania County WA a testing ground for impacts on coniferous forests. The potential for devastating impacts to this area are real. This is not an appropriate site for a large scale wind project. [LTR 30, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The project would cause minimal or NO disturbance to areas of forested habitat. [LTR 44, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Impacts on timber production and wildlife are major concerns related to the proposal. SDS intends to reduce all vegetation to no more than 15 feet high within 150 feet of each turbine. Within the next 350 feet, vegetation would be kept less than 50 feet high. Nearly all timber harvest would thus be permanently eliminated for approximately 18 acres around each turbine. For a 100 turbine field, his would total 1,800 acres, or nearly 3 square miles, of lost timber production. [LTR 79, CMT 15]*

**Response**: The effects of the proposed Project were analyzed and the results presented in DEIS Section 3.4. While there will be some loss of forest habitat in areas proposed for new project related facilities, the impacted areas have been minimized to reduce lost of forest habitat. The Project area is within a managed forest system, which has many cleared areas and will continue to have cleared areas despite the approval or disapproval of this proposed Project.

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**Comment**: *Turbine access roads and appurtenant facilities would multiply this loss several fold. [LTR 79, CMT 16]*

**Response**: Please see response to Comment LTR 79, CMT 15 above.

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**Comment**: *We are aware of efforts by officials from the Washington Department of Natural Resources to develop procedures for wind power leasing on forestlands? However, as the State has yet to adopt procedures or criteria specific to forested land, or to permit a forestland-based project, review of the Whistling Ridge Energy Project must be conducted with the highest standards for science and due process in mind. [LTR 95, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Plant Species and Communities Issues: The EIS appears to adequately address 'Special Status Plant Species.' They appear to have queried appropriate sources of information and to have done on-the-ground surveys at the appropriate times. Thank you for this consideration. On [DEIS] page 3-43, there is mention of the Oregon white oak/Idaho fescue plant community. However, there is no subsequent mention of it. Was it surveyed for and not found? Was it not surveyed for, because there was no requirement to do so? Request: Add a statement (s?) about the Oregon white oak/Idaho fescue plant community on [DEIS] page 3-74 where the impacts to special status plant species are discussed. [LTR 172, CMT 5]*

**Response**: The WNHP data shows the nearest Oregon white oak/Idaho fescue community as over 1 mile south of the Project Area near the banks of the Columbia River. No Oregon white oak/Idaho fescue communities were observed within the Project Area boundaries during field investigations.

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**Comment**: *Comments, concerns and potential mitigation that would be required (for specific DEIS page numbers): [DEIS pages] 2-9, 2-15. Harvesting trees in areas that are not already cleared. This would require an approved Forest Practices Application prior to harvest. Need for Forest Practices Application is already listed in required permits on page 4-3. [LTR 172, CMT 13]*

**Response**: Comment acknowledged.

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**Comment**: *[Referring to DEIS page] 3-28. Approximately 22 acres of the site will be converted from timber management to non forestry use around the wind turbine sites. All of the Forest Practices Applications that were applied for in the area 4 indicated that the sites would be kept in forestry, not converted to a non-forestry use. This appears to be a violation of the*

*Forest Practices Rules. Potential conversion impacts were not considered. Any future FPAs to harvest trees near wind tower locations will require a conversion FPA (Class IV - General) and any current timber harvesting under Current FPAs may be in violation as well. State law (RCW 76.09.460) allows that Skamania County may deny any conversion permits for up to six years on any sites where FPAs were not submitted as conversion FPAs. Under Forest Practices Rules and Regulations (WAC 222-34) DNR requires reforestation to occur on all harvested acres that will remain in forestry. Request: All applicable FPAs should be amended or reapplied for to reflect conversion activities (RCW 76.09.470). Any new Class IV-General FPAs must await completion of the final EIS before they can be approved for harvest by DNR. [LTR 172, CMT 16]*

**Response**: The permanently disturbed, cleared areas would be considered a "forest conversion" under the Washington Forest Practices Act because they would be implemented for the purposes of the Whistling Ridge Energy Project. At the time the FPAs were applied for, the Whistling Ridge Energy Project had not been approved, and therefore the forest conversion has not been approved. If the Governor of the State of Washington approves the Project, new FPA permits will likely be required.

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**Comment**: *[In reference to] FOREST LAND UNDER G.M.A. In addition, this section of the DEIS fails to discuss or describe the impact of the Growth Management Act, RCW ch. 36.70A and its regulations on the subject proposal. Though Skamania County is not a county required to plan under GMA, it is required by GMA to designate natural resource land, including: (b) Forest lands that are not already characterized by urban growth and that have long-term significance for the commercial production of timber[.] RCW 36.70A.170. The purpose of such designation is to assure that forest lands of long term commercial significance will be protected by appropriate land use regulation. It is apparent from the discussion in the EIS that the project site meets the definition of forest lands of long term commercial significance. As the DEIS indicates: ["]This site has been in commercial forestry use for the last century, during which the site has been logged over a series of approximately 50 year rotations.["] DEIS at page 2-18. See also DEIS at page 1-9, "the site has a long history of commercial logging ..." The reason that forest lands are required to be identified is that such lands are intended to be protected and preserved from nonforestry uses. In the present case, industrial wind turbines are intended to cover significant portions of this commercial forest land, contrary to GMA's directives. Further, this proposal is the first, or one of the first, to be sited in the timbered forest lands near the Columbia Gorge. Under these circumstances, the FEIS must consider whether this project will serve as a precedent for other or future projects impacting the scenic values of the Gorge and forested areas. Finally, the DEIS at page 3-151 says that there will be no "changes to existing land uses, land use activities or development patterns." This conclusionary statement is unsupported by any objective evidence and is incorrect. It is well known that the placement of industrial wind turbines has a significant adverse impact on residential uses and tourism activities. This is true for most wind turbine locations, but is especially true in areas highly valued for scenic resources, including the Columbia Gorge, which are prized for their aesthetic surroundings. Much more detailed analysis is required for adequate consideration of these issues. [LTR 175, CMT 6]*

**Response**: As described in the Section 3.8 Land Use and Recreation, Skamania County has found the Project to be consistent with the Skamania County Comprehensive Plan and Maps. It should be noted that Skamania County is not a Growth Management Act County. The County plans under Washington's Planning Enabling Act. Under the applicable authority, a comprehensive plan is considered "policy guide" only. RCW 36.70.020(6). Skamania County, in its 2007 Comprehensive Plan, has designated the Project Area as "Conservancy." Among the uses identified by the 2007 Comprehensive Plan as appropriate in the Conservancy designation are: public facilities, utilities, utility substations, forest management, and surface mining. The Project would convert approximately 54 acres (approximately 5%) of the 1,152 acres of commercial forest land into utility use, both of which are permitted within the Conservancy designation. As the County has determined in its Land Use Consistency certification, the Project is within the area designated "conservancy" in the County's 2007 Plan. Public utilities and facilities and utility substations are allowed uses. In accordance with the County's determination, the Project is an allowed use, subject to applicable zoning requirements. As described in Section 3.13.2, Socioeconomics Impacts, (beginning on DEIS page 3-259), there have been a number of recent studies performed to determine the impact of wind power projects on property values, including views of turbines from residential uses. In summary, the results of these studies and literature reviews are that no statistical evidence exists that wind development has a harmful effect on residential property values within the viewshed. Nor has any statistical evidence been found of significant adverse impacts on tourism from the presence of wind turbines.

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**Comment**: *[In Section] 3.4 BIOLOGICAL RESOURCES, [DEIS Section] 3.4.1.2, Habitats Conifer Forests - p.3-37. The second to the last sentence in this section states that "[the majority of coniferous forests within the project site is managed for commercial timber production, and is replanted following harvest." "Majority" could mean anywhere from 51 percent to 100 percent. A more quantitative disclosure is needed here. [LTR 177, CMT 29]*

**Response**: The text in Section 3.4.1.2 (DEIS page 3-37 under Conifer Forest) has been modified to read: "The conifer forest within the Project Area is managed for commercial timber production and is replanted following harvest."

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**Comment**: *[In reference to DEIS] Section 3.4.1.2, [f]ive vegetation communities…… Two of the first five vegetation communities do not naturally occur in the area and are only present following logging and only for a few years. This is not an accurate representation. [LTR 178, CMT 84]*

**Response**: The vegetation communities described in the DEIS represented the conditions present at the time the DEIS was prepared.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [f]rom 150 feet to 500 feet from the base of the turbine towers, tree height would be limited to 50 feet above the turbine base within an area formed by a 90 degree arc centered on the ordinary downwind direction ([F]igure 2-4 in Chapter 2). DEIS fails to state exactly what locations and affected acres will be within an area formed by a 90 degree arc….. DEIS fails to reveal how many turbines are proposed in a topographical area that does not meet the 90 degree arc requirement. The DEIS fails to provide an analysis of acres will affected and to what degree in topographical areas that do not meet the area formed by a 90 degree arc requirement. This significant deficiency does not allow agencies or the public to assess what the impacts to forestry and forest habitat from siting wind turbines in forested areas will be. During scoping, a comment requesting this information was submitted. Reference - Topographical maps show little, if any, areas meet the condition of "an area formed by a 90 degree arc centered on the ordinary downwind direction." Remedy - Rewrite section of DEIS with a complete analysis, in light of the expanded information. A map of the project area and the all area around it that could be impacted to create and maintain airflow needs to be included. Include a table of the affected habitat types and display the expected length of time for the forest to be fully renewed for viable timber harvest. If harvest will not be allowed to renewed to an age of 50-80 years for any reason, then show age it will attain. Any sections on forest, animals, and habitats that would be affected in light of this information needs to be updated and resubmitted for public comment through a completely updated DEIS or a supplemental DEIS. [LTR 178, CMT 107]*

**Response**: The numbers of acres that will be temporarily and permanently affected is listed in Table 2-1 (on DEIS page 2-4). See Table 2-1, Footnote C of the DEIS for information on how impact areas were calculated. Also refer to Table 2-1 for a listing of permanent and temporary impacts by project component (DEIS page 2-4). The Project elements are mapped on Figure 2-1, Proposed Project Elements, on DEIS page 2-3. The current forest types are shown on Figure 2-2, on page 2-11 of the DEIS. The harvesting schedule is graphically depicted on Figure 2-3, following page 2-15 of the DEIS. As described in Section 2, on DEIS page 2-15, "Harvests have typically occurred approximately every 50 years; however the harvest periods vary depending on the market and the demand for the type of timber. As a result, some harvests have occurred as frequently as every 40 years, and some have been up to every 65 to 70 years. Additional harvests are planned; subject to requirements of a Forest Practice Application." As shown on Table 2-1, the Project Area encompasses 1,152 acres, of which 56.13 acres would be permanently converted to the wind project. The remaining 1,095.87 acres would remain in commercial forest use.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [c]onstruction of the proposed project would result in the permanent loss of 21.86 acres of managed coniferous or mixed deciduous-coniferous forest. Here it state that the loss of forest will be permanent, yet prior arguments stated "for the life of the project estimated to be 30 years." Remedy - Show actual permanent loss of forest from construction and operation of the project. Rewrite this section of DEIS with a complete analysis, in light of the expanded information. Include a map of the entire forest area that could be impacted to improve airflow. Include a table of the affected habitat types and display the expected length of time for the forest to be fully renewed for viable timber harvest. If harvest will not be allowed to renewed to an age of 50-80 years for any reason, then show age it*

*will be allowed to attain and the differential in board feet at harvest. Any sections on forest, animals, and habitats that would be affected in light of this information needs to be updated and resubmitted for public comment through a completely updated DEIS or a supplemental DEIS. [LTR 177, CMT 111]*

**Response**: A wind facility project life expectancy is typically assumed to be 30 years. However, with equipment maintenance and replacement, the project life for Whistling Ridge could be much longer. Therefore, the project impacts were identified as permanent. Furthermore, this EIS deals with the siting of the proposed Project as well as the interconnection request to connect to the Federal Columbia River Power System (FCRPS). Routine commercial forest management practices that the Applicant would normally engage in are outside the scope of this EIS.

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**Comment**: *[In reference to DEIS] Section 3.4.1.7, [o]peration of the project would result in no further impacts to habitats on the project site. Operation of the project would result in the LONG TERM and perhaps permanent removal of functional forest in the airflow area. Trees in the airflow area may never be allowed to regrow to a size that could prove needed habitat. Remedy - Remove this statement and others like it. [LTR 178, CMT 112]*

**Response**: The text in Section 3.4.2.1 (DEIS page 3-77 Operation, Habitats) has been revised to read: "Table 3.4-10 shows the permanent impacts of the Project to the habitat types found on the site. Operation of the Project would result in the permanent removal of 60.69 acres of habitat."

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**Comment**: *Unknowns. The analysis in the DEIS leaves some unanswered questions in addition to the ones already raised. First, what will be the extent of short-term and permanent forest clearings around the turbines? Typically wind turbines need a lot of free space around them to reduce turbulence and blade interference. How far will this clearing extend from each turbine? Has this forest clearing been incorporated into the photomontages? It does not appear to have been.. [LTR 180, CMT 25]*

**Response**: Please refer to Figure 2-4, Turbine Timber Buffer, in the DEIS. The need for free space around the turbines was included in the impact area calculations.

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**Comment**: *It would affect the vegetation in the area and reduce the food supply in the long term. [LTR 208, CMT 4]*

**Response**: Please see response to Comment LTR 79, CMT 15 above.

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**Comment**: *Wind power promoters like to denigrate the sites of their proposed projects, and the Whistling Ridge proposal is no different. The DEIS states the site is commercial forest lacking native plants. [See Page 1.9] Perhaps SDS shipped those trees in from some other bio-region, but we doubt it. In fact, it is likely that just about all the plants on the site are native, and that they serve as habitat for animals and birds. [LTR 256, CMT 9]*

**Response**: Please see response to Comment LTR 177, CMT 4 above.

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**Comment**: *It is not in a natural or native coniferous forest condition. [LTR 260, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The concept of ridge line deforestation and industrial development is also faulty in its failure to address additional factors such as the earthquake prone conditions of this area, the impact of blasting and construction on known water resources, including springs and aquifers. The steepness of the proposed site, once deforested further, will result in unacceptable water run off, erosion and extreme habitat loss. The concept of clear cutting thousands of acres of old growth forest for industrial development in favor of select harvesting is ecologically and economically unsound for this region. [LTR 283, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Most of the area that is involved is not pristine, it is planted third growth forest. It is a working managed forest. [LTR 317, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *We need to thin the forest so wind can get though and trees can grow tall. [LTR 318, CMT 63]*

**Response**: Comment acknowledged.

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**Comment**: *All sections in the proposal are within the Bull Trout overlay delineated in state FP rules (WAC- 222). [T3N-Rl0E-S5] There is an F type stream with possible Bull Trout required protections. There are potential unstable slopes indicated. [LTR 172, CMT 7]*

**Response**: As stated on page 3-69 of the DEIS, in the first paragraph under "Fish", no fish have been documented within the Project Area. Surface water is described in Section 3.3.1.1 on page 3-24 of the DEIS. The drainages within the Project Area boundaries are seasonal non-fish habitat streams or perennial, non-fish habitat streams.

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**Comment**: *[Within] T3N-R10E-S6, [t]here is an F type stream with possible Bull Trout required protections. There are potential unstable slopes indicated. There is a Spotted Owl circle. [LTR 172, CMT 8]*

**Response**: Please see response to Comment LTR 172, CMT 7 above regarding fish. Northern spotted owls were discussed in Section 3.4. As stated on page 3-49 of the DEIS, the Project is not located within habitat designated as critical or identified as essential to northern spotted owl recovery. There are a total of 9 turbines proposed within the 1.8 mile provincial range of two NSO activity centers. There are no proposed turbines located within the 500 acre core areas of these activity centers. The two spotted owl site centers are no longer considered to be occupied by USFW endorsed protocols but have not been decertified by WDFW or USFW and are still considered occupied by state and federal law. USFWS has concurred with BPA's conclusion that the Project "*may affect, but is not likely to affect*" northern spotted owls or their habitat.

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**Comment**: *[In reference to DEIS] Section 3.2.1, [t]he Skamania Fish Hatchery…….. Average temps taken from fish hatchery that cannot be googled for address? Precipitation is higher and snowfall is significantly lower as elevation decreases and one proceeds west. Underwood receives approx 40 inches of rainfall a year and snowfall is measured in feet. WRE location can expect 4-5 feet of snow on the ground during winter and over 10 feet annual snowfall. [LTR 178, CMT 81]*

**Response**: Comment acknowledged.

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**Comment**: *Additionally, the site includes the fish-bearing Silva Creek, a tributary to the Klickitat River. [LTR 183, CMT 8]*

**Response**: As stated in Section 3.4.1.6 (on page 3-69 of the DEIS), in the first paragraph under "Fish", no fish have been documented within the Project Area. Surface water is described in Section 3.3.1.1 (on page 3-24 of the DEIS). The drainages within the Project Area boundaries are seasonal non-fish habitat streams or perennial, non-fish habitat streams.

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**Comment**: *["T]he interconnection of existing and proposed wind-powered generation projects in the region to the BPA transmission system does poses the potential for cumulative*

*impacts to listed Columbia River fish species through a somewhat complex relationship among the wind projects, general Columbia River hydrosystem operations (see map below), and operation of the hydrosystem to meet Clean Water Act (CWA) and Endangered Species Act (ESA) requirements for listed fish species." (my bold emphasis) So, there is a cumulative impacts issue for fish. This is not adequately addressed in the Whistling Ridge DEIS, and it is apparent from this document that BPA has knowledge about the issue and could have addressed it in the DEIS. [LTR 311, CMT 10]*

**Response**: Cumulative impacts to fish are discussed in Section 3.14.3.5 (beginning on page 3-276 of the DEIS). The EIS includes a discussion of the potential indirect cumulative impacts that can occur through the relationship among wind projects interconnected to the BPA transmission system, the Columbia River hydro-operations, and operation of the hydroelectric generation system to meet Clean Water Act and ESA requirements for listed fish species.

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## G.3.5 ENERGY AND NATURAL RESOURCES

**Comment**: *Remote areas that are not connected to the electricity power grid can use wind turbines to produce their own supply. [LTR 1, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *In a diverse world this ability to not see eye to eye on everything is what makes us so unique. Unlike fuels that must be drilled for and then processed and eventuality depleted, wind power is naturally created and to one degree or another is always being produced. Therefore there is an unlimited supply of this source of power and the environment does not suffer from the use of the energy. [LTR 1, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *If we learn one thing from the current problems with peak oil and climate change, it is that we should consider the impacts of energy decisions and all the implications before engaging in the energy projects. If we do anything for energy without considering the ill consequences, we blunder forward no smarter than our erroneous actions with fossil fuels. For this reason please consider the following. I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. [LTR 6, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *In the meantime, we can look at something proven to meet our growing demand for energy that doesn't have any negative impacts. It's called conservation. Few of us realize the rapid pace of this change. [LTR 12, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *Solar is an alternative, abundant, clean, renewable source of energy that does not require large transmission lines. [LTR 17, CMT 2]*

**Response**: It is correct that residential installation of solar energy may not require additional transmission infrastructure, however, utility scale photo-voltaic generation would require adequate transmission line capacity just as other major renewable generation sources.

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**Comment**: *The same will be true when it is understood that this power conveyance is not needed in the future. Until the country puts a sincere effort into energy conservation, which it has not done, I am opposed to sacrificing an irreplaceable treasure for expediency. [LTR 19, CMT 5]*

**Response**: BPA is committed to energy efficiency and considers energy conservation and efficiency as a power resource. More information about energy conservation can be found at: http://www.bpa.gov/Energy/N/.

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**Comment**: *Wind energy is a clean, quiet source which uses the natural winds of the Gorge. [LTR 21, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Wind power is undergoing much research and development. To jump on the band wagon with the existing technology of HUGE turbines in populated areas is a mistake. In the future, we're sure there will be sleeker, smaller, more efficient turbines that will be more "user friendly" to local populations. On a recent drive through the mid section of our country (Kansas, Colorado, Wyoming) we saw ONE wind farm the whole way - and it looked smaller than the ones already existing in eastern Oregon and Washington. [LTR 26, CMT 4]*

**Response**: Comment acknowledged.

**Comment**: *The Norwest has done its part – we're given up our rivers to power production – we've given up land for thousands of wind turbines in the eastern parts of our states. The power produced by Whistling Ridge will be controlled by a power company located in Europe and the power will be exported to other parts of the country. We'll be left with the headaches and the hundreds of acres denuded to make space for these wind behemoths. [LTR 26, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *This project will create much needed green, renewable energy [LTR 45, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Regarding "future developments", the "Middle Mountain Wind Project" should be updated to indicate that the Hood River County Commissioners have determined the project to be not feasible due to local discontent and the results of an independent study concluding the project would be financially unacceptable, contrary to the financial payback reported by their applicant. You might also consider adding the decision regarding the Seven Mile project; impacts to the local community and the scenic area also could not be justified. [LTR 60, CMT 11]*

**Response**: The "Middle Mountain Project" status has been updated throughout the EIS to reflect Hood River County's decision to cease development of the Project.

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**Comment**: *Global climate change is a reality, and renewable energy is part of the solution. As a society, we want to have our cake and eat it too: we want to reduce our carbon footprint, but we often oppose new sources of energy necessary to achieve that goal. We cannot conserve our way out of the climate change crisis. If we are to maintain our current standard of living, we will need radically different alternatives to fossil fuels on a grand scale, whether this means nuclear power, wind, solar, geothermal, tidal, wave energy, or most likely a combination of all of the above in concert with energy-efficient design. As we build out wind energy in more remote locations, we will inevitably face the need to develop wind power closer to places where people already live. While some may object to the visual appearance of wind turbines, I submit that these are far more attractive than strip-mining coal and tar shales, and drilling for deep-water oil in places like the Gulf of Mexico or Arctic National Wildlife Refuge. Wind energy is clean energy, and for that reason alone we should welcome the project before us. [LTR 68, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *America is a great country – and a fortunate one, but we are at a crossroads regarding future energy sources. I am glad to see Skamania County taking a leadership role in wind power and the green technologies of the future. Someday, future Skamanians will look back in pride and say we were among the first to recognize the new energy world, put aside our personal differences, and went with what is best for the great good. Thanks you. [LTR 69, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I wish to state my support for the Whistling Ridge Energy Project. This project will help reach the goal mandated by the voters of our state to make renewable energy a greater part of the state's energy consumption. It will help Skamania County continue to provide the services that we, the residents, demand and expect. [LTR 70, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I believe that we must, as citizens of this planet, accept our responsibility to find ways to utilize clean, renewable resources to meet our energy demands. As a nation we may have to make some sacrifices that will enable us to exploit the renewable energy resources that are available to us. We can no longer expect the rest of the world to provide us with cheap energy. We can no longer accept the damages to our planet caused by continued use of fossil fuels. We must move forward to develop new technologies that reduce our impact on the environment. In my view, the potential benefits of this project outweigh any detrimental impact on the region. [LTR 70, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Renewable energy has strong foundation in Americas future energy needs. Never more so than today considering our fossil fuel crisis in the Gulf and over seas. [LTR 71, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Washington Voter[s] have spoken, utilities are required to provide renewable energy to their customers. Here it is! [LTR 72, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *There is no mention of the requirement for providing alternative power sources for specific megawatt-production wind facilities. These are usually natural gas facilities. In what nearby communities would these be built? They should also be considered part of the cost of a wind facility. [LTR 76, CMT 10]*

**Response**: BPA does not build nor own any power generation facilities whatsoever. However, BPA is committed to finding innovative solutions to meet the renewable resource objectives of the Pacific Northwest by reliably and cost-effectively extending the integration capability of the BPA Balancing Authority while honoring our statutory obligations to our preference customers and the operational limitations on the Federal hydroelectric system. Currently, BPA uses the hydro-system to balance wind generation and cannot speculate whether increased wind generation will require the construction of other facilities in the reasonably foreseeable future. See *http://www.bpa.gov/corporate/WindPower/* for more information on balancing loads in the region.

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**Comment**: *I also have some questions for BPA: Questions for BPA: 1) Even if there are multiple wind farms integrated into your system, do you have to operate the grid as if there were NO wind farms connected to the grid, since wind can be unpredictable and inconsistent? [LTR 82, CMT 2]*

**Response**: No. BPA has several procedures in place to operate with wind facilities interconnected to BPA's transmission grid. BPA allocates some balancing capacity to wind facilities under the BPA Balancing Authority*. Wind Facility Developers pay for this capacity through BPA transmission rates. In addition to BPA transmission rates, generators are subject to Generation Imbalance which is also used to balance the wind output. BPA currently manages imbalances using the Federal Columbia River Power System (through the use of federally-managed dams on the Columbia River). For the long term, BPA is also evaluating other possible alternatives including self supply. More information regarding BPA's Customer Supplied Generation Imbalance, please visit *http://transmission.bpa.gov/wind/gen_imbalance/*. For more information regarding BPA's Wind Integration Team, please visit *http://www.bpa.gov/corporate/WindPower/WIT.cfm*. Lastly, for more information regarding BPA's Wind Power initiatives, please visit *http://www.bpa.gov/corporate/windpower/index.cfm*.

* Balancing Authority is defined as BPA's responsibility to schedule generation on transmission paths ahead of time, to maintain load-interchange-generation balance within a Balancing Authority Area, and to support interconnection frequency in real time. The Balancing Authority Area is defined as the collection of generation, transmission, and loads within the metered boundaries of the balancing Authority. The balancing authority maintains load-resource balance within this area.

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**Comment**: *If there is no wind and the dams cannot let water through because of other issues (i.e., fish protections), do you have to have backup natural gas plants to produce the added electricity that the wind turbines would be providing? (I am assuming that if the wind farms*

*provide X amount of energy to the grid, BPA will sell X amount of energy to make more money, and the people to whom this X amount of energy is sold would not be happy if they were not getting their X amount of energy, so if the wind is not blowing and the water is not flowing, the energy would have to come from somewhere, wouldn't it?) [LTR 82, CMT 3]*

**Response**: The wind facilities are allocated a limited amount of balancing reserves through Transmission Business Line (TBL) rates. If they exceed these values the wind facilities have to reduce their output. Additionally, please see response to Comment LTR 82, CMT 2 above for more information related to BPA's Balancing Authority.

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**Comment**: *Does BPA have any plans to build or partner in any natural gas plant projects? [LTR 82, CMT 4]*

**Response**: No, BPA does not build nor own any power generation facilities. For a more detailed explanation as to how BPA handles the intermittent-to-varied power output created by wind facilities, please see response to Comment LTR 82, CMT 2 above.

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**Comment**: *How big would these natural gas plants have to be?[LTR 82, CMT 5]*

**Response**: Please see response to Comment LTR 82, CMT 4 above.

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**Comment**: *How is BPA going to back up the real and potential wind energy production from all of these wind farms? [LTR 82, CMT 6]*

**Response**: BPA allocates some balancing capacity to wind facilities within BPA's Balancing Authority. Developers pay for this capacity through BPA transmission rates. In addition through BPA transmission rates, generators are subject to Generation Imbalance which is also used to balance the wind output. This is currently done only through the use of the hydro-system (the collection of dams located on the Columbia River). For the long term, BPA is also evaluating other possible alternatives including self supply. See *http://www.bpa.gov/corporate/WindPower/* for more information.

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**Comment**: *Transmission lines: Is BPA going to have to build more transmission lines? Where would these lines have to be built, if they are needed? What kind of lines would have to be built to accommodate all the increased wind energy production? [LTR 82, CMT 7]*

**Response**: BPA is already in the process of constructing new transmission lines that were identified in BPA's network Open Season Process in 2008 (this effort is in part to support wind interconnection requests). BPA's current and proposed transmission line projects are in response

to generation requests throughout BPA's Balancing Authority. Please note that BPA is not constructing new transmission lines in direct response to the proposed generation request from the Whistling Ridge Energy Project other than a "tap" to existing transmission lines that are in the vicinity of the proposed Project. The location of any new BPA transmission lines depends on several factors, one of which is the location of wind facilities requesting interconnection onto BPA's transmission grid. BPA is already in the process of constructing new transmission lines (the 500-kilovolt (kV) McNary- John Day transmission line is a current example that was identified in BPA's Network Open Season 2008). The types of transmission lines in BPA's system are typically 500-kv or 230-kilovolt lattice-steel tower supported lines, or 115-kV lattice-steel or double wood-pole tower transmission lines.

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**Comment**: *I would also like to submit the following articles into the record: "Swollen Columbia River churns so much electricity BPA is giving some away," by Ted Sickinger - BPA generating power 144 percent of normal Spring generation - so what to do with all this "extra" power [LTR 82, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: "*Increased Costs are Blowin' in the Wind," by Todd Wynn and Eric Low, Cascade Commentary, from Cascade Policy organization, February 17, 2010 – "Wind energy on the Pacific Northwest's electricity grid has increased substantially. Often overlooked are the impacts of increasing wind generation on the reliability and affordability of electricity that very-well might outweigh any of the promised environmental benefits." Thank you for this opportunity to submit my comments. I will be making more comments on the entire DEIS at a future date. [LTR 82, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *RNP does not, as a practice, advocate for particular renewable energy projects. But we have commented, and will continue to comment, on renewable energy projects that we believe have significant policy ramifications for the development of renewable energy in the Northwest. In our view, the Whistling Ridge Energy Project has significant policy ramifications for the development of renewable energy in forested areas of the Northwest, thereby establishing precedent for forestland projects in other regions of the state. Among the many lessons taught by the recent Gulf Coast oil disaster, one of the clearest is the need for comprehensive clean energy policy. Reliable, renewable energy will play a key role in overall effort to reduce our reliance upon fossil fuel, and pave the way towards a more robust economy. [LTR 95, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Reliable, cost-competitive renewable energy benefits from diverse geographic locations of renewable energy projects. Geographic diversity helps integrate variable renewable energy resources into the system at low cost as resources with different daily or seasonal operating characteristics can help support each other. While the State of Washington is endowed by an abundant supply of wind resource potential, to date these resources have been harvested primarily in Washington's dry, shrub-steppe eco-system that peaks in the spring and summer months. West-side resources may help supply wind during other seasons of the year and blunt the effects rapid wind ramping events. The Whistling Ridge Energy Project provides Washington with an important opportunity to diversify the supply of wind energy to include resources harvested from forest eco-systems. [LTR 95, CMT 4]*

**Response**: Interconnecting more geographically-diverse wind resources to the FCRTS may be complementary to the current renewable generation portfolio and could help reduce the variability of wind generation and alleviate some of the need for firming. Thank you for your comment.

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**Comment**: *All persons giving testimony about the Whistling Ridge project seem to agree the time is right for a turbine project. Utilities are being mandated to use larger & larger percentages of wind power. The market is here and now, and the time is perfect. Progress takes change and change can be good for the world as a whole. [LTR 96, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I have been told that 750 gallons of oil a year will be atomized in each of the turbines. That does not sound like clean energy. [LTR 102, CMT 7]*

**Response**: Oil is required to lubricate and cool many moving parts in the turbine nacelles and information can be found in Sections 3.5.2.1, Impacts, and 3.6.2.1, Operations, Turbine Fluids of the EIS. While the oil is not technically "atomized," it does breakdown through a variety of processes and needs to be changed regularly, just like an automobile. Typical oil drain intervals are between 8 and 12 months for gearbox oils, with cooling oils needing to be changed less frequently. More information can be found at: *http://www.machinerylubrication.com/Read/395/wind-turbine-lubrication*.

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**Comment**: *Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. Skamania County has the wind, SDS Lumber has the land: it is a match made in heaven. [LTR 105, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Washington State utilities must reach the goals set by Initiative 937. Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. Skamania County has the wind, SDS Lumber has the land: it is a match made in heaven. [LTR 107, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. [LTR 114, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. The choice is clear: support Whistling Ridge and Skamania County by approving this project. [LTR 132, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *It will also benefit the region in creating renewable energy that is clean and self sustaining. This is an excellent example of how we can balance environmental protection and economic development. [LTR 138, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Washington voters passed Initiative 937 in 2006 requiring large utilities to obtain 15% of their electricity from new renewable resources such as solar and wind by 2020; Whistling Ridge Energy LLC has proposed a project to help meet the requirements of this initiative. [LTR 155, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *It is very unfortunate that environmentalists and others have chosen to oppose this project when our global environment is already experiencing the impacts of climate change.*

*What good is a scenic area if our global environment is polluted with carbon-emitting energy sources? [LTR 156, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *We simply cannot afford to pass up opportunities to create more renewable energy. Washington State utilities must reach the goals set by Initiative 937. Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. [LTR 156, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *As a retiree of Skamania Co. PUD, I see a great need for alternative sources of energy. [LTR 160, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Regional need for new sources of renewable energy According to Paragraph 1.2.3.1 of the DEIS Summary, based on the findings of the Northwest Power and Conservation Council's (NPCC) Fifth Power Plan (May 2005) and draft Sixth Power Plan (September 2009), the regional population in Idaho, Montana, Oregon and Washington is expected to grow from 12.7 million in 2007 to 16.3 million by 2030. This 3.6 million population increase will increase the demand for electricity. The draft Six Plan concludes that "[t]he Pacific Northwest consumed 19,000 a/MW or 166 million MW-hours of electricity in 2007." That demand is expected to grow to 25,000 a/MW by 2030. Between 2007 and 2030, demand is expected to increase by a total of 6,500 a/MW, growing on average by 270 a/MW, or 1.2 percent, per year. [LTR 162, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *In additional to the normal, free-market increase in demand accompanied by such population growth, states like Oregon, California and Washington have adopted Renewable Portfolio Standards (RPS), which mandate that qualifying public and private utilities obtain a certain percentage of defined "renewable" energy, not including hydropower, by a date certain. In Washington, Initiative 937 requires qualifying utilities to obtain 15% defined "renewable" energy by 2020. The Summary concludes that "[t]he RPS, coupled with load growth in Washington's urban areas, has prompted investor-owned and public power utilities to seek new 3 sources, most often developed by independent power producers, to meet their resource goals." It is for this reason that adoption of the DEIS and, ultimately, approval of the applicant's project*

*is so important. In the coming decades, Washington will need new sources of electricity to meet market demand, as well as the artificial demand created by the "renewable" standards imposed by 1-937. Furthermore, if utilities aren't able to meet the RPS established by 1-937, a $50/MW hour shortfall penalty will be imposed on the utility and passed on to the ratepayers – Washington's families and businesses. [LTR 162, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS paints a rosy picture as viewed from Olympia, but not on our road. WIND POWER The generation of electricity by wind powered systems has the potential to be a nonpolluting source of energy. In areas with steady wind velocities of 15 to 16 miles per hour, such as the great plains states of Texas, Oklahoma, Nevada, North and South Dakota, eastern Montana and Wyoming, and also eastern Washington and Oregon, it is possible to generate electricity from wind farms for as low as 3.5 to 4 cents per kilowatt hour (KWh). Current tax incentives of 1.5 to 1.7 cents per KWh makes the generation of electricity by wind farms very competitive with electricity generated from the burning of hydrocarbon fuels such as coal and natural gas. Wind turbine farms do not spew carbon dioxide, nitrogen oxide, and sulfur oxides into the atmosphere, the atmosphere so they meet the definition of green energy systems. An extensive systems analysis indicates that the price of wind generated electrical power is now less than electrical power generated from burning coal. The price of electricity derived from a new 500 megawatt coal-powered plant is about 5 cents per kilowatt hours (KWh), which is more than wind-powered generation. The carbon dioxide, nitrogen oxide, and sulfur oxide emission from coal-powered plants create acid rain, smog, degradation of visibility, carbon dioxide, which seem to be warming of the planet Some of these emissions increase the probability of cardiovascular diseases, asthma, respiratory problems, and human mortality. When the cost of all of these human health and environmental degradation are factored into the systems analysis, the cost of coal-powered electricity is approaching 8 cents per KWh. [LTR 170, CMT 4]*

**Response**: Comment acknowledged

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**Comment**: *Wind-driven electrical power generation is environmentally and economically superior to any of the hydrocarbon electrical power generation. The hydro generation of electricity is still superior to the wind generation. The electrical power derived from the 11 dams on the Columbia River and the 4 on the Snake River generate electricity that is delivered to the PUD's at a price of about 2.5 to 2.75 cents per KWh. Expansion of the Northwest hydroelectric systems have already reached their maximum limit. Probably no more dams will be built on the Columbia and Snake River drainage areas because of environmental concerns. [LTR 170, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *In addition, the EIS should consider whether placing a VER like WR on line will simply require construction of other facilities to balance loads, such as gas turbines or other facilities. [LTR 176, CMT 12]*

**Response**: Please see response to Comment LTR 82, CMT 4 above.

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**Comment**: *[In reference to DEIS] Section 3.2.1, [l]ike hydropower production of electricity from wind produces no direct emissions of greenhouse gases or other pollutants. The generation of wind also displaces generation from individual fossil fuel fired power plants or units thereby reducing fuel consumption and the resulting air emissions that would have otherwise occurred. Patently false, and rebutt by adding papers that actually state that greenhouse gas emissions will increase that we are displacing clean hydropower because most dams used water from run-of-the-river and storage as a result is limited, both in capacity and for fish. Include articles that demonstrate as more wind is integrated into the system, the more difficult it is for BPA to balance without harming fish. Include paper that shows that BPA desire that wind energy operators acquires its own balancing reserves and that means NG generation and increasing emissions. [LTR 178, CMT 76]*

**Response**: The challenges posed by the dramatic increase in wind generation connected to the FCRTS, the balancing issues faced by the hydro system, and the potential affects to fish populations are described in detail in the cumulative impacts - Section 3.14.3.5, Habitat and Wildlife, Fish Species, in the EIS.

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**Comment**: *General Comment on DEIS - Need Met Tower data at proposed location on the Western (prevailing windward) slope. This data must include 3 dimensional wind direction, as well as wind speeds. At least one should be located South of the South BPA line, along the A1 7 string. This area topographically should result in the worst case scenario for turbulence and off axis wind direction. Turbine efficiency is based on laminar flow in the direction of the Turbine Axis. Turbines placed on a steep slope will suffer significantly reduced performance, which must be quantified in the EIS to ensure economic viability for the Applicant. Remedy - Applicant should demonstrate to EFSEC Council that the "wind power" resources at this proposed site meet or exceed that of existing or permitted WA Wind Turbine Facilities. "Wind Power" is defined as the aggregatized product of wind speed with time. The purpose would be to provide some basis to justify and offset the increased environmental impacts of this project, relative to those existing WA Wind Turbine Facilities. [LTR 178, CMT 132]*

**Response**: There were several criteria applied to determine whether the Whistling Ridge Energy Project or other alternatives were technically and economically feasible, and these criteria are discussed in Section 1.4.3 of the EIS. The criteria included the need for a "steady supply of robust wind power, and on a site on which construction can reasonably occur," that "the Project must be located on land the Applicant owns and controls…," and that "the Project must be located in proximity to existing high-voltage transmission lines." While both Washington EFSEC and BPA need to respond to the applicable Applicant requests for

authorizations and approvals regarding the proposed Project, neither have the jurisdictional authority to determine or require that the Applicant provide the information requested, some of which may be considered proprietary.

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**Comment**: *Third, the BPA did not consider other potential renewable energy sources in the DEIS. A dismissal of renewable energy sources other than wind energy, such as distributed generation, does not comport with the agencies' stated goal of acting consistently with their environmental and social responsibilities. [LTR 179, CMT 25]*

**Response**: While there may be other potential renewable energy sources besides wind energy, these other sources are speculative and beyond the scope of this EIS which has the purpose of disclosing the potential impacts of the proposed Project. Section 1.4 includes a description of a range of alternatives, including the No Action alternative in Section 1.4.2 and alternatives to the proposed Project that were eliminated from detailed study in Section 1.4.3. Consideration of a reasonable range of alternatives is fundamental to the NEPA and SEPA review process, and these are included in the Whistling Ridge EIS.

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**Comment**: *In response to the rapid development of wind energy in the region in recent years the BPA has proposed several new transmission projects. These projects are necessary to integrate the intermittent nature of wind energy and to ensure sufficient transmission capacity to transmit energy to the region and markets in other regions. BPA's own development plans demonstrate that the Whistling Ridge Energy Project would contribute to demand for transmission facilities and contribute to significant adverse impacts to the environment. The BPA's own documents, some of which are attached hereto as exhibits, explain that the McNary-John Day transmission project and the Big Eddy-Knight transmission project are needed to respond to the demands that new wind energy facilities place on the grid. To respond to the increased demand for interconnections to the grid, the BPA conducts annual Network Open Seasons where prospective energy producers can submit Transmission Service Requests (TSRs) to BPA. From these requests the BPA offers eligible producers Preferred Transmission Service Agreements (PTSAs). Based on these agreements the BPA calculates the demand for transmission services and the need for any new transmission facilities. As shown in the attached exhibits, in response to the 2008 Network Open Season, the BPA signed PTSAs securing 6,410 MW of transmission capacity. And in response to the 2009 Network Open Season the BPA signed PTSAs securing 1,553 MW of transmission capacity. In 2010 alone the BPA received TSRs for 4,456 MW of wind energy development that would be eligible to sign PTSAs. If all eligible PTSA are signed and completed, the total new services provided by BPA will total over 12,000 MW, generate the need for hundreds of miles of new transmission lines, and the expenditure of millions of dollars in public funds. The Whistling Ridge Energy Project Project would directly contribute to these impacts. The DEIS must acknowledge and evaluate these impacts and the further impacts that flow from them. The BPA must include actual data on the grid's capacity to accommodate new sources of intermittent wind energy. As stated above, the BPA has previously expressed concern about how it will reliably integrate over 6,000 MW of wind energy by 2013. Northwest Power and Conservation Council, Sixth Power Plan, at 12-11.*

*The DEIS must include some analysis of how much wind energy the grid can accommodate over the long-term and whether wind integration capacity will limit the amount of wind energy development that can occur in the region. [LTR 179, CMT 59]*

**Response**: The operation of the FCRTS requires BPA to consider the reliability of the transmission system and its ability to meet the demand for power of priority customers within BPA's Balancing Authority. According to BPA's Open Access Tariff, BPA offers transmission interconnections to the FCRTS to all eligible customers on a first-come, first-served basis. Requests for transmission service are separate from that process. The decision to offer transmission service requiring new transmission facilities is contingent on a review under NEPA and the satisfaction of any additional environmental laws and statutes, including SEPA. This NEPA study will be based on infrastructure needed for service to actual requests that are have made the commitment to take service. This is done to avoid the overbuilding that this comment raises concern over. Consistent with NEPA regulations, the Whistling Ridge EIS includes issues that are significant to the proposed Project and the direct and indirect effects of the alternatives and their significance. If in the future BPA identifies a need to build new transmission infrastructure due to generation requests and demand in BPA's Balancing Authority, any new projects would be subject to an independent NEPA review.

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**Comment**: *If integration capacity will limit generation potential, then the DEIS must address why the Whistling Ridge Energy Project should take priority over potential development in other locations that would have reduced environmental impacts. Importantly, the BPA has failed to undertake comprehensive review of the impacts of its transmission system. The BPA's last comprehensive review of the transmission system was in 1995. BPA Business Plan Final Environmental Impact Statement (DOE/EIS-0183) (hereinafter "BPA BP EIS"). That review noted that wind energy could cause adverse impacts to wildlife and scenic resources, but did not undertake any detailed review of how providing access to the transmission system would lead to impacts from the explosion of wind energy development throughout the region. BPA BP EIS at 4-42, Section 4.3.1. The BPA BP EIS also does not address how much wind energy can be integrated into the grid. In 2007, the BPA undertook a supplemental analysis of the Business Plan EIS, but declined to undertake further environmental review. Supplemental Analysis of the Business Plan EIS (DOE/EIS-0183) (April 6, 2007). The supplement stated that "continued consideration of a comprehensive policy for BPA's transmission business is not in the best interests of the agency at this time." The supplemental analysis was based on four wind projects totaling 750 MW of wind energy that had been connected to the BPA grid at that time. Id. at 42. The analysis did not discuss impacts to wildlife from this development. Id. at 46. The analysis did not include a section on scenic impacts, much less how wind energy development enabled by the BPA has transformed scenic landscapes. The supplemental review also failed to acknowledge the ongoing impacts to cultural resources from the development that has been enabled by BPA transmission project. Id. at 48-49. [LTR 179, CMT 60]*

**Response**: The commenter's views concerning BPA's Business Plan EIS and a regional review of BPA's transmission system are noted. BPA does not believe that there are any requirements in which BPA would need to conduct a regional review of its current transmission system. Additionally, the analysis requested by the commenter is beyond the scope of the EIS,

which is being prepared to inform EFSEC's decision on whether to issue a Site Certificate for the proposed wind project and BPA's decision on whether to grant the requested interconnection of the proposed wind project. Furthermore, BPA believes it is reasonable to consider transmission needs on a location-specific basis, given the transmission path-specific nature of firm transmission service requests. BPA is committed to ensuring thorough NEPA evaluation of any proposed transmission projects arising from such considerations.

The commenter observations concerning BPA's 2007 Supplement Analysis (SA) to the Business Plan EIS are noted. However, the commenter appears to misunderstand the purpose of this SA. As discussed in the SA, the SA was prepared to determine whether there have been any changes in BPA's business practices or in environmental conditions since publication of the Business Plan EIS that could trigger the need for a supplemental or new EIS. The SA was not intended to provide for environmental review of wind projects that had been interconnected to BPA's transmission system since the Business Plan EIS; such review was accomplished through NEPA documentation prepared for each project. Furthermore, the SA was not "based" on four wind projects, as stated by the commenter; instead, these four projects are merely identified as examples of changes in the affected environment since publication of the Business Plan EIS. BPA believes it has adequately evaluated wind projects under NEPA as they have been proposed for interconnection to BPA's transmission system.

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**Comment**: *Another type of impact not anticipated or reviewed in the EIS is the potential overloading of the energy grid as a result of the dramatic increase in wind energy in the region, which can in turn affect fish populations by requiring an excess spilling of water over the region's hydroelectric dams in order to balance out unexpected surges in wind energy production. This rapid expansion in wind energy has occurred without any programmatic review of the impacts of the generating sources, the existing transmission system, or the demands for new transmission lines. This has also occurred without an adequate understanding of how much wind energy development the grid can accommodate and how projects could be prioritized for grid access based on environmental impacts. [LTR 179, CMT 62]*

**Response**: The challenges posed by the dramatic increase in wind generation connected to the FCRTS, the balancing issues it creates on the grid, and the potential affects to fish populations is analyzed in detail in Section 3.14.3.5, Habitat and Wildlife, Fish Species. BPA has also performed numerous studies on the impacts of the generating sources on the existing transmission system, and identified the future demand for additional transmission capacity for new generation (NOS). As discussed in Section 1.2.2, BPA operates under an Open Access Transmission Tariff which offers transmission interconnection to the FCRTS to all eligible customers on a first-come, first-served basis, with the decision to make this offer subject to review under NEPA.

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**Comment**: *Finally, reflecting as I do as a citizen of Washington State, I'm hopeful that the Council will, in its deliberations, take cognizance of existing state policies which promote renewable energy development. In other words, I trust that you will reflect in your decision, the*

*policy priorities that the Governor and Legislature not to mention the electorate through I-937 have made law. [LTR 185, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *EPA supports development of alternative and environmentally sustainable sources of energy such as wind power. [LTR 189, CMT 3]*

**Response**: Comment acknowledged

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**Comment**: *I support renewable energy. I am the Vice Chairman of the Renewable Northwest Project and support BPA's involvement in developing wind resources. [LTR 191, CMT 5]*

**Response**: Comment acknowledged

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**Comment**: *The Whistling Ridge resource will further diversify the BPA portfolio by including wind resources west of the transmission constraint areas. This site has significant positive impacts on the BPA system with regard to availability close to large load centers. [LTR 191, CMT 6]*

**Response**: Please see response to Comment LTR 95, CMT 4 above.

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**Comment**: *We support development of wind, solar, biomass, geothermal, and other renewable energy projects in our region which are designed in a manner consistent with local regulations. MCEDD has supported the creation of the Columbia Gorge Bi-State Renewable Energy Zone as a means to engage in a cross-jurisdiction, inter-agency, bi-state collaborative approach to renewable energy development. In establishing the Columbia Gorge Bi-State Renewable Energy Zone, we took into consideration a variety of factors, all linked by the regional economy. These include the renewable energy resource itself (wind, solar, hydro, geothermal, biofuels, and biomass), financial investment in those resources by renewable energy industry, existing transportation networks {roads, rail, river and air), high-speed telecommunications networks, education and workforce training capacity, public utilities, resident workforce, transmission capacity, industrial lands base, and quality of life. [LTR 192, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The Port of Vancouver is an active participant in regional and national associations promoting alternative energy, particularly wind energy. We support alternative energy credit programs and state and national alternative energy standards. In addition, the port advocates for the expansion of the wind energy grid in the Pacific Northwest and nationwide. [LTR 195, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The Board finds: Interiors comments contradict both the Secretary's publicly stated policy as it pertains to renewable energy as well as contradicting the clear energy policy direction of the current Administration. [LTR 197, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *In looking at the map on the website for the EIS, it appears the interconnect won't affect us, but SDS's project appears to be in the area of our pipeline that runs east/west up the gorge through Skamania County. I need to be in contact with SDS or its developer, but want to be sure I get our information out there to all players and wasn't sure of BPA's involvement initially. Thank you for passing the information on and including us with notifications. [LTR 199, CMT 1]*

**Response**: Please note that the developer's contact information was forwarded on to NW Pipeline.

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**Comment**: *Wind energy should be one of our priorities when considering new and green energy sources for our future. [LTR 209, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *We need to reduce consumption of power. No more power production should be initiated in the Columbia River Gorge. Power quotas should be enacted to reduce consumption of electricity. The environmental consequences are too great. [LTR 211, CMT 2]*

**Response**: Please see response to Comment LTR 19, CMT 5 above.

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**Comment**: *Love the idea of a cleaner power source than coal. Not sure that it is fair for us to push the unsightly and dirty job of generating power with coal onto other communities when we have a chance to contribute our share locally. [LTR 211, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *WIND TURBULENCE, the whistling ridge is right in the wind venture of the crest of the Cascade Mountains and the Columbia River gorge. Making one of the windiest spots in North America with very gusty turbulent conditions. ..Bad for big turbine efficiency and longevity, [LTR 226, CMT 2]*

**Response**: The proposed Project has a projected useful life of at least 30 years and each turbine is equipped with mechanisms to adjust to wind conditions, including a wind vane that signals wind direction changes to the turbine's controller. The turbines would operate at wind speeds from 9 to 56 mph, and the blades would feather on their axis and the rotor would stop turning at speeds exceeding 56 mph. A description of the wind turbines can be found in Section 2.1.3.1 of the EIS.

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**Comment**: *WIND SHEAR, the Steep complex varied terrain (especially to the west) from the whistling ridge site accompanied by the Gusty Nature of the westerly Gorge winds will impair the turbine balance. ..Bad for turbine safety [LTR 226, CMT 3]*

**Response**: The turbine design will be site specific, and a description of the potential impacts to Public Health and Safety from the proposed Project can be found in Section 3.6.2.1 of the EIS.

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**Comment**: *Besides, these ignorant people are completely overlooking the fact that in forty years, we are going to be out of fossil fuel and are running out of time to generate alternative energy. Do they think this is going to happen without impacting anyone? They are all for cleaner, alternative energy--as long as it doesn't disturb the status quo, or cost them any money, but change for the better is always an adjustment, and we simply don't like to be disturbed. Alternative energy is here to stay, because we have no choice, we are running out of resources, so they might as well embrace these changes, they are here to stay! [LTR 229, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The only way to reduce the impacts of this global catastrophe is to drastically reduce our emissions of CO2 and other Greenhouse Gasses (GHGs). Realistically, this means optimizing every feasible opportunity to generate energy from non-polluting renewable sources, and there is no source less polluting or more renewable than the wind. Unfortunately,*

*commercially viable wind farm locations like Whistling Ridge are extremely rare. For these reasons, I have reviewed the Whistling Ridge DEIS hoping to evaluate for myself how a special place I cherish would be impacted by the demands of power production for our future, estimated by the Northwest Power and Conservation Council to grow 1.2% annually for the next 20 years. [LTR 231, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Nearly all the impacts addressed by most EISs that I've worked on or reviewed are adverse to the environment. What makes this DEIS notable is the section on Avoided Emissions on page 3-20. According to this section: "Project operation would avoid the use of fossil fuel to meet the energy needs of the region. The project's annual electricity production is estimated at 197,000-megawatt hours (MWh). This energy is equivalent to 114,000 barrels of crude oil or 654 million cubic feet of natural gas." According to the U.S. Energy Information Administration, 197,000 MWh is roughly equivalent to the annual energy consumption of close to 18,000 homes. That's a huge amount of energy to be generated entirely by renewable, non-polluting sources. Perhaps even more significant is the annual displacement of 131,466 tons of the GHG Carbon Dioxide and 155 tons of the pollutant Sulfur Dioxide (Table 3.2-1) that would typically result from generating this quantity of electricity, benefitting both the smog-threatened Scenic Area and the GHG threatened global climate. [LTR 231, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The interconnection of this project (and other wind resources) is problematic. Bonneville has not analyzed the environmental and social impacts of integrating wind. It also has not considered the impacts of BPA operations on designated critical habitat for ESA. For this reason, the interconnection aspects of the project should be deferred until Bonneville complies with law. The facility siting aspects, however, should proceed. [LTR 236, CMT 2]*

**Response**: BPA's purpose and need can be found in Section 1.2.2 of the EIS, which describes how BPA reviews and makes decisions on customer request to interconnect to BPA's transmission system. Prior to making a decision to offer to interconnect new generation to the FCRTS, a decision for which each request is subject to an environmental review under NEPA. BPA analyzes the impacts of agency actions, as well as the indirect impacts that may occur as a result of that action. There are challenges presented by a somewhat complex relationship between wind generation interconnected to BPA's Balancing Authority, the Columbia River hydro operations, and operation of the hydro system to meet Clean Water Act (CWA) and Endangered Species Act (ESA) requirements for listed fish species and their designated critical habitat. These complex relationships are discussed in Section 3.14.3.5, Fish Species, of the EIS. Additional information can be found at:
*http://transmission.bpa.gov/wind/op_controls/default.cfm*.

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**Comment**: *Technology has given us a chance to use the sun and the wind supplied to us each and every day. Our family approves the project plan and we commend the people with the courage to fight for the Whistling Ridge project. [LTR 243, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The history of NW wind power offers very little to be proud of. The first question regulators should be asking is why wind power is being developed in the NW when most or all of the power is being sold in the SW? The history of SW wind power would raise a lot of red flags for NW wind power development issues that are being ignored here. It seems we are doomed to repeat all of the mistakes that are now fairly well understood in the sw. When wind power burned too many bridges in the SW and they decided to move into our region, and the Federal government warned them that they would be facing arrest and jail if they killed federally protected birds, and that they had to solve the bird problem before they would be allowed to develop In the NW. They did solve it, but not in a way that would save even one bird. Instead they did an end run and solved the problem politically. Ever since then the regulatory agencies have been playing the "Go along to get along" song to protect their budgets from cuts from above. As a result, wind power has been allowed to develop projects Just about anywhere they want, no matter the consequences. [LTR 256, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *When new energy production is promoted you can take it as standard operating procedure that the need for energy will be over inflated. Studies are conducted to "prove" the inflated energy numbers. The nuclear industry did it when they promoted the infamous – "WHOOPS!" nuclear development, and we believe that the wind industry and their boosters are doing the same thing. Over the last few years the Columbia River aluminum industry has closed its doors and around one third of Oregon and Washington's electrical energy has become available for other uses. The recent recession only gets deeper and deeper and this is bound to cause a reduction in energy use, These major Impacts on NW energy use are virtually ignored. But they are real, and to a large extent this is why our transmission lines are flooded to capacity and most of the energy is going to the SW. This is why about a third of the wind machines are turned off at any one time, This is why many of them that are spinning are not even hooked up to transmission lines. All of this is ignored while you focus of hocus-pocus studies that inflate-create a huge imaginary need for power. VOI.I cannot serve the real interest of the people if you cannot keep your feet grounded in reality. [LTR 256, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Wind energy is expensive. It costs about four times the cost of hydropower. The 100% back up will add to the costs. The new transmission lines necessary for transmitting wind power and the conversion to "smart" lines will add to the costs. Using wind power to pump water up behind huge earthen dams - as are planned on the Columbia Hills - so that it can be released and run through generators when transmission lines are open will add to the expenses of wind power. In the end, wind power will be so expensive that rate payers will not be able to afford it. The excessive expenses associated with wind power, combined with recent revelations of Wind power corruption, are opening the eyes of people all over the NW. What will happen to wind power, and the extensive infrastructure that is being built to support it, if the citizens of Oregon and Washington decide to vote out the requirement that energy providers must incorporate wind energy in their portfolio? You had better give a lot of thought to that question, because in all likelihood that is where we are headed. [LTR 256, CMT 7]*

**Response**: Please see response to Comment LTR 76, CMT 10 above.

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**Comment**: *[In DEIS] Section 1.4.1, Pg 9, Proposed Action, [t]he project site is stated to have a "proven, robust wind resource." There is no material to supply this "proof in the EIS document. If "robust" is interpreted to mean "good", then this statement is doubly inaccurate. The web-based National Renewable Energy Lab regional wind power mapping resource states that the proposal area provides only "marginal to fair" averaged wind resources compared to other sites in the state. The good to excellent areas are farther east. A BPA (among others}-sponsored wind mapping project on the Internet shows the area to have not particularly good wind resources as well. The wind mapping data, referenced above, conflicts with the applicant's claim that the project site has a "proven, robust wind resource." No scientifically stringent data is presented that supplies this "proof." This "proven, robust" ("steady") terminology appears repeatedly throughout the document and is misleading. A credible document needs to show at least an attempt at accuracy and objectivity. There are other reasons as well, discussed on the following pages, that indicate the selected site may be a poor choice for a wind facility. Paramount to these, is the technical geologic study of the project site that has not yet, and must be been performed before suitability evaluations begin. One of the factors that the Applicant used to identify site suitability was stated to be the "associated lack of native habitat, reducing or eliminating the need to clear additional forest land." Section 3 discusses the initial "need to clear trees to prepare ridge top sites for construction of turbine base pads and of specially configured parts delivery roadways. Information is even provided regarding where the logs will be taken after being cut. The applicant needs to choose one statement or the other and ensure that references to the eliminated statement are removed from the document as well. Which will it be? A credible document displays consistency. A current aerial photograph of the steep (70% or more) southern side of the project area, in the vicinity of proposed turbine string A1- A7 shows standing trees that were restricted from being cut by Washington State DNR when the applicant applied for a Forest Practices Application permit in 2003. What were the constraints that prevented this harvest? Will project approval permit the cutting of these trees, in order to clear for turbine pads and access roads, overriding the earlier DNR prohibition? The Council would need to investigate the nature of the DNR constraint before the evaluation process proceeds. Again, mention of the alleged availability of nearby BPA transmission lines as a site selection factor: transmission lines that do not have the capacity to carry significant additional power.*

*This issue needs to be clarified as discussed under "Interconnection" on pages one and two. Lastly, the site was stated to have been chosen because it is close to an SDS mill site (even though it was stated above that no additional trees would have to be cut for the project) and to SDS business offices I Surely this declaration could be deleted lest it be concluded that convenience has a higher value than environmental factors when choosing a suitable location for a wind power facility. Perhaps if the reasoning behind the statement was elucidated, it might seem an appropriate inclusion [LTR 272, CMT 5]*

**Response**: There were several criteria used to determine whether the Whistling Ridge Project or other alternatives were technically and economically feasible, and these criteria are discussed in Section 1.4.3 of the EIS. The criteria included the need for a "steady supply of robust wind power, and on a site on which construction can reasonably occur," that "the Project must be located on land the Applicant owns and controls...," and that "the Project must be located in proximity to existing high-voltage transmission lines." While both Washington EFSEC and BPA need to respond to the applicable Applicant requests for authorizations and approvals regarding the proposed Project, neither have the jurisdictional authority to determine or require that the Applicant provide extensive "proof" of the wind resource, some of which may be considered proprietary. Geologic studies of the potential Project impacts have been completed on the site and the impacts are described in Section 3.1.1.3 of the EIS. The description of the site found in the site suitability criteria factors in Section 1.4.1 of the EIS for the proposed action represents a basic characterization of the site and is not intended to infer that no tree clearing would be needed for the proposed Project. Please also keep in mind that the proposed site (the Project Area) is already situated on lands that are managed for commercial forestry so it should be understood that tree harvesting is already taking place in conjunction with the Applicant's Forest Practices Permit.

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**Comment**: *Inadequate Electrical Grid. An article published in the Oregonian Newspaper dated July 17,2010 written by Ted Sickenger titled, "Too Much of a Good Thing: Growth in wind power makes life difficult for grid managers" (http://www.oregonlive.com/business/index.ssf/2010/07/too_much_of_a_good_thing_growt.html) provides a great summary of the enormous limitations of the current grid system for handling the CURRENT number of wind turbines. It is a very complicated issue that needs to be rectified BEFORE we decide which green energy makes the most sense to invest government dollars in. Why are we spending huge amounts of subsidy money to build what will most likely be an obsolete technology by the time the electrical grid can handle the capacity of these giant wind turbines so they do not have to sit idle when the wind is blowing! There are promising new wind energy technologies under development right now that will very soon be economically viable without subsidies and have less visual and environmental impact. (See http://www.makanipower.com/for example.) [LTR 273, CMT 2]*

**Response**: Please see response to Comment LTR 76, CMT 10 above.

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**Comment**: *I would like to further address the issue of wind power generation in the Pacific NW and the fact that "wind generation needs back-up, flexible sources to handle unexpected changed in its output." I have made comments in the memo entitled "Comments_DEIS_Chap. 3_Environment_Impacts_Mitigation_27Aug2010," but in this document I would like to go further in depth about my concerns that were not addressed in the Whistling Ridge DEIS, concerns that I feel BPA should have addressed in the DEIS and they did not. The document that helped to crystallize my concerns about the lack of information on wind power integration and the integration of wind power into the energy grid, is the Sixth Power Plan done by the NW Energy Council, and the document is located at http://www.nwcouncil.org/energy/powerplan/6/final/SixthPowerPlan_Overview.pdf. [LTR 279, CMT 1]*

**Response**: Please see response to Comment LTR 76, CMT 10 above.

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**Comment**: *Wind power has "little capacity value and increases the need for flexibility reserves" which basically means that wind power needs backup sources, which means coal-power, gas plants, hydro power, or some other sources. Sources which probably contribute more CO2 to the environment. The DEIS does not address the issue of the unreliability of wind, the lack of storage capacity in wind power, and the need for backups to the power system to balance or leaven the production of wind energy. Why isn't this information in BPA's portion of the DEIS? Oh, I forgot. BPA didn't contribute very much pertinent energy production and infrastructure information to the DEIS so that's why we don't have all the information needed to make a thoughtful and studied decision about the feasibility or desirability of this wind farm proposal! How much flexibility and capacity will have to be added to BPA's energy production in order to balance wind power? [LTR 279, CMT 3]*

**Response**: Please see response to Comment LTR 76, CMT 10 above. Additionally, the challenges presented by the complex relationships between wind generation interconnected to BPA's Balancing Authority, the Columbia River hydro operations, and the operation of the hydro system to meet Clean Water Act (CWA) and Endangered Species Act (ESA) requirements for listed fish species and their designated critical habitat are all discussed in Section 3.14.3.5, Fish Species, of the EIS. More information on how BPA implements automated tools and operating protocols for variable generators to limit actual wind generation to schedule or curtail e-Tags to actual generation in response to the amount of balancing reserves deployed can be found at: *http://transmission.bpa.gov/wind/op_controls/default.cfm*.

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**Comment**: *What are the metrics for measuring system flexibility? What are the methods to be used to quantify the flexibility of the region's existing resources? How will BPA improve forecasting of the region's future demand for flexible capacity? How will BPA and the wind industry improve wind forecasting and scheduling? How will BPA transition from current whole-hour scheduling to intra-hour scheduling? How will BPA increase the availability and use of dynamic scheduling? What is dynamic scheduling? Will it cost the rate payers more money to implement all of these efforts to integrate unreliable wind power into the existing*

*power grid? If physical upgrades to transmission, communication, and control facilities will be required, what are the costs going to be? To the regional rate payers? Tax payers? [LTR 279, CMT 4]*

**Response**: The answers to these questions are outside of the scope of this EIS. However, several of BPA initiatives that are not solely related to wind power but yet are still very important to wind power's development in the Northwest can be found on BPA's wind website at: *http://www.bpa.gov/corporate/WindPower/*. Under "Related BPA Efforts," you will be able to find how wind has factored into BPA's rate cases, as well as how conditional firm transmission service is offered.

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**Comment**: *So Bonneville, which is BPA, sits on the Northwest Resource Adequacy Forum, and they have "devoted considerable effort…to reaching an understanding of the hydrosystem's sustainable capacity value." Care to share with the rest of us, BPA? What is the sustainable capacity value of our hydrosystem? How much sustainable capacity does BPA actually have? If there is too much capacity, from all these regional wind farms, does it become unsustainable? What happens to unsustainable capacity? Does too much capacity affect the BPA infrastructure? [LTR 279, CMT 7]*

**Response**: In 2005, the Northwest Power and Conservation Council (Council) and BPA created the Northwest Resource Adequacy Forum to aid the Council in developing a standard, and to annually assess the adequacy of the power supply. The forum, which is open to the public, includes utility planners, state utility commission staff, and other interested parties. After nearly three years of coordinated effort, it reached consensus on a proposed resource adequacy standard, which the Council subsequently adopted in April 2008.

The standard helps to assess whether the electricity supply is sufficient to meet the Region's needs now and in the near future. It provides a minimum threshold that serves as an early warning should resource adequacy development fall dangerously short. The GENESYS model, which performs a detailed simulation of the Northwest power system, is used to assess the ability of the system to meet these standards. One of its most important features is that it is a probabilistic model, that is, it incorporates future uncertainties into its analysis. Each simulation is performed using different values for uncertain future variables such as water (fuel supply for hydroelectric plants), temperature (which affects the demand for electricity), variability associated with wind generation (based on historical wind generation patterns), and forced outages of thermal units.

Historical water conditions are used in the model to determine the amount of energy that can be supplied by the hydroelectric system including both Federal and non-Federal plants. The hydroelectric system is further constrained by non-power constraints such as fish spill and by the amount of hydroelectric peaking capability the system can provide over the 2, 4, and 10 hour period (which is also known as sustained peaking).

More information on the forum including the standards, assessments, presentations, and GENESYS can be found at: *http://www.nwcouncil.org/energy/resource/Default.asp*

With respect to this comment, BPA has done capacity analyses for the entire FCRPS hydrosystem. The results are published in The 2010 Resource Program, published September 2010, which can be found at the following web site: *http://www.bpa.gov/power/P/ResourceProgram/Index.shtml*.

This analysis for sustainable capacity, or "18-hour capacity," examines the maximum output of the hydrosystem when hydro-generation is shaped to provide generation for a 3-day heat wave or 3-day cold snap. Under more mild conditions, the hydrosystem would produce less power during a typical 3-day period. The 2010 Resource Program indicates that the BPA system can produce a surplus of about 1600 MW capacity during a 1-in-10-year cold-snap in winter of 2013, and is roughly adequate (only 200 MW surplus) during a severe heat wave (1-in-10-year heat wave).

Lastly, too much "peak capacity" is not a problem for the hydrosystem, in that a capacity assessment measures the most amount of water that could go through the generators when needed.

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**Comment**: *If wind generation is not controllable, why is the Federal government subsidizing the wind industry? Why aren't we using our monies to work on conservation and raising efficiencies in the ways that we now use energy? [LTR 279, CMT 9]*

**Response**: The growing need for new sources of renewable energy is described in Section 1.2.3.1 of the EIS. BPA is committed to energy efficiency and considers energy conservation and efficiency as a power resource. More information about energy conservation can be found at: *http://www.bpa.gov/Energy/N/*.

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**Comment**: *If "the output level is relatively unpredictable and, in the Northwest, is unlikely to be available at times of extreme peak load…a winter cold spell or a summer hot spell" why are all these wind farms being built? Probably because they are highly subsidized by taxpayer money, and the producers get tax credits which they use for God knows what, but they are tax credits. Why are we spending so much money and effort on wind if it won't be available to cool us in summer and warm us in winter because wind is uncontrollable, variable, and unpredictable? These questions should be answered in the DEIS. [LTR 279, CMT 10]*

**Response**: Wind is an intermittent, variable renewable energy resource and as such, maximum nameplate capacity generation does not always correspond with the maximum load in the Region. While this may be the case, the Regional need for new sources of renewable energy is described in Section 1.2.3.1 of the EIS. As the Nation seeks new sources of clean electricity, wind has emerged as the most mature and promising new resource. It is free of $CO_2$ emissions, relatively cost effective compared to other new generating resources and is, thus far, the most viable non-hydro renewable resource available on a large scale.

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**Comment**: *So, analysis done by Bonneville and the Resource Adequacy Forum "…suggests that, for the wind area at the east end of the Columbia Gorge, where much of the region's current wind generation is located [as is the Whistling Ridge proposal] there is an inverse relationship between wind generation and extreme temperatures, both in winter and summer." Well, gosh darn, does this mean that when it's really hot, like in the summer time, there is less wind and therefore there is less wind power generation and therefore less energy is available for cooling? Summer time also means less water in the Columbia River and that means less water available to BPA for power generation. And, in the winter time, when it is really cold there is less wind power generation available to heat our homes and businesses? Why aren't these issues and concerns addressed in the DEIS? When we most need energy is when it is not being produced. Hmm, that does not make sense. Common sense, that is. Why are we even subsidizing more wind farms? [LTR 279, CMT 12]*

**Response**: Please see response to Comment LTR 279, CMT 7 above. Additionally, it is true that wind generation is less likely to be available during extremely hot or extremely cold periods. That is an unfortunate reality. However, the value of wind generation lies in the average generation that wind produces and its ability to assist in the reduction greenhouse gas emissions that would normally be produced by fossil-fuel-powered generation.

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**Comment**: *Further, "the Resource Adequacy Forum has adopted a provisional peak contribution for wind of 5 percent of installed capacity." Does this mean that all the wind farms that litter the landscape only produce, and WILL ONLY PRODUCE and are ONLY CAPABLE OF PRODUCING, "5 percent of installed capacity"? This is a stunning statement. Whole ecosystems are being destroyed by wind turbines, pads, and impermeable maintenance roads that crisis-cross our environments and ecosystems, and these wind farms will ONLY PRODUCE "5 percent of installed capacity"?!? Well, I would be speechless if this didn't make me so angry. This stunning analysis MUST be part of the DEIS and must be addressed in the future. A deep fatal flaw in this very inadequate, and getting more inadequate by the minute, DEIS. [LTR 279, CMT 13]*

**Response**: Wind generation facilities generate approximately 25-35 percent of project nameplate capacity on average. However, because wind generation varies with meteorological conditions, wind generation ranges from full name-plate capacity to zero. Therefore, it is prudent to measure not only the average amount of wind power that may be generated but also an amount of energy that may be generated with high certainty, namely how much wind power can be counted on to contribute to power generation during peak demand. It is for this latter quantity that the Resource Adequacy Forum has chosen to adopt 5%. As discussed in Comment LTR 279, CMT 12 above, wind generation's value is less from power generation during specific periods and more from average generation that can displace fossil-fuel-powered generation.

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**Comment**: *If I recall correctly, pumped-storage hydro plants are really reservoirs at high elevations to which water is pumped uphill, stored, and then released to go downhill and produce power through turbines. What are utility demand response programs? What are the*

*cumulative regional impacts of these backup systems? These questions and issues should be addressed in the DEIS and are not. The DEIS is supposed to be a document that contains information so that we can all make reasoned, objective decisions about the proposed project and its regional cumulative effects. This DEIS is by no means that type of document. [LTR 279, CMT 15]*

**Response**: Utility demand response programs are programs designed reduce end use loads via control systems that respond to a signal from a utility or the system operator. Demand response is typically employed to manage peak loads and mitigate transmission congestion, but could also be employed to respond to variable energy resource under performance. Dynamic transfer is one of the most important techniques to reliably and cost-effectively integrate large amounts of variable renewable generation resources. This technique would allow a dispatcher in one balancing authority to control and take responsibility for supplying balancing reserves for a generator located in another balancing authority. Dynamic transfer allows for a greater diversity of response resources and minimizes the duplication of reserves when the generation and load are in more than one balancing authority area. A study identifying available dynamic transfer capacity on 11 key transmission paths, completed in February 2010, found moderate amounts of available dynamic transfer capability. BPA is making this capability available to its customers on a pilot basis. As part of a comprehensive review of wind project interconnections and their effects conducted in winter 2008, BPA has established transmission operation protocols to maintain system reliability and ESA or CWA compliance. Under these protocols BPA's dispatch system automatically instructs wind project operators to reduce their generation to specified levels when too much generation is occurring on the system. Similarly BPA's dispatch system reduces export schedules to balance loads and generation when variable energy resource output falls significantly below their planned generation levels. BPA has issued Dispatcher Standing Order (DSO) 216 to document these protocols, and is continuing to refine and clarify this DSO as more is learned about wind project operations relative to BPA's transmission system (See *http://www.transmission.bpa.gov/wind/op_controls/default.cfm* for more information). Long term, when wind generation and hydro generation exceeds load and cannot be dispatched out of the region, alternative energy storage solutions are being explored such as hydro pump storage. Pump storage is where water is pumped into a reservoir during periods of surplus generation then power is generated from the stored water when additional generation is needed. Pumped storage facilities can be dedicated closed loop systems or multipurpose projects, typically used for irrigation pumping as well as storage and generation. Pumped storage operations must account for physical constraints of the upper and lower reservoirs, any irrigation requirements and the round trip energy loss associated with the pump/generation cycle. The reasonably foreseeable future cumulative impact of excess generation is considered in Section 3.14.3 of the EIS. Find more information on wind power and utility demand response programs at *http://www.bpa.gov/corporate/WindPower/*.

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**Comment**: *These "two good candidates for flexibility augmentation" sound good. But what is their carbon footprint? How do they affect the environment? Do they cause air pollution? Could we achieve better energy-saving results through conservation and increasing our efficiencies capabilities? [LTR 279, CMT 16]*

**Response**: A speculative discussion of impacts, either qualitative or quantitative, is outside the scope of this EIS and does not meet the purpose and need of this document. If BPA receives a request to interconnect new generation to the transmission system, back-up or otherwise, each request will be reviewed on a case by case basis and subject to review under NEPA. BPA is committed to exploring energy efficiency and considers energy conservation and efficiency as a power resource in the Northwest. More information about energy conservation can be found at: *http://www.bpa.gov/Energy/N/*.

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**Comment**: *The DEIS should have included a section on other ways and means of conserving and producing energy, as a contrast to wind power generation. BPA should more fully explain how our Pacific NW energy demands can be met by means other than wind power. [LTR 279, CMT 19]*

**Response**: The regional need for new sources of renewable energy is described in Sections 1.2.3.1 and 3.5 of the EIS, which also includes a brief description of the Northwest Power and Conservation Council (NPCC) projections for energy demand growth in the Northwest. As the nation seeks new sources of clean electricity, wind energy has emerged as the most mature and promising new resource. Wind energy is free of $CO_2$ emissions, is relatively cost effective compared to other new generating resources and is, thus far, the most viable non-hydro renewable resource available on a large scale. Additionally, BPA is also committed to energy efficiency and considers energy conservation and efficiency as a power resource. More information about energy conservation and the NPCC projections for Northwest energy demands can be found at the following websites*: http://www.bpa.gov/Energy/N/*, and *http://www.nwcouncil.org/*.

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**Comment**: *The operation of the proposed industrial facility raises unanswered questions regarding the use of the power generated and the ownership of the facility. It is common knowledge that 80% of the wind power generated in the northwest is sold outside of Washington, principally to California, and thus not contributing to Washington's mandated green energy requirements. [LTR 283, CMT 16]*

**Response**: The proposed Project will be owned and operated by the Applicant. A proposed collector substation will be required to gather any power that is generated by the proposed Project wind turbines and this collector substation will also be owned and operated by the Applicant. However, BPA will also need to build a proposed substation and tap facilities which would also be owned and operated by BPA. A list of these facilities required for this proposed Project and their ownership is described fully in Section 2.1.2. Furthermore, BPA is a federal agency that owns and operates the majority of the high-voltage electric transmission system in the Pacific Northwest. This system is known as the FCRTS. BPA has adopted an Open Access Transmission Tariff (Tariff) for the FCRTS, consistent with the Federal Energy Regulatory Commission's (FERC) *pro forma* open access tariff.[NOTE] Under BPA's Tariff, BPA offers transmission interconnection to the FCRTS to all eligible customers on a first-come, first-served basis, with this offer subject to an environmental review under the NEPA. For all requests for

interconnection of generating facilities that exceed 20 MW, BPA chooses to act consistently with FERC's Order No. 2003, Standardization of Large Generator Interconnection Agreement and Procedures, and Order 661, Interconnection for Wind Energy, as adopted by BPA and incorporated, with FERC approval, into BPA's Tariff. Order No. 2003 established the Large Generator Interconnection Procedures (LGIP) and Large Generator Interconnection Agreement (LGIA), which provide a uniform process for offering interconnection to any generating facilities exceeding 20 MW. Order 661 contains additional standardized processes and technical requirements specific to interconnection of wind generators. BPA has adopted its LGIP and LGIA as Attachment L to its Tariff. In its Order 2003 Tariff filing, BPA included provisions in its LGIP to reflect BPA's obligation to complete an environmental review under NEPA of a proposed large generator interconnection before deciding whether to offer a final LGIA to the party requesting interconnection.

**NOTE**: Although BPA is generally not subject to FERC's jurisdiction, BPA follows the open access tariff as a matter of national policy set forth by the Department of Energy. This course of action demonstrates BPA's commitment to non-discriminatory access to its transmission system and ensures that BPA will receive reciprocal and non-discriminatory access to the transmission systems of utilities that are subject to FERC's jurisdiction. This non-discriminatory access to transmission requires BPA to provide service to any customer requesting it, subject to NEPA review and not impacting reliability standards, without regard to where the load is that the request is serving.

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**Comment**: *I think this article makes it quite clear that too much wind power is not good for the power grid—which brings up the question of why are so many subsidized wind farms being built if the power they produce can't actually be used on the electric power grid? And, why are we concentrating all our energy eggs in the wind power basket? [LTR 285, CMT 2]*

**Response**: The regional need for new sources of renewable energy is described in Sections 1.2.3.1 and 3.5 of the EIS. As the Nation seeks new sources of clean electricity, wind has emerged as the most mature and promising new resource. It is free of $CO_2$ emissions, relatively cost effective compared to other new generating resources and is, thus far, the most viable non-hydro renewable resource available on a large scale.

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**Comment**: *In conclusion, it appears that wind may not be the end all answer to our concerns about carbon footprints and going green. More wind farms will mean more cries for more and bigger transmission lines. [LTR 285, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section 3.2.1 Affected Environment;] The DEIS should have addressed the issue of Wind Integration into the power system and the aforementioned Wind*

*Integration Forum. The statement "Large swings ill wind output have sometimes adversely affected hydropower and fish operations" should be further explained in the DEIS. How large are these swings in output? Just how big is the issue of wind integration into the power grid? How much wind is too much wind? Does wind inconsistency mean more gas plant buck-ups (or other types of back-ups) being used by BPA? Frankly, just because then are now some state and federal requirements to meet some made up greenhouse gas emissions number does not mean that new technologies or other methods (energy efficiencies and conservation, for example) might not change these requirements. In the rush to go "green" perhaps common sense has fallen by the wayside. Wind energy production is subsidized by taxpayer monies. It is not cheap green energy. The full cost of wind energy production should be added up and should be included in the DEIS. [LTR 286, CMT 14]*

**Response**: BPA currently has over 3,000 MW of wind generation nameplate capacity interconnected to the FCRTS, and the transmission system has experienced unscheduled wind generation swings of up to 1,100 MW in less than an hour. Bringing a variable and difficult to predict energy resource, such as wind, onto the power grid in large amounts is one of the great engineering and economic challenges in the power industry today. BPA is maintaining a remarkable pace of connecting wind power onto its transmission system and has among the highest levels of wind power of any grid balancing authority in the country. The challenges posed by the dramatic increase in wind generation connected to the FCRTS, the balancing issues faced by the hydro system, and the potential affects to fish populations is described in detail in the cumulative impacts Section 3.14.3.5, Habitat and Wildlife, Fish Species. Additional information can be found on BPA's wind website at: *http://www.bpa.gov/corporate/WindPower/*.

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**Comment**: *[In reference to Section 3.2.2 Impacts; PDF pg. 34-35], If Whistling Ridge is NOT built, this does not necessarily mean that gas plants will take its place. Conservation and energy efficiencies in our homes, businesses, and infrastructure could fill the energy gap. Whistling Ridge and other wind farms are not necessarily the best way to meet our energy needs. What must be addressed, and it is NOT addressed in the DEIS, is that most of the energy produced in the NW is sucked down to California and parts South and they will continue to demand more and more energy and we will never be able to satisfy their energy thirst because they will want more and more. With global climate change upon us and temperatures rising, people will want more energy for air conditioning. Why should our environment and ecosystems be degraded just to satisfy this insatiable energy thirst? If California wants more energy let them put wind turbines on their beaches. Like that's going to happen any time soon!! [LTR 286, CMT 14]*

**Response**: If Washington EFSEC grants siting approval through its Site Certification process and if BPA decides to offer transmission interconnection for the proposed Project, the additional generation would be added to BPA's Balancing Authority. A Balancing Authority is responsible for maintaining a constant balance between power load and power generation in a geographic area. As described in Sections 1.2.2 and 3.5 of the EIS, BPA's tariff requires BPA to consider transmission interconnection requests on a first-come, first-serve basis, independent of what customer load that energy may ultimately serve. The statement that "most of the energy produced in the Northwest is sucked to California and parts south" is not an accurate one. Most

of the energy produced and interconnected to the FCRTS serves the load within BPA's Balancing Authority. Furthermore, BPA is mandated and has a statutory obligation under the Northwest Power Act of 1980 to provide energy to customers of the northwest. However, due to state mandates for renewable energy, BPA does estimate that approximately 47 percent of the wind generation capacity connected to BPA's system will be under contract to California utilities at the end of 2010. As of May 2010, only about 400 MW of the 2,800 MW of wind on the BPA system served the loads of preference customers located within the BPA Balancing Authority.

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**Comment**: *[In reference to Section 3.6.2.1 Impacts-Proposed Action], I did not see any wind studies, long-term wind direction distribution curves, data on maximum and minimum temperatures onsite, the different altitude locations for the wind turbines (altitude above sea level affects wind production? Where are the air density tables for the proposed location, etc. Where are the wind studies for this area? What are the environmental issues associated with micro-siting? [LTR 286, CMT 52]*

**Response**: Please see response to Comment LTR 178, CMT 132 above.

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**Comment**: *[In reference to Section 3.14.3 Cumulative Impacts], Although BPA states that it does not own any gas plants, it will need to rely on backups, perhaps even natural gas-powered plants, to back up its energy production. The more energy BPA is asked to produce the more power plants (or other types of machinery that will produce on-demand, quick backup) will have to be online to ensure flexibility and capability in the power grid. This is NOT a "positive cumulative impact" that would "combat air quality deterioration and climate change"! Cumulative impacts are not done on a project by project basis. They must be on a regional basis, especially when there is a regional energy producer, BPA, involved. Also, BPA is in the process of trying to build bigger and bigger transmission lines in order to produce and carry more energy production. These transmission lines have environmental effects and cumulative effects. There is nothing in the DEIS that addresses the environmental impacts and effects of past, present, and future transmission lines. [LTR 286, CMT 78]*

**Response**: BPA is a transmission authority that owns and operates the transmission system but does not produce generation or own electrical generation. The hydrosystem that BPA relies upon to balance wind generation comes primarily from the FCRPS, with much of the power generated at federal hydro projects owned and operated by the US Army Corps of Engineers or the Bureau of Reclamation. It is correct that cumulative impacts need to be considered in the correct spatial context, whether that be locally, regionally, or globally, as well as the full spectrum of direct and indirect impacts on resources. The cumulative impacts Section 3.14.3 reflects the most recent knowledge in regards to the cumulative impacts from wind generation, which is generally believed to displace power generated by carbon dioxide-emitting sources and replace it with generation that does not have a significant contribution to air quality or greenhouse gases. While there are ongoing discussions about the potential future impacts that a continued increase in renewable energy may have in the region, there is no evidence that wind generation will have a cumulative negative impact to air quality or climate change. Analysis of

past, present and future impacts related to transmission line infrastructure is incorporated into the cumulative impacts section as part of the "Proposed Action," which is defined in Chapter 2 of the EIS. Potential cumulative impacts from the proposed Project interconnection to BPA's transmission system are discussed in a few sections where direct cumulative impacts can be discerned from the overall Project (examples are in Sections 3.14.3.5 and 3.14.3.7).

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**Comment**: *Energy planning would include (1) energy demand projections over time and space and (2) capacity estimates for acceptable sites, in order to understand how much environmental compromise might be needed over time. Planning should be regional rather than state-by-state, simply because demand for electricity generated anywhere in this area is distributed across at least two states. Planning also should test scenarios for the maturation of large-scale photovoltaic electricity generation. [LTR 315, CMT 27]*

**Response**: The regional need for new sources of renewable energy is described in Sections 1.2.3.1 and 3.5 of the EIS, which includes a brief description of the Northwest Power and Conservation Council (NPCC) and its projections for energy demand growth in the Northwest. The NPCC is a regional planning council, created by the Northwest Power Act in 1980, which develops and maintains a regional power plan and a fish and wildlife program to balance the Northwest's environment and energy needs. Additional information about regional energy demand planning and projections can be found at: *http://www.nwcouncil.org/*. Additional information related to BPA's Resource Program can be found at: *http://www.bpa.gov/power/P/ResourceProgram/Index.shtml*.

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**Comment**: *I am greatly concerned that there is not a section in the DEIS that give us information on transmission lines and how they are susceptible to solar storms. There is enough literature and data widely available, see my References #1 and #2, below [for attachments see PDF starting at page 3] that could have been used to fill this information gap in the DEIS....More transmission lines equal more vulnerable to solar storms put us all at risk of blackouts… The DEIS does not contain this information. Therefore, the DEIS is incomplete. [LTR 316, CMT 1]*

**Response**: The Purpose and Need for Action is described in Section 1.2 of the EIS. While this comment has been noted, a theoretical relationship between more transmission lines contributing to a higher vulnerability to transmission system reliability from solar storms is beyond the scope of this EIS.

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**Comment**: *The real clean energy is solar. [LTR 317, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *Will that power generated be kept local or sold to the highest bidder? [LTR 317, CMT 80]*

**Response**: BPA follows the open access tariff as a matter of national policy set forth by the Department of Energy. This course of action demonstrates BPA's commitment to non-discriminatory access to its transmission system and ensures that BPA will receive reciprocal and non-discriminatory access to the transmission systems of utilities that are subject to FERC's jurisdiction. This non-discriminatory access to transmission requires BPA to provide service to any customer requesting it, subject to NEPA review and not impacting reliability standards, without regard to where the load is that the request is serving.

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**Comment**: *I suggest that you bifurcate the interconnection aspect from the siting facility aspect so that the project can go forward there and not get hung up in questions about how we're going to integrate wind. [LTR 318, CMT 55]*

**Response**: A joint EIS was prepared to satisfy the purpose and need of both lead agencies, which is discussed in Section 1.3 of the EIS. Washington EFSEC has to make a decision on whether or not to grant siting approval through its Site Certification process for the proposed Project and BPA has to decide whether or not to interconnect the new generation onto the FCRTS. Both processes are independent actions being considered by Washington EFSEC and BPA, respectively. Both agency decisions need to be made prior to the decision to proceed with the proposed Project. As discussed in Section 1.3.3, preparing a joint SEPA/NEPA EIS is encouraged by both the State of Washington and the federal governments since it avoids duplication between NEPA and comparable state requirements and also results in more clarity during the public involvement processes.

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**Comment**: *Overlooked are the impact of increasing wind generation on the reliability and affordability of the electricity that very well might outweigh any of the promised environmental benefits. [LTR 318, CMT 61]*

**Response**: BPA is a not-for-profit federal agency that is dedicated to providing high system reliability, low rates consistent with sound business principles, environmental stewardship and accountability. The impacts of the increasingly larger share of wind power on the operation of the FCRTS do present a number of challenges within BPA's Balancing Area. BPA is working closely with wind developers and operators to incorporate necessary measures to ensure that the increase of wind power does not have an impact on the reliability of the FCRTS. The affordability of electricity in the region is influenced by a variety of factors, with the interconnection of additional generation sources being just one factor. Developers of new generation are responsible for all of the costs associated with interconnection to the FCRTS, including all of the necessary system studies and improvements to BPA's system.

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

# BPA's wind power pilots launched, working well

In June 2009, the Bonneville Power Administration committed to starting five pilot projects by October 2010 on new tools and techniques to support wind power in the transmission grid.

Today, all the tasks promised — and more — are done. As a result, BPA expects to support thousands more megawatts of wind power reliably in its transmission grid, and the robust growth of the Northwest wind fleet continues.

BPA is proud of the work its Wind Integration Team has accomplished in a very short time to increase the agency's ability to support large amounts of wind power integrated with the Northwest federal power system. We look forward to the next steps on an exciting journey to adapt the power grid to new, variable renewable power sources.

## Wind power is changing the way the grid works

BPA's primary role in supporting wind power is to provide transmission from remote wind farms to the utilities purchasing the wind power. Most Northwest wind power clusters east of the Columbia River Gorge in the heart of BPA's high-voltage transmission grid. Most — 80 percent — of the wind power connected to BPA's grid is exported to other utilities' systems, and half is exported from the Pacific Northwest. To support this growth, BPA has developed and implemented new approaches to prioritizing new transmission line construction, providing access to transmission for more than 7,000 megawatts of additional wind generation

in the Northwest.[1] For more on BPA's broader efforts related to wind power, go to *www.bpa.gov/go/wind*.

BPA manages wind energy as it is transmitted over BPA's grid to receiving utilities. Utilities traditionally schedule power output by the hour and control how much electricity each generator produces, but wind generation is controlled largely by nature and can vary widely and unexpectedly within an hour. BPA provides generation balancing reserve services to correct for differences between wind's scheduled and actual output inside each hour.

## WIT projects advance the state of the art

The Wind Integration Team was designed to help stretch the federal hydro system's ability to support wind power in BPA's transmission grid. The WIT projects include:

**Putting a limit on hydro reserves:** BPA built a dispatchers' tool that limits the amount of federal hydropower BPA must set aside to back wind while maintaining reliable power service. The level reflects wind projects' desire to keep costs low. When wind projects have consumed all the generation imbalance reserves they have purchased from BPA, BPA dispatch now automatically sends an electronic signal to wind plants to reduce their generation to scheduled levels. Similarly, when large decreases in scheduled wind generation deplete BPA's ability to provide balancing energy, BPA revises the wind schedules downward, and receiving utilities must make up the difference with their own resources. In the year since it went into automatic operation, this tool, Dispatchers Order 216 or DSO 216, has maintained system reliability while actually triggering less often than expected. DSO 216 has become BPA's bedrock tool for maintaining grid reliability while the wind fleet grows.

[1] For an overview of BPA's broader wind power efforts, see: "BPA's wind power efforts surge forward." For BPA's transmission initiatives, including its Network Open Season approach to prioritizing new transmission line construction, see "Network Open Season nets robust response" on the open season concept, and "Network Open Season 2010" for this year's results. Look for these documents on *www.bpa.gov*.

*BPA's anemometer fleet lets dispatchers see where the wind is coming from, and how fast.*

**Improving wind forecasting:** BPA and the wind power community are working to improve the accuracy wind generation scheduling. Forecasting when the wind will rise or subside, by how much and how quickly is notoriously difficult, particularly in an area like the Columbia River Gorge where wind patterns are driven variously by coastal, Arctic and inland storm fronts. BPA installed a fleet of 14 anemometers from the Oregon and Washington coast to the inland Columbia Basin and has developed (and is patenting) displays so system dispatchers can literally see wind fronts coming toward and blowing through the wind power area. We are sharing these tools with wind power operators so they can see the information on their own plants. BPA has developed its own in-house wind forecasting system and, for the next year, is also purchasing two commercial wind generation forecasts. Data from all three forecasts will be used to help determine the most accurate forecasting approach.

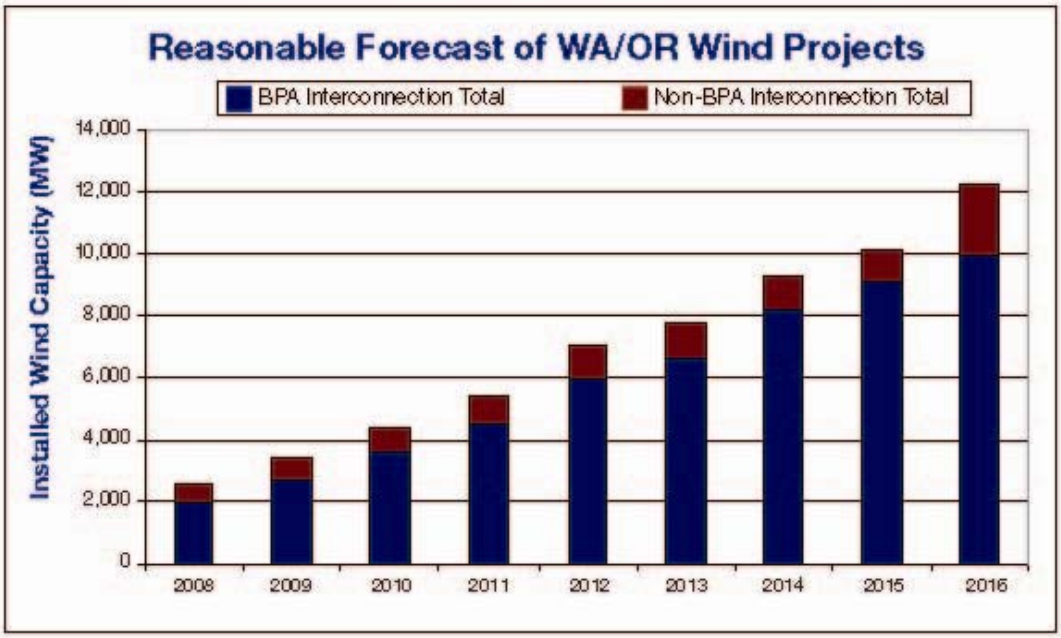
**Giving customers a choice of reserve suppliers:** Until September 2010, wind projects located in BPA's transmission grid purchased all their generation reserves from BPA. Today, the largest wind project owner in the Columbia Basin, Iberdrola Renewables, is supplying its own generation imbalance reserves for its 1,100 megawatts of wind turbines in the basin. Iberdrola has purchased reserves from nonfederal hydropower and coal plants in Washington and is also supplying reserves from its own natural gas fired plant in southern Oregon. Offering wind power

owners the opportunity to supply their own reserves from nonfederal sources reduces the amount of reserves the federal hydro system must supply, in this case, by roughly 300 megawatts.

This effort took two pilot projects. First, BPA identified transmission capability available to deliver reserve power to wind power consumers (dynamic transfer capability) and offered that capability to prospective users, including Iberdrola. This was accomplished by July 2010. Second, BPA worked with Iberdrola and its partners to develop, install and test the requisite communications and control equipment so dispatchers for all parties always know what's happening. This was completed by Sept. 1, 2010. So far, this pilot is going smoothly.

**Selling power within the hour:** Another way to reduce the difference between hourly power scheduled and actual output is to change the schedules more often. This isn't as easy as it sounds. Utilities have scheduled power by the hour since the grid was built, and decades of automated systems are founded on that premise. By December 2009, BPA had systems in place to allow sales of wind power on the half-hour where wind overgeneration would otherwise trigger DSO-216, the reliability protocol. BPA is working with other utilities to develop common business practices for within-hour power sales and to expand use of this technique.

**Purchasing nonfederal reserves:** A sixth WIT pilot project also has been accomplished. BPA has purchased 75 megawatts of generation imbalance reserves from a Calpine Corporation natural gas fired plant in Hermiston, Ore. When wind generators overgenerate, BPA can ask Calpine to reduce its natural gas-fired generation. Calpine will then buy the excess power on BPA's system to fulfill its existing obligations to customers. The arrangement optimizes use of renewable hydro and wind power resources that do not emit carbon dioxide while conserving natural gas supplies and maintaining power system reliability.




*While the amount of wind power that will actually be developed in the Northwest remains uncertain, wind project requests for integration to BPA's transmission grid continue to grow.*

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## This is just the beginning

When BPA launched its WIT work plan in June 2009, the agency had just come out of a period in which it had temporarily suspended signing contracts to integrate more wind projects in its transmission grid because it had no assurance it could support more wind power and maintain transmission system reliability.

Today, based on interconnection requests, regional experts foresee up to 12,000 megawatts of wind power operating in the Northwest transmission grid by 2016, with about 80 percent integrated to BPA transmission. The work of the Wind Integration Team over the last 16 months, in concert with utilities and the wind power community, has made it possible to begin to look forward to realizing this possibility. While this work will not alone suffice, it has gone a long way toward making this potential feasible.

Much more necessary innovation lies ahead.

BPA is now working with utilities and the wind power community across the Northwest and the broader interconnected transmission grid of the western United States, British Columbia and Alberta on consistent, effective and mutually beneficial utility practices to support variable power sources. BPA's principles in this effort are to:

- Support renewable resource development.
- Assure reliable operations.
- Avoid cost shifts — cost recovery must follow cost causation.
- Meet hydro system fish obligations.

This is a challenging and exciting time to be in the electric utility business. BPA has experienced significant success as we've delivered on the WIT initiatives to date. These initiatives have allowed us to integrate more wind onto our system quickly and reliably.

With the WIT projects of June 2009 well launched, BPA is reflecting on its next set of objectives to further the art of wind integration. In the weeks and months to come, we will lay out our round of wind integration activities, objectives and projects.

To keep abreast of BPA's ongoing wind integration initiatives, sign up for the WIT mail list. Go to *www.bpa.gov/corporate/WindPower/WIT-Contact.cfm.* Send an e-mail to *BPAwindintegration@bpa.gov* or call Eric King, WIT projects manager, at 503-230-5236.

For general information on BPA's wind integration efforts, see *www.bpa.gov/corporate/WindPower/.*

BONNEVILLE POWER ADMINISTRATION
DOE/BP-4207 • OCTOBER 2010

## G.3.6 PUBLIC HEALTH AND SAFETY

**Comment**: T*he project improves fire access roads in the farm areas making it safer and easier for our firemen in case of a major fire. [LTR 37, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *There was very little discussion on the flashing red lights. My understanding is that these are fairly bright and regular flashes, which besides being disturbing to local residents could also trigger health issues. Please add this consideration to your study. [LTR 60, CMT 4]*

**Response**: After consideration of comments received during the EIS scoping period, information regarding lighting and the potential impacts has been added to the "Other Potential Impacts" in Section 3.6 of the EIS.

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**Comment**: *More research data on human health in connection with wind turbine arrays is available than has ever been in the past, from both Europe and the United States. Unfortunately, it has not been common knowledge and therefore has not been reflected in public policy regulations. There has been testimony dealing with this subject in detail and this body of yet unrecognized information should be a major determinant in wind farm siting decisions. Please acquaint yourselves with the data before moving ahead. [LTR 76, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *The day we signed the papers on our house we found out about the proposed Industrial Wind Turbine Project. After doing some research on my computer my heart sank as I read all the reports from families living within 2 miles of the Industrial monsters. People like us who had sold their big family homes and wanted to scale down, simplify their lives and live a simple life in the country, gardening, working and enjoying nature. Many of these people now live with insomnia, headaches, irritability, decreased concentration, anxiety, and more. This was very disturbing indeed as I read this information. These are real people, not whiners. They have had to leave their homes to get well. Some have returned only to have the symptoms return. The wind industry disputes these claims dismissing them (without any intelligent responses on why they don't believe it) as whiners, angry etc. Well I would be angry if I had to spend thousands of dollars on medical bills, leave my beloved home and suffer health consequences. People would never do this just to spite the wind industry. These are people just like you and me, and they are sick. It is obvious that there is a problem with placing these large industrial*

*wind turbines too close to residential communities. Why are we continuing to site these projects so close to human habitation? [LTR 98, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am very nervous about the installation of these turbines on the ridges of our beautiful community. There are many people who will be living within 2 miles of the project. How can we risk sacrificing the health of our neighbors? Not everyone is affected by the low frequency vibration. It would be simple if everyone was, but because of this it makes the ones who are look like liars or crackpots. They are not. [LTR 98, CMT 4]*

**Response**: The potential immediate and long-term impacts to health and safety from both construction and operation of the proposed Project are described in Section 3.6, Public Health and Safety of the EIS. Health concerns have been raised regarding shadow flicker, low-frequency noise, lighting, and electromagnetic fields from wind turbines and facilities. The potential impacts of each of these phenomena and others, including possible mitigation measures, are disclosed and analyzed in the EIS.

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**Comment**: *What are the long term health effects? [LTR 102, CMT 6]*

**Response**: The potential immediate and long-term impacts to health and safety from the proposed Project are described in Section 3.6, Public Health and Safety, and Section 3.7, Noise, in the EIS. Long-term health concerns have been raised regarding shadow flicker, noise, and electromagnetic fields from wind turbines and facilities. The potential impacts of each of these phenomena and possible mitigation measures are described in the EIS.

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**Comment**: *So my biggest concerns are for the health of the people in this community. It's not fair to put them at risk. Pay attention to the new studies coming out. Carl Phillips says it would be easy to prove that these turbines are causing health problems, but the money isn't being spent on the studies. The industry doesn't want this type of thing "getting in their way". If you knowingly OK this project with reliable information about causing humans physical harm, you will be liable for their health problems and could be liable in lawsuits down the road. I beg you to look further into this information. Don't be responsible for harming our community. It just isn't right. [LTR 98, CMT 8]*

**Response**: Please see response to Comment LTR 102, CMT 6 above.

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**Comment**: *Health hazard from the droning, [LTR 118, CMT 4]*

**Response**: A description of the potential health hazards from the noise generated during construction and operation of the proposed Project can be found in Section 3.7, Noise, of the EIS.

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**Comment**: *[It is requested that] the "How to" Guide to Siting Wind Turbines to Prevent Health Risks (or minimally, the EPA guidelines) be used in determining projected impact and that any predicted decibel increases over 10 be mitigated up front by effective set-backs or the outright elimination of selected wind turbines. [LTR 139, CMT 28]*

**Response**: The EPA guidance was considered in determining the significance of impacts from noise, as described under the "Regulatory Overview" heading in Section 3.7.1.2 of the EIS. If the proposed Project was to be constructed and was to exceed state or county ambient noise thresholds, the Project would be subject to enforcement intervention and mitigation measures as determined by the regulatory entities. Furthermore, EFSEC would require that the Certificate Holder submit, for EFSEC review, modeling of noise impacts from the Project reflecting its final layout and selected turbine components, prior to the beginning of site preparation.

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**Comment**: *[For issues regarding TOXICS CLEANUP], If contamination is currently known or suspected during construction, testing of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily visible, or is revealed by testing, Ecology must be notified. [LTR 171, CMT 3]*

**Response**: In consideration of these comments, additional information has been added to Section 3.6, Public Health and Safety, Releases of Hazardous Materials, to reflect the appropriate notification protocol in the event contaminated media is encountered during construction.

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**Comment**: *[Regarding] Fire Hazard[s], DNR has fire protection responsibility on a significant portion of the land within the project area. After review of the DEIS, we believe that implementation of the fire related mitigation measures listed in Chapter 3, [S]ection 3.6.3 of the DEIS (5/1/2010) would adequately address fire prevention responsibility and response on those lands. Thank you for this consideration. Contact: Darrel Johnston Phone: (360) 902-2112 darrel.johnston@dnr.wa.gov [LTR 172, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section] 3.6, PUBLIC HEALTH AND SAFETY, [Section] 3.6.2.1, Proposed Action, Construction, Fire and Explosion, p. 3-97: The wind turbine nacelles will be at a height of 262 feet. This section should discuss the technical challenges that are posed by responding to a fire, explosion or medical emergency at such a height, the types of emergency*

*equipment necessary to respond to emergency events, and who (local fire departments, DNR or the Applicant) will be responsible for supplying and operating this equipment. Operation, Fire and Explosion, p. 3-99: This section acknowledges that turbine malfunctions resulting in fires have been known to occur. Given that the turbines nacelle are located hundreds of feet in the air in a windy area surrounded by land being managed for timber production, it would appear that a fire could pose a serious threat to the project site and surrounding property. This section should be expanded to discuss the potential environmental impacts that may arise from a turbine fire and the actions that would be taken to minimize those impacts. This section should discuss whether equipping the turbines with fire suppression equipment is advisable. [LTR 177, CMT 48]*

**Response**: Section 3.6 of the EIS states that "DNR would likely respond to a structure fire in the woods, as would Underwood Fire District #3 and Mill A volunteers." Additionally, as seen above in Comment LTR 172, CMT 4, DNR states that they "believe that implementation of the fire related mitigation measures listed in Chapter 3, [S]ection 3.6.3 of the DEIS (5/1/2010) would adequately address fire prevention responsibility and response on those lands." There are numerous precautions that will be included in the Fire Protection and Prevention Plan that would be developed by the Applicant for EFSEC approval, as mentioned in Section 3.6.3. The fire protection plan and implementation of additional fire precautions will also be coordinated with the Skamania County Fire Marshall and DNR in response to fire conditions in the Project Area.

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**Comment**: *EFSEC and BPA must ensure that the DEIS includes adequate review of the likely impacts on neighboring properties. Recent studies have shown a potential for wind energy facilities to cause adverse impacts to human health. Adverse health impacts could occur. [LTR 179, CMT 91]*

**Response**: Comment acknowledged.

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**Comment**: *[Regarding] WASTE RESOURCES, [Please contact] Mike Drumright, (360) 407-6397, [for any questions that relate to a]ll grading and filling of land must utilize only clean fill, i.e., dirt or gravel. All other materials, including waste concrete and asphalt, are considered to be solid waste and permit approval must be obtained through the local jurisdictional health department prior to filling. Standards apply as defined by Washington Administrative Code (WAC) 173-350-990, Criteria for Inert Waste. Property owners, developers, and contractors are encouraged to recycle all possible leftover construction, demolition, and land clearing (CDL) materials and reduce waste generated. Recycling construction debris is often less expensive than landfill disposal. Please visit http://1800recycle.wa.gov or call the 1-800-RECYCLE hotline to find facilities that that will accept your CDL materials for reuse or recycling. [LTR 187, CMT 2]*

**Response**: This information has been included in the EIS and as part of the mitigation action plan that will be released with the FEIS and Record of Decision.

**Comment**: *What are the long term health effects? [LTR 225, CMT 3]*

**Response**: Please see response to Comment LTR 102, CMT 6 above.

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**Comment**: *The DEIS summary emphasizes that no hazardous waste would be produced by the project. Actually there is a significant release of hazardous wastes my each machine. Lubricants run down the blades and are flung for quite a distance. Solvents and other cleaning materials are used to de-grease the tower and blades, and these hazardous wastes go right into the ground. When the first wind machines (the MOD-II's) were built on the Goodnoe Hills section of the Columbia Hilts (and later removed due to engineering failure) Natives reported that they could no longer gather traditional herbs and roots on the site due to pollution by lubricants and solvents. While we have no authority to speak for Natives (nor would we attempt to do so), we do believe that we can report on what is public knowledge. [LTR 256, CMT 14]*

**Response**: The summary of hazardous materials production described in Section 3.6 of the DEIS is accurate, and the precautions and control measures to prevent hazardous waste releases will be implemented per the mitigation measures in Section 3.6.3.

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**Comment**: *How is the infrastructure affected if capacity reaches unsustainable levels? Are there inherent dangers in unsustainable capacity? Dangers to the BPA infrastructure? Dangers to the general public and energy users? These questions, and many more relevant ones, should be addressed in the DEIS, by BPA. They are not. A fatal flaw. [LTR 279, CMT 8]*

**Response**: Within BPA's Balancing Authority, the generation needs to match the load at all times. BPA operates the transmission system to ensure that capacity is maintained at sustainable levels, and would employ any measures required to maintain system reliability regardless of infrastructure capacity. FERC requires that BPA perform electrical studies (a interconnection request feasibility study, the interconnection system impact study, and the facilities study) which help identify all necessary infrastructure that would be necessary for this particular interconnection request as well as analyzing the current transmission system's capacity for this new interconnection request (which could include upgrades to the transmission system). The information identified from these three studies is related to the electrical system and its capacity. The information from the electrical studies is never included in BPA's environmental documents other than what facilities will need to be upgraded and/or added as the facilities study identifies what new facilities may be needed as part of the interconnection request. In this case, a new BPA substation will be required as well as a tap into BPA's existing North Bonneville-Midway 230-kV transmission line. NEPA requirements focus on the potential of a proposed Project to impact the environment, and thus the possible construction of a new BPA substation and the associated tap would have that effect.

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**Comment**: *How would people be evacuated if a wind turbine's weight causes a mass wasting event or other types of erosion? What are the evacuation routes? [LTR 281, CMT 23]*

**Response**: The analysis of geologic hazards and soils in the proposed Project Area can be found in Section 3.1, Earth, of the EIS. As stated in Section 3.1.3, Mitigation Measures, "If detailed geotechnical investigations indicate potential for slope instability...," the developer would ensure "proper engineering to account for this risk or relocate the facilities on-site to avoid this risk." The landslide hazard report include in Appendix D of geotechnical report referenced in the DEIS (URS 2009) concluded that the proposed Project facilities could be constructed and operated without danger to human life or the surrounding environment (due to landslide hazards). Therefore, the need for evacuation routes in response to a mass wasting event were not developed.

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**Comment**: *The location of the proposed project is also fatally flawed for many of the reasons discussed previously and for additional reasons. The proposed location will severely impact local Underwood residents. You are aware of the numerous non wind industry sponsored studies detailing both physical and mental health impacts on both adults and children, so I will not reiterate those findings. Please do not discount the life altering effect that an industrial energy facility will impose on local residents. Please do not credit the wind industry sponsored studies that such a facility would not negatively impact home values severely. Really, would any of you chose a residence within close proximity to 425 foot loud twirling lighted structures if given the choice of an equally pleasing quiet rural residence unencumbered by such structures? I think not. [LTR 283, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed location of the project also discounts the very real threat of fire in what is now a strictly no burn tinder box. This location is not a flat insured wheat field. This location is a forested steeply graded terrain which is home to a wide variety of wildlife, domesticated livestock and people and their homes. Both construction and operation of an industrial facility poses an unacceptable threat to the aforementioned as well as to travelers and the very scenic vistas that make up the Gorge. The location of the proposed facility by its very nature would be difficult or impossible to adequately access with fire fighting equipment. The helicopter water drops so instrumental in fighting the Underwood fire of the summer of 2008 which destroyed trees, vegetation, wildlife and homes, would not be available for use in and around the proposed structures because of the proximity prohibition for helicopters and turbines or towers. [LTR 283, CMT 8]*

**Response**: Please see response to Comment LTR 177, CMT 48 above.

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**Comment**: *Is Whistling Ridge proposing to use herbicides over the life of the proposed wind farm to control vegetation? What kind of herbicides and/or pesticides is SDS proposing to use? What is the chemical makeup of any proposed chemicals that might be used on this project? Are there any potential health hazards to human beings and wildlife? [LTR 286, CMT 30]*

**Response**: As stated in Section 3.4.3, the Applicant would implement a noxious weed control program, in coordination with the Skamania County Noxious Weed Control Board, to control the spread and prevent the introduction of noxious weed species. The exact type of herbicide that might be used has not been determined. For more information on Skamania County's program, please visit their website at: *http://skamania.wsu.edu/noxiousweeds/index.html*.

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**Comment**: *What are these chemicals that are in storage? What is their chemical makeup? Are they hazardous? Are they dangerous to humans and wildlife? [LTR 286, CMT 31]*

**Response**: A description of the hazardous materials that may be stored on site and the corresponding control and preventative measures can be found in Section 3.6, Public Health and Safety, of the EIS. Specific information can be found under the headings "Releases of Hazardous Materials" and "Releases to the Environment" in the Impacts analysis found in Section 3.6.2.

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**Comment**: *In section 3.17, there is this statement about snow: average of 9 inches of snow per year. Footnote 4. Which is the true statement "…snow, which may accumulate one to three meters during the winter season" or "average of 9 inches of snow per year"?? This does not compute. Three to nine feet of snow is a lot different than 9 inches of snow. Meters of snow mean more water erosion. Meters of snow mean more snow removal traffic. Meters of snow could also mean lack of access to the wind turbines when they have to be tied down due to high winds. What happens if the technicians can't get to the wind turbines and the blades are subjected to high winds? Will they rip off? Will they go flying into neighboring properties? What happens during high winds and snow season? What's the standard operating procedure to be followed? The DEIS should answer these questions and address the issue of snow. [LTR 286, CMT 34]*

**Response**: There is an average snowfall of 9 inches in the Project Area, but there have been times when the surrounding region has received significantly more snow. Snow can accumulate into snowdrifts from the wind, so this information is included in the description of the "Regional Environment" in Section 3.4.1.1. The potentially significant issues posed by inclement weather, including high winds and snow, are the same as discussed in Section 3.6, Public Health and Safety, and include turbine structure failure, blade throw, and ice throw. To minimize the risk of these events occurring, the wind turbines automatically feather into the wind and stop operating in winds exceeding 56 mph as described in Section 2.1.3 of the EIS.

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**Comment**: *How dangerous is mineral oil to the environment, in case of leaks? Is there combustion danger? How much of the mineral oil is stored onsite for use? Over the life of each turbine transformer, how much mineral oil is used? How much mineral oil is used over the lifetime of the BPA substations? What is the chemical makeup of the mineral oil? [LTR 286, CMT 48]*

**Response**: Mineral oil is used in a variety of industrial/mechanical capacities as a non-conductive coolant or thermal fluid in electric components as it does not conduct electricity, while simultaneously functioning to displace air and water. Some examples in which mineral oils are used are transformers (where it is known as transformer oil) and in high voltage switchgear (where mineral oil is used as an insulator and as a coolant to disperse switching arcs). If a small spill were to occur, it is suggested that the mineral oil be covered with inert material such as sand or clay, so that it can absorb to the inert material and then be disposed of properly. Large spills may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers for appropriate disposal. Transformers do not operate at temperatures that would be great enough to ignite the mineral oil. The designs for small new substations usually do not include on-site bulk oil storage; and, oil in electrical equipment is not considered bulk storage under the Clean Water Act. The environmental or public health and safety risk from mineral oil is very low considering the preventive design and operation measures designed to prevent discharges to the environment, as discussed under the heading "Releases to the Environment" in Section 3.6.2.1 of the EIS.

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**Comment**: *Duh. "Shadow flicker would not be a risk during construction because turbines would not be operational." I really dislike it when people think I'm stupid… SO, what happens after the turbines are constructed? How much shadow flicker is there? How are people and wildlife affected by shadow flicker? Shadow flicker is VERY ANNOYING, as anyone who has had light flickering on their peripheral vision can attest! This is not an analysis of shadow flicker, its effects on humans and wildlife, and its location relative to human habitation in the area. [LTR 286, CMT 49]*

**Response**: Please see response to Comment LTR 98, CMT 4 above.

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**Comment**: *SO, what happens after construction. What strength electrical and magnetic fields would be generated? What effects do electromagnetic fields have on humans and wildlife? Are there any genetic effects? Cancer-causing effects? [LTR 286, CMT 50]*

**Response**: Please see responses to Comment LTR 98, CMT 4 and Comment LTR 178, CMT 54 above.

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**Comment**: *This is the Gorge. There are strong winds in the Gorge. There is extreme weather in the Gorge. Why is SDS proposing to build huge, dangerous propellers in an area known for gusting, strong, winds? [LTR 286, CMT 51]*

**Response**: As described in Section 2.1.3 of the EIS, the wind turbines would be engineered to withstand wind gusts and would automatically feather into the wind and stop operating in winds exceeding 56 mph.

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**Comment**: *So this wind farm would be operating in an area that gets up to 3 meters of snow in the Winter? There would be hail, high winds, thunderstorms, and extreme cold weather? Personnel would have operate in this environment? What does OSHA have to say about this?* [*LTR 286, CMT 53]*

**Response**: A list of some of the personnel safety standards, measures and regulations that the proposed Project would comply with can be found in Section 3.6.3 of the EIS.

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**Comment**: *Other areas not addressed in the Whistling Ridge DEIS are electric and magnetic fields from transmission lines. Why didn't BPA address this issue in the DEIS? Are there health effects for humans and wildlife from transmission lines? If bigger and taller transmission lines are built are there bigger electric and magnetic fields?* [*LTR 311, CMT 11]*

**Response**: Please see response to Comment LTR 178, CMT 54 above.

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**Comment**: *Can transmission lines cause forest fires? [LTR 311, CMT 12]*

**Response**: There is some risk of fire caused by transmission infrastructure if a line collapses and remains energized, or in the event that there is a failure or explosion at associated transmission facilities like substations. These events are rare. However, a discussion regarding these types of issues can be found in Section 3.6, Public Health and Safety, of the EIS.

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**Comment**: *How much pesticide is used on an annual basis to keep the transmission area free of vegetation and pests? What are the environmental effects of this pesticide use? [LTR 311, CMT 15]*

**Response**: Vegetation management and control measures for the proposed Project will be developed according to local, county and state regulations, as described in Section 3.4 of the EIS.

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**Comment**: *There is certainly no "full range of potential effects of the proposed action on human health and the environment" analysis in the DEIS. Health effects that might or would occur - audio, visual, environmental - are downplayed in the EIS and information that is contradictory is not included. What are the benefits and detriments of siting hundreds if not thousands of wind farms in rural environments? What are the impacts to the rural communities and their way of life? What are the impacts to water resources? To air quality? [LTR 314, CMT 6]*

**Response**: Impacts to these various concerns can be found within Section 3.0, Affected Environment, Impacts and Mitigation, within the EIS. Washington EFSEC and BPA believe that the description of the environment and any potential impacts that have been described within Section 3.0, as well as throughout the entire EIS, are comprehensive and objectively consider the potential impacts of the proposed Project to the local residents and the surrounding area.

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**Comment**: *There is very little discussion on the flashing red lights. My understanding is these are fairly bright and regular flashes. I read that this may trigger some health issues so I'd like to see more consideration for that in a study. [LTR 317, CMT 25]*

**Response**: Please see response to Comment LTR 60, CMT 4 above.

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**Comment**: *I do not understand how there will be no impact to emergency services. There will be 200+ trucks coming through at rush hour and the day. What happens if a house is burning?* [*LTR 317, CMT 87]*

**Response**: An analysis of traffic patterns in the local area can be found within Section 3.11, Transportation. Emergency service availability within the local area can be found in Section 3.6, Public Health and Safety, and Section 3.11, Transportation, of the EIS.

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## G.3.7 NOISE

**Comment**: *They also create noise pollution that aggravates nearby residents as well as jams the communication calls birds and other creatures use for breeding, finding food, and predator avoidance. [LTR 12, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Noise – The noise impact will be detrimental to the rural environment. [LTR 33, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Audible annoyance/deleterious health effects on humans and their domesticated animals. [LTR 49, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *There is no reference to Dr. Pierpont's studies on the health effects of wind turbine sounds, and a response to this new science by the applicant. It is not sufficient to say "not a problem", when current scientific studies indicate the need for larger setbacks to avoid these issues. All of the "noise" documentation is generally positive, educational, and/or based on county defined noise ordinances, all of which do not comprehend continuous operation of noise producing machinery. It is also interesting to me the shear amount of documentation in the DEIS on noise, causing me to believe that this can be a problem and really needs more than an academic dissertation on sound. The most recent science should be considered in the study. [LTR 60, CMT 5]*

**Response**: Dr. Pierpont's studies were not referenced in the DEIS due to concerns about the scientific methods used in the studies as discussed in critiques of Dr. Pierponts's work by prominent acousticians such as Geoff Leventhall. For example, Section 4.3.2 of "Wind Turbine Sound and Health Effects – An Expert Panel Review" (Colby et al, 2009), for which Mr. Leventhall was one of seven preparers that included three medical doctors, offers the following remarks on "Wind Turbine Syndrome": "Wind turbine syndrome," not a recognized medical diagnosis, is essentially reflective of symptoms associated with noise annoyance and is an unnecessary and confusing addition to the vocabulary on noise. This syndrome is not a recognized diagnosis in the medical community. There are no unique symptoms or combinations of symptoms that would lead to a specific pattern of this hypothesized disorder. The collective symptoms in some people exposed to wind turbines are more likely associated with annoyance to low sound levels." While Dr. Pierpont's self-published book has garnered some attention, it may not be appropriate to characterize her work as "new science". However, Leventhall (Leventhall, 2009) does appear to acknowledge the following regarding Dr. Pierponts work: "Pierpont may have made one contribution to the science of environmental noise, by showing that a proportion of those affected have underlying medical conditions, which act to increase their susceptibility. That is, a number of those affected, had pre-existing problems, which increased their susceptibility to noise. That is, they exhibit a negative response when the majority would not do. This discovery is the only original contribution, which she has made."

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**Comment**: *The study did not use the noise levels defined by the manufacturer of the proposed towers and the generating station, which are larger and noisier than those discussed. It is unacceptable and reckless to conclude the noise would be within EFSEC limits, if this group does not assess the actual towers and the generator facility to be used. Please update your report for the maximum anticipated noise levels, cumulative effects of multiple towers coupled with power generation/transfer and their impact to the surrounding community. [LTR 60, CMT 6]*

**Response**: Technical specifications (vendor data) about candidate wind turbine systems, including noise data, have been compiled and application-specific data have been used in new noise modeling runs. Table 3.7-7 lists and compares overall reference sound power level (Lw, dBA) for a variety of different manufacturers and models, with power capacity being a primary differentiator. The overall sound level of the sample "industry-leading" manufacturer model used by the Applicant for noise prediction analysis purposes for the DEIS was within the range shown by this small set of samples. The Applicant has therefore exercised appropriate conservatism in its selection of a representative wind turbine as the input noise source for its Cadna/A model. Note: Reference values are taken proximate to wind turbine generators at a distance of 50 feet (15 meters) from the tower base in order to account for nacelle (gearbox, generator, yaw drive, etc.) noise. Since the Applicant has not yet issued requests for proposals (RFPs) to wind turbine manufacturers, the sound level of the actual wind turbine model to be installed has not yet been determined. However, as shown in Table 3.7-7, the average range of sound levels is within about 3 to 4 dBA of the typical value of 106 dBA, with noisier models tending to be larger in power capacity, as would be expected. Thus, the actual model ultimately selected could reasonably be expected to be in this range.

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**Comment**: *We have examined previously submitted and forthcoming testimony from Keith Brown PhD regarding public health implications of this proposal. Based upon his solid review of pertinent research, we conclude the EIS cannot assure that health of residents living in the Whistling Ridge vicinity would not be adversely affected by turbine noise. Can the developers of the EIS draft provide such assurance? If not, noise concerns should alone exclude approval of this project. And human health concerns from expected turbine noise should be added to the draft's growing list of "Adverse Effects that Cannot be Avoided." [LTR 79, CMT 11]*

**Response**: The following conclusions from "Wind Turbine Sound and Health Effects – An Expert Panel Review" (Colby et al, 2009) substantiate the assertion that the health of residents living in the Whistling Ridge vicinity would not be adversely affected by turbine noise. Sound from wind turbines does not pose a risk of hearing loss or any other adverse health effect in humans. Sub-audible, low frequency sound and infrasound from wind turbines do not present a risk to human health. Some people may be annoyed at the presence of sound from wind turbines. Annoyance is not a pathological entity. A major cause of concern about wind turbine sound is its fluctuating nature. Some may find this sound annoying, a reaction that depends primarily on personal characteristics as opposed to the intensity of the sound level.

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**Comment**: *On June 30th 2010 Carl B. Phillips an epidemiologist and health policy researcher with a PHD from Harvard testified at wind siting hearings held at the Wisconsin Public Service Commission in Madison Wisconsin. He stated that there was ample evidence of a problem of some magnitude with siting the Industrial wind turbines near homes. He had studied the subject in depth and submitted a 5 minute verbal testimony and handed in a lengthy written testimony. Dr. Nina Pierpont has done extensive work with persons who live with "wind turbine syndrome" and has written a book called "Wind Turbine Syndrome" A Natural Experiment. I am a nurse and a massage therapist. I am also a sound healer and work with sound. [LTR 98, CMT 2]*

**Response**: Please see response to Comment LTR 60, CMT 5 above.

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**Comment**: *I am aware of the positive and negative effects of sound. Sound vibrations can harm. Sound vibrations destroyed the Tacoma Narrows Bridge. Low frequency sound vibrations were used as torture in WW2. [LTR 98, CMT 3]*

**Response**: Comment acknowledged. Please note the referenced Tacoma Narrows Bridge opened to traffic on July 1, 1940. Its main span collapsed four months later on November 7 due to a phenomenon known as aeroelastic flutter caused by 42 mph (67 kph) winds, not sound vibrations. In many undergraduate physics and engineering courses, the event is presented as an example of elementary forced resonance with the wind providing an external periodic frequency that matched the natural structural frequency of the span, about 1 cycle every 4 seconds (0.25 Hz), which is virtually inaudible (see also see response to Comment LTR 139, CMT 5 below).

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**Comment**: *I have also heard that one cannot predict what will happen with the sound when turbines are placed on ridges. [LTR 98, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *Putting these turbines on mountain tops has not been studied thoroughly so we really don't know what the impact will be. Many people are affected by the vibration and sound of the turbines. [LTR 102, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *My husband and I live approximately 1 mile from the proposed site and are extremely fearful of the noise, vibration, [LTR 118, CMT 2]*

**Response**: Comment acknowledged.

**Comment**: *The dominant concern expressed by our Members has been fear that noise from the Project will be a constant nuisance whenever our windows are open, or when we are outside our homes. Although we are located two miles from the Project, we are concerned that this distance will not protect us due to our geography and wind patterns. The Project will be located at the head of the Little Buck Creek watershed. We are concerned that sound from the Project will echo off valley walls and have an amplified effect on us. In addition, the prevailing winds in the summer (when we are outside most) blow from the Project straight to our homes. So we are also concerned that the wind will carry more noise from the Project to us. SDS's application has a sound map suggesting that our area will receive 20+ dB of sound from the Project. It is not at all clear to us how this map was produced or whether it is reliable. Perhaps more important, based on reports we have read from residents located near active wind farms, specific decibel measurements might not be the best way to determine whether noise from wind turbines will have an adverse effect. Some of the strongest complaints about wind turbine noise are due to the low-frequency sounds - a constant "whumping" similar to the bass beat that can be heard (and felt) from certain car stereos even from a great distance, and even with the windows rolled up. We have heard that these low frequency sounds can sometimes have much greater impact at a distance than they do at the point of creation. We are therefore very worried about how such sounds might affect us. It is our understanding that few if any wind projects have been built in terrain with valleys and ridges like ours. So it seems there is very little track record for predicting how noise from the Project might affect us. We therefore request that the EIS make very extensive studies of how sound from the Project will affect us and other residents. In particular, we think tests should be conducted that reproduce, at the Project site, the noise from a project of this size as accurately as technologically possible. Measurements of the noise should be taken not only with instruments, but more importantly, with surveys of the subjective impressions of all affected residents. Unless such surveys are taken, we do not believe an accurate prediction can be made regarding noise effects of the Project. Lastly, in evaluating whether such noise effects (or any other effects to people) are considered "adverse", we request that EFSEC and BPA rely not on statutory definitions based on decibel levels. Rather, a conclusion that an effect will be "adverse" should be determined by whether the effect will unreasonably diminish the enjoyment of day-to-day life. [LTR 119, CMT 4]*

**Response**: The World Health Organization (WHO) "Guidelines for Community Noise" (WHO, 1999) indicates the following on "annoyance" in its Executive Summary: "The capacity of a noise to induce annoyance depends upon its physical characteristics, including the sound pressure level, spectral characteristics and variations of these properties with time. During daytime, few people are highly annoyed at $LA_{eq}$ levels below 55 dB(A), and few are moderately annoyed at $LA_{eq}$ levels below 50 dB(A). Sound levels during the evening and night should be 5-10 dB lower than during the day. Noise with low-frequency components requires lower guideline values. For intermittent noise, it is emphasized that it is necessary to take into account both the maximum sound pressure level and the number of noise events. Guidelines or noise abatement measures should also take into account residential outdoor activities." The above citation suggests a range of 50-55 dBA $L_{eq}$ for daytime outdoors, or 45 dBA $L_{eq}$ for outdoors at night. (In fact, 45 dBA is the level indicated for "outside bedrooms" in Table 1 of the Executive Summary.) Table 3.7-12 shows the results of a refined predictive noise analyses using the same Cadna/A modeling program as used for the DEIS, but applying or adding new parameters, as shown. Previously, the potential for a "worst case" of a receiver being subject to a "downwind" condition was discussed only qualitatively. Note that the predicted levels for the "worst case"

Scenario "D" for the two representative receiver locations to the southeast of the Project Area, R1 and R3, are almost 5 dBA higher than that of the original "wind neutral" analysis (i.e., no wind direction was favored or indicated in the model). However, under this same condition of wind approximately blowing from the West, which meteorological data cited in the DEIS suggests would be the most likely or prevalent to occur, the predicted noise at R2 would be about 9 dBA lower. Three additional Scenarios (A, B, C) show how the predicted aggregate operating wind turbine noise may vary at the three representative receiver locations based on changes in temperature, relative humidity, and whether all wind turbines are operating at the same time. Please note that the commenter may have misinterpreted the "20+ dB" noise isopleth (contour). The figure referred to in the comment shows only the predicted absolute project operational noise effect (i.e., wind turbines running), not the sum of operational noise plus ambient background, nor the ambient background itself. Thus, while operational noise at a particular location might be 20 dB, when this is logarithmically added to the ambient background for that location, the increase will depend on what the ambient level is. For example, if ambient background noise is 30 dB, adding 20 dB of project noise would not be perceivable (i.e., 30.4 dB combined effect), as shown: 10 log [ 10(20/10) + 10(30/10) ] = 30.4 dB Put another way, a doubling of equivalent sound sources (e.g., 30 dB + 30dB) is a 3 dB increase, which is generally regarded as just perceivable to adults with normal hearing: 10 log [ 10(30/10) + 10(30/10) ] = 33 dB Also, the inverse square law ( 1/r2 ) applies when the receiver distance from a sound source is doubled, i.e., doubling the distance lowers sound intensity by a factor of four, or 6 dB: 10 log [ { 10(30/10) } / 4 ] = 24 dB.

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**Comment**: *The noise would be tolerable as the turbines are now more than 1 mile away from the nearest home. Eliminating the A1-A7 turbines would bring the Whistling Ridge project in line compliance with current scientific studies indicate the need for larger setbacks to avoid these issues. It is interesting to note the shear amount of documentation in the DEIS on noise, causing me to believe that this can be a problem and really needs to be addressed. [LTR 124, CMT 4]*

**Response**: Please see response to Comment LTR 119, CMT 4 above. Please note that all predicted noise levels remain below the 50 dBA nighttime threshold per Washington EFSEC guidelines; the maximum combined effect would be about 46 dBA.

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**Comment**: *The study did not use the noise levels defined by the manufacturer of the proposed towers and the generating station, which are larger and noisier than those discussed. Eliminating the A1-A7 turbines puts the noise levels within EFSEC limits even when using the actual towers and the generator facility that will be used in the Whistling Ridge project are used for noise calculations. It also would make the noise within EFSEC limits when computing the maximum anticipated noise levels, cumulative effects of multiple towers coupled with power generation/transfer and their impact to the surrounding community. [LTR 124, CMT 5]*

**Response**: Please see response to Comments LTR 60, CMT 6 and LTR 119, CMT 4 above. Note that all predicted noise levels remain below the 50 dBA nighttime threshold per WEFSEC guidelines; the maximum combined effect would be about 46 dBA.

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**Comment**: *The draft EIS offers no assurance that Whistling Ridge wind turbine siting will preserve a resident's right to enjoy the current peace and tranquility of his/her homesite. [LTR 139, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Mr. Richard James, an acoustical engineer, provided credible testimony (source provided you in May 2009 material) that wind turbines generate a type of noise that is not adequately measured by the dBA scale used in the Washington state noise standards. The dBA scale is designed to detect noises audible to humans. Wind turbines generate low-frequency noise (20Hz or lower) that might cause the body to resonate even if it is not audible. Such effects are measurable on the C-weighted scale (dBC). Your draft EIS dismisses the C-rated scale as insignificant and we quote: "The turbine sound power level manufacturing ratings show C-weighted levels are within 2dB of A-weighted levels. Therefore, low-frequency noise is not anticipated to be an issue for this project" (page 3-130 draft EIS). If this is factual (which cannot be verified given that the data below 31.6 Hz was not provided in the draft EIS) it would only measure 2 decibels difference at the source (wind turbine). The problem with this rationale has been scientifically proven. The difference at the affected homesites would be substantial, as the lower-frequency vibrations (dBC) travel greater distances than the higher dBA frequencies, attenuating at approximately half the rate of the higher frequencies. Thus, when you reach the homesites, the dBC values will be roughly 20 dB higher than the dBA values (see page 7, Kamperman and James). Further, the lower-frequency noise easily penetrates home structure, while the higher frequencies are somewhat attenuated by home structure, thus inside the home the difference between the dBA and dBC scales will be even greater (see page 11-12, Kamperman and James). This is why it is necessary to use the C-weighted scale in addition to the A-weighted scale. [LTR 139, CMT 5]*

**Response**: Low-frequency noise is generally characterized as ranging between 20 and 200 Hz, while the term "infrasound" is used to describe sound having frequencies lower than 20 Hz. Table 3.7-13 shows differences in dBA and dBC predicted at the three representative receivers R1, R2, and R3 – not at the source, the wind turbines. The table in Attachment C shows dBC vs. dBA for the five scenarios. As can be seen, only one result, Scenario A at R2, results in greater than a 10 dB difference between dBA and dBC ( i.e., 13 dBA). This is not significant since the sound levels are relatively low and nevertheless below Washington EFSEC thresholds, as shown in Table 3.7-12. It is important to note that the C-weighted level is calculated from the component values at nine octave-band center frequencies (31.5 through 8kHz), not just the lower frequencies, which is conservative since it yields upwardly-biased results. However, the wind turbine manufacturer's data used as input to the model did not extend below 31.5 Hz, therefore, the difference between levels at 125 Hz and 63 Hz were used to estimate levels below 31.5 Hz

by extrapolation (the octave band sound levels provided by the manufacturer are not "warranted" per se – only the overall dBA level is). In conclusion, the differences between dBC and dBA are significantly less than the 20 dB difference claimed by Kamperman and James. Per Leventhall (2006), Figure 3.7-2 illustrates the thresholds of human hearing at low frequencies. At 200 HZ, the threshold is about 16 dB for most persons, while at 20 Hz the threshold is about 80 dB, and at 5 Hz (infrasound) the threshold is on the order of 110 dB. While low frequencies and infrasound are audible, the sound power (pressure) needed to make them so increases exponentially as the frequency decreases. Thus, low frequencies at low power, such as those produced by distant wind turbines, are virtually inaudible, particularly if the sound level at any given frequency is more than 20 dB below threshold.

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**Comment**: *Even your cited expert G. Leventhal questions current measurement techniques in "Low Frequency Noise. What we know, what we do not know and what we would like to know", Journal of Low Frequency Noise, Vibration and Active Control, Vol. 28, Number 2,2009: "Does the way in which we measure low frequency noise hide some of its disturbing characteristics?" (p. 98) "Unfortunately, conventional methods of dealing with environmental noise stressors are A-weighted, which means that the presence of disturbing low frequency noise may not be detected ... chronic psychophysiological damage may result from long-term exposure to an audible low-level low frequency noise, which is left uncontrolled, despite complaints." (p. 95) Earlier in the draft EIS, before dismissing the need to use the C-rated scale you state, "C-weighting is often used to assess potential annoyance due to low-frequency noise that may excite vibration in structures" (p. 3-115). This is exactly what happens! Quoting yet another of your cited experts G.P. van den Berg from Do wind turbines produce significant low frequency sound levels?, presentation at 11th International Meeting on Low Frequency Noise and Vibration and its Control, Maastricht, The Netherlands, 30 August to 1 September 2004: "Although infrasound levels from large turbines at frequencies below 20 Hz are too low to be audible, they may cause structural elements of buildings to vibrate ... Perceptible vibrations of windows may occur at frequencies from I to 10 Hz ... sound pressure levels above 60 dB at frequencies below 10 Hz occur close to a turbine as well as at 750 m distance and further." (p. 7) This has been validated by the research of S.S. lung, W. Cheung, C. Cheong and S. Shin, Experimental Identification of Acoustic Emission Characteristics of Large Wind Turbines with Emphasis on Infrasound and Low-Frequency Noise, Journal of the Korean Physical Society, Vol. 53, No.4, October 2008. "...we found that the low-frequency noise of the 1.5 MW ... wind turbines in the frequency range over 30 Hz would very likely lead to psychological complaints from ordinary adults and that the infrasound in the frequency range from 5 Hz to 8 Hz would very likely lead to complaints about rattling house fittings, such as doors and windows." [LTR 139, CMT 6]*

**Response**: The selected quotations from the cited Leventhall paper and the mention of C-weighting in the comment appear to imply that dBC might be a better indicator of noise impacts. If this is the comment intent, please see the response to Comment LTR 139, CMT 5 above.

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**Comment**: *We strongly feel the 0.38-mile setback from the nearest residence is woefully insufficient. This is especially true in this area of canyons, bowls, and mountains, as the terrain*

*will contain, reflect and transmit the sound from the wind turbines greater distances than in typically used flatter terrain. The simplistic sound modeling and the limited collected data used in this draft EIS result in an inaccurate depiction of likely impact. (Decibel levels exceeding predictions has been documented by M.A. Nissenbaum at Mars Hill, 2010 and G.B. van den Berg 2006 in his work at the Rhede Wind Farm). [LTR 139, CMT 7]*

**Response**: The Applicant offers the following with respect to concerns about wind turbine noise and the nearby terrain. The modeled elevated hub heights tend to be distant from what might be sources of terrain feature reflection (e.g., a sheer, smooth cliffside). In other words, sound has to travel considerable distance before reflecting off of a qualifying surface, by which time it will have attenuated and thus have less influence on the aggregate sound at the given distant receiver. Furthermore, the wind turbines are not near the ground nor are they backed by a wall or some other nearby reflective surface. They are mounted high above these features, so that the turbine rotors can take full advantage of the wind resource at these upper elevations. Also, much in the same way a concert hall or interior performance space can be found to feature hard, irregular shapes and surfaces that diffuse incoming sound by reflecting it in many different directions, the irregular shapes and facets of rocks, boulders and cliffs would be expected to generally diffuse wind turbine generator noise, rather than concentrate or amplify it as the mention of mountainous "bowls" and "steep terrain" might suggest in this comment. Regarding treatment of terrain features, the prediction analysis in the DEIS and Application did include detailed "contour lines" to represent the actual Project Area and vicinity terrain features. Cadna/A handles this terrain presence in a manner as described from the software reference manual: "The topographical conditions or uneven terrain may cause shielding effects and affect ground attenuation in the propagation calculation. Furthermore, the absolute height of objects whose height has been given as a relative value is determined by taking into account the height of the terrain at the base of the object as resulting from contour lines and fault lines. For the calculation of shielding effects of elevated terrain, contour lines are treated like the top edges of barriers." The Applicant's documents have acknowledged that, under the right conditions, predicted aggregate wind turbine generator operation noise levels may exceed what is presented. Please see the response to Comment LTR 119, CMT 4 above, which shows quantification of variance from these predicted levels based on receiver position being "upwind" or "downwind" of the wind turbine layout in the presence of wind blowing at 12 m/s.

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**Comment**: *Again, we request that potential noise (dBA) and low-frequency (dBC) impacts be thoroughly investigated through valid baseline measurements and cutting edge computer simulations that will accurately depict for this mountainous area the sound emissions produced in worst case conditions, such as recommended by Kamperman and James, 2008. This would include ambient sound monitoring on all residential properties within and up to 2 miles of the project property boundary. [LTR 139, CMT 8]*

**Response**: Please see the response to Comment LTR 139, CMT 5 above, which describes a comparison between dBC and dBA at representative receivers and low frequency thresholds, and the response to Comment LTR 119, CMT 4 also above, which describes the additive properties of sound. Ambient sound monitoring on all residential properties within and up to 2 miles of the Project property boundary is inconsistent with reasonable acoustical practice, which seeks to

measure noise at representative and/or nearest identified noise-sensitive receivers under practical considerations including – but not limited to – available budget, schedule, cooperative climate conditions, property access permission, and safety considerations.

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**Comment**: *Prospathopoulos, J. M. and Voutsinas, S. G.'s work (Application of a ray theory model to the prediction of noise emissions from isolated wind turbines and wind parks ... in Wind Energy. Volume 10 Issue 2, Pages 103 - 119, published online: 6 Dec 2006, john Wiley & Sons, Ltd.) proves that the simple computer model employed in this draft EIS prediction is inadequate. "In cases of complex terrain ... simple projection models are no longer valid." The need for using more complex computational models than the ones employed for this draft EIS is well-documented by the U.S. Department of Energy Workshop Report: Research Needs for Wind Resource Characterization, Technical Report NREL/TP-600-4362I , June 2008 (Jointly sponsored by DOE Office of Science, Office of Biological and Environmental Research and DOE Office of Energy Efficiency and Renewable Energy, Wind & Hydropower Technologies Program). "Models routinely under-predict power performance likely due to; a misrepresentation of the vertical wind speed and turbulence profile, a lack of understanding of the impact of complex terrain on flow, fundamental errors in modeling of ray effects/wind turbine wakes and/or a combination of these effects" (page 38). "The utility in models ... that are based upon linear formation ... falls off rapidly when applied in relatively steep terrain or if the weather fluctuates much. Several non-linear formations have been developed... that allow for turbulence prediction in steeper terrain" (page 47). [LTR 139, CMT 9]*

**Response**: The Cadna/A noise model used for sound propagation prediction in the Application and DEIS, represents one of the leading tools among a class of popular, currently adopted, industry-vetted, commercially-available, and affordable software programs that are based on internationally-accepted algorithms and numerical techniques (e.g., ISO 9613-2). The Prospathopoulos work cited in the comment is an example the ongoing research and development of newer and/or more sophisticated noise prediction techniques by academia and industry. For an explanation of how the Cadna/A modeling program handles the effects of terrain on sound propagation, please see the response to Comment LTR 139, CMT 7 above.

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**Comment**: *In studying your draft EIS, we determined it does not demonstrate that any additional sound measurements were even conducted. It appears the limited data originally gathered by the SDS consultant was the only information utilized. An Independent Qualified Acoustical Consultant (unbiased third party with no financial or other connection to SDS or related companies) should have performed (not just reviewed what was provided) all sound monitoring, simulations and projections. It appears that no actual sound monitoring was conducted at any of the three closest residences. It is not depicted in the draft EIS and we must necessarily assume it was not done. "Measurement Location 2" sound monitoring appears to have been measured almost 2 miles distant from the affected residence. "Measurement Location I" sound monitoring appears to have been measured approximately at 1/2 mile distant beyond both the planned and the current residence closest to the wind turbines. No dBC scale measurements were conducted at all. Applying Kamperman and James methodology to even the*

*current SDS application noise data for receiver ID3 (the closest residential property), shows that the noise level would increase from 26 dBA (using Kamperman and James recommended $L_{90}$, rather than the $L_{eq}$ depicted in draft EIS Table 3.7-4) to 42-plus dBA during nighttime operation (draft EIS Table 3.7-9) ... an increase in excess of 16 dBA. This considerably exceeds (by more than 3 times) the 5 dBA recommended by Kamperman and James, as well as the Government of South Australia EPA Protection Authority Environmental Noise Guidelines, in preventing health risks! Further, it exceeds the 10 decibel EPA guidelines and is thereby considered "serious and warranting close attention". A 10 dB increase almost always causes adverse community response (page 14 of the "How To" guide). This is a more accurate depiction of what people will be subjected to at 2 a.m. (when attempting to sleep) than what is presented in this draft EIS. The need for the draft EIS to more accurately represent nighttime ambient background noise level is further supported by the U.S. Department of Transportation "Transit Noise and Vibration Impact Assessment", May 2006 (Chapter 5: General Noise Assessment, pages 5-14 & 15) ... "In areas away from major roadways, noise from local streets or in neighborhoods is estimated using a relationship determined during a research program by the U.S. EPA.(2) EPA determined that ambient noise can be related to population density in locations away from transportation corridors, such as airports, major roads and railroad tracks, according to the following relation: Ldn =22+ 10log(p) (in dBA) where P = population density in people per square mile." In the USDOT document Table 5-7, Estimating Existing Noise Exposure for General Assessment, it shows that the estimated $L_{eq}$ for nighttime is 25 decibels for a population density of 1-100 per square mile. The closest homesites certainly fall within this category. Given that the draft EIS did not include measurements at the closest residences, a figure of 25 dB as estimated by EPA must be used, rather than the convoluted and inaccurate estimate of 34-35 dB depicted in the draft EIS (Table 3.7-9, page 3-128). The draft EIS computer prediction model (Cadna/A) depicts on Table 3-7.7 that wind turbines were treated as "point" source with no information provided to suggest that the computer simulation treats each array as a "line" source - even though they are arrayed in a line. "Point" sources attenuate (drop) at a rate of 6 dB per doubling of distance. "Line" sources attenuate (drop) at a rate of 3 dB per doubling of distance. There is ample scientifically proven evidence both from: NASA studies (Prediction of the Far Field Noise from Wind Energy Farms. Shepherd, K. P. and Hubbard, H.H 1986, NASA-CR-177956) "At intermediate distances the array acts like a line source for which the theoretical decay rate is 3 dB per doubling of distance or 10 dB per decade. Only at the extreme distances, greater than one row length or 900 m, does the decay rate approach the single source value of 6 dB per doubling of distance or 20 dB per decade"; (page 4) and van den Berg's 2006 thesis (The sound of high winds: the effect of atmospheric stability on wind turbine sound and microphone noise. Rijksuniversiteit Groningen), cited in your draft EIS, that demonstrates wind turbines arrayed in a line, as they are projected to be at the Whistling Ridge site, may operate as a "line" source. This phenomenon is a well-documented fact by the US Department of Transportation (May 2006 - Transit Noise and Vibration Impact Assessment) that individual cars traveling on a highway can be treated as a "point" source, while multiple cars traveling in a line have to be treated as a "line" source. The same is true of railcar transportation. (That is why sound barriers are erected on heavily traveled highways - to protect nearby residents.) [LTR 139, CMT 10]*

**Response**: Please see the response to Comment LTR 139, CMT 5 above, which describes a comparison between dBC and dBA at representative receivers. Ambient sound monitoring was conducted at locations considered, at the time of the field study, representative of western and

southeastern areas of the Project vicinity populated with noise-sensitive receivers, as explained in the response to Comment LTR 139, CMT 8 above. Additionally, please see response to Comment LTR 119, CMT 4 above.

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**Comment**: *The draft EIS leads people to believe that the sound from the line of wind turbines will drop at a rate of 6 dB. "As a general rule, at distances greater than 50 feet from a noise generator such as a wind turbine, SPL drops at a rate of 6dB with each doubling of distance." (Page 3-114). This, in our opinion, is inaccurate for wind turbines arrayed in a line on a ridge in mountainous, bowled and irregular terrain. We feel the negative sound impact to be experienced by this community's residents is grossly underestimated. The only way to mitigate this impact is to set the wind turbines back further from the closest non-participating properties. The "How To" Guide referenced above clearly articulates how to go about setting such standards. Simple reliance on the Washington State Environmental Noise Levels, Chapter 173-60 WAC (enacted 35 years ago, before large industrial wind turbines were even developed), is not enough. The acoustical experts' "How To" Guide approach is to locate a wind turbine so as to not increase preconstruction/operation background sound levels by more than 5 dBA along the property lines of the receiving non-participating property. And, such that it would not exceed a total of 35 dBA within 100 feet of any occupied structure. (Page 15) Additionally, we refer you to the low-frequency sound limits also depicted on page 15. NOTE: In previously provided expert testimony, Mr. James recommended a minimum distance of 1.2 miles between turbines and residences. [LTR 139, CMT 11]*

**Response**: Consistent with typical industry-accepted practice, wind turbines are modeled as point sources in the Cadna/A modeling program, as they are individual sources of continuous noise and treated as such. While a "string" of turbines near a receiver will expose that receiver to multiple wind turbine generators and thus the likely additive effect of 3 dB per doubling of identical source quantity (please see response to Comment LTR 119, CMT 4 above), this is not the same as a "line" source that Cadna/A and other programs use to model rail and highway segments involving many mobile and intermittent sources of noise constrained to the geometry of a distinct line, segment or pathway. In the absence of statutory noise limits, such as regulations and ordinances, for a project vicinity or jurisdiction, it is the expectation of the acoustical expert would draw from practical experience, refer to appropriate standards, and use professional judgment or opinion to develop appropriate acoustical guidance criteria that may be used to assess noise impacts. The cited "How to" siting guide by Kamperman and James is one example of such offered guidance. However, for this project vicinity, there are existing State and County regulations regarding acceptable noise levels, and they are clearly defined as absolute criteria, by law. Were relative criteria such as the +5 dB over pre-project ambient offered by Kamperman and James the law of the land – which it is not – complications for determining impact assessment arise due to the nature of ambient environmental noise: it is subject to variance from a number of factors including seasonal presence of noisy wildlife (frogs, insects, migratory birds, etc.), climate (temperature, humidity), ground wind speed, levels of outdoor human activities (within a community or at an individual property), surface traffic, aviation over-flights, seasonal HVAC usage (air conditioners during the summer months) and precipitation (rainfall on roofs, road surfaces, etc.). The results of environmental impact analyses, noise or

otherwise, can only be legally evaluated against enacted statutes and promulgated regulations, not recommendations published in academic papers.

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**Comment**: *If industrial wind turbines are as "quiet" as represented, setting enhanced noise standards or requiring the meeting of standards used just across the river in Oregon should provide no difficulty for developers to meet. You now have an opportunity to make a strong statement illustrating BPA's and EFSEC's commitment to safeguarding the health of Washington's residents. We formerly provided as part of our May 6, 2009 testimony, documentation of potential health risks from sound: "Deputation (by Dr. Robert McMurtry M.D., F.R.C.S (C). F.A.C.S) to the Standing Committee on General Government Regarding Bill C-160 April 22, 2009 www.wind-watch.org/documents/wp_content/uploads/mcmutry-deputation-to-standing-committee.pdf);); a news release (March 4, 2009 www.windaction.org/documents/20306) from the Medical Staff of Northern Maine Medical Center regarding "Health Concerns and the Need for Careful Siting of Wind Turbines"; "Wind Turbine Syndrome A Report on a Natural Experiment" published by K-Selected Books; and work of New York physician Nina Pierpont M.D., Ph.D. at www.windturbinesyndrome.com . In late February 2009 the Office of Energy Security (OES), [the equivalent to Washington's EFSEC], requested that the Minnesota Department of Health (MDH) evaluate the possible health effects associated with low frequency vibrations and sound arising from large wind energy conversion systems to assist them in guiding decision-malting for future wind energy projects. MDH produced a 26-page white paper "Public Health Impacts of Wind Turbines" on May 22, 2009 (attached). [LTR 139, CMT 12]*

**Response**: Please see response to Comment LTR 139, CMT 11 above.

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**Comment**: *The following quotes are a summary (of the 26-page white paper) with excerpts of salient points especially applicable to the draft EIS. We feel you must give serious consideration and take appropriate action in adequately addressing the environmental and health issues of the proposed Whistling Ridge Energy Project. NOTE: Underlining that follows is our emphasis. Health Issues "Noise originates from mechanical equipment inside the nacelles of the turbines (gears, generators, etc.) and from interaction of turbine blades with wind. ... The most problematic wind turbine noise is a broadband "whooshing" sound produced by interaction of turbine blades with the wind." (Page 6) "The NRC (National Research Council of the National Academies) also notes that effects of low frequency (infrasound) vibration (less than 20 Hz) ... have been asserted to disturb some people." (Page 6) [LTR 139, CMT 13]*

**Response**: Please see response to Comments LTR 119, CMT 4 and LTR 139, CMT 5 above. Note that all predicted noise levels remain below the 50 dBA nighttime threshold per Washington EFSEC guidelines; the maximum combined effect would be about 46 dBA.

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**Comment**: *Sound: ".. low frequencies are not effectively attenuated by walls and windows of most homes or vehicles. (For example, one can typically hear the bass, low frequency music from a neighboring car at a stoplight, but not the higher frequencies.)" (Page 9) "Rhythmic, low frequency pulsing of higher frequency noise (like the sound of an amplified heart beat) is one type of sound that can be caused by wind turbine blades under some conditions." (Page 9) "The World Health Organization (WHO, 1999) suggests that A-weighting noise that has a large low frequency component is not reliable assessment of loudness." (Page 11) [LTR 139, CMT 14]*

**Response**: Please see response to Comments LTR 119, CMT 4 and LTR 139, CMT 5 above. Note that all predicted noise levels remain below the 50 dBA nighttime threshold per Washington EFSEC guidelines; the maximum combined effect would be about 46 dBA.

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**Comment**: *Noise from Wind Turbines: "Aerodynamic noise from a wind turbine may be underestimated during planning. One source of error is that most meteorological wind speed measurements noted in wind farm literature are taken at 10 meters above the ground. Wind speed above this elevation, in the area of the wind turbine rotor, is then calculated using established modeling relationships. In one study ... it was determined that the wind speeds at the hub at night were up to 2.6 times higher than modeled. Subsequently, it was found that noise levels were 15 dB higher than anticipated." (Pages 11-12) "Rhythmic modulation of noise, especially low frequency noise, has been found to be more annoying than steady noise." (Page 12) "Horizontal layers with different wind speeds or directions can form in the atmosphere ...called shear. If the winds at the top and bottom of the blade rotation are different, blade noise will vary between the top and bottom of blade rotation, causing modulation of aerodynamic noise. (Page 12) "...additional noise, or thumping, may occur as each blade passes through the transition between different wind speed (or wind direction) areas." (Page 13) "...in the nighttime the atmosphere can stabilize (vertically), and layers form. Consequently, blade noise would be greater at night." (Page 14) "A number of reports ... suggest that aerodynamic modulation is typically underestimated ... that detailed modeling of wind, terrain, land use and structures may be used to predict whether modulation of aerodynamic noise will be a problem at a proposed wind turbine site." (Page 14) "...noise from a wind turbine farm may be greater than noise from the nearest turbine due to synchrony between noise from more than one turbine..." (Page 14) [LTR 139, CMT 15]*

**Response**: The Applicant's documents have acknowledged that, under the right conditions, predicted aggregate wind turbine generator operation noise levels may exceed what is presented for the same reasons that are mentioned in the cited Herbrandson and Messing paper. Please see response to Comments LTR 119, CMT 4 and LTR 139, CMT 7 above, which show quantification of variance from these predicted levels based on receiver position being "upwind" or "downwind" of the wind turbine layout in the presence of 12 m/s wind and terrain effects, respectively.

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**Comment**: *Impacts of Wind Turbine Noise: "Some people are more sensitive to low frequency noise. The difference, in dB, between soft (acceptable) and loud (annoying) noise is*

*much less at low frequency ..." (Page 16) "Two studies in Sweden ... showed ... when noise measurements were greater than 40 dB(A), about 50% of the people surveyed (22 of 46 people) reported annoyance. When noise measurements were between 36 and 40 dB(A) about 24% reported annoyance (67 of 276 people). Noise annoyance was more likely in areas that were rated as quiet and in areas where turbines were visible. In one of the studies, 64% respondents who reported noise annoyance also reported sleep disturbance: 16% of respondents reported sleep disturbance without annoyance." (Page 17) " ... reports have catalogued complaints of annoyance and some more severe health impacts ... The most common complaint is decreased quality of life, followed by sleep loss and headache. Complaints seem to be either from individuals with homes quite close to turbines, or individuals who live in areas subject to aerodynamic modulation and, possibly, enhanced sound propagation which can occur in hilly or mountainous terrain." (Page 18) [LTR 139, CMT 16]*

**Response**: Please see response to Comments LTR 60, CMT 5 and LTR 139, CMT 5 above.

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**Comment**: *Noise Assessment and Regulation: "...lower noise levels (dB(A)) from wind turbines engenders annoyance similar to much higher levels of noise exposure from aircraft, road traffic and railroads." (Page 20) "The World Health Organization (WHO) recommends that if dB(C) is greater than 10 dB more than dB(A), the low frequency components of the noise may be important and should be evaluated separately. In addition, WHO says "[i]t should be noted that a large proportion of low-frequency components in noise may increase considerably the adverse effects on health." (Page 20) "... sound tends to propagate as if by spherical dispersion. This creates amplitude decay at a rate of about -6 dB per doubling of distance. However, low frequency noise from a wind turbine has been shown to follow more of a cylindrical decay at long distances, about -3 dB per doubling of distance in the downwind direction ..." (Page 23) "As one moves away from the noise source, loudness at higher frequencies decreases more rapidly (and extinguishes faster) than at lower frequencies. Measurement of A-weighted decibels ... obscures this finding." (Page 23) [LTR 139, CMT 17]*

**Response**: Please refer to the first paragraph of response to Comment LTR 139, CMT 11 above.

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**Comment**: *"Wind turbines generate a broad spectrum of low-intensity noise. At typical setback distances higher frequencies are attenuated. In addition, walls and windows of homes attenuate high frequencies, but their effect on low frequencies is limited. Low frequency noise is primarily a problem that may affect some people in their homes, especially at night." (Page 25) [LTR 139, CMT 18]*

**Response**: Please see response to Comments LTR 119, CMT 4 and LTR 139, CMT 5 above.

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**Comment**: *"The most common complaint in various studies of wind turbine effects on people is annoyance or an impact on quality of life. Sleeplessness and headache are the most common health complaints and are highly correlated (but not perfectly correlated) with annoyance complaints. Complaints are more likely when turbines are visible or when shadow flicker occurs. Most available evidence suggests that reported health effects are related to audible low frequency noise. Complaints appear to rise with increasing outside noise levels above 35 dB(A)." (Page 25) "The Minnesota nighttime standard of 50 dB(A) not to be exceeded more than 50% of the time in a given hour, appears to underweight penetration of low frequency noise into dwellings." (Page 25) NOTE: Washington State noise standards, which rely on dB(A), do not adequately take into account the low frequency noise generated by wind turbines. [LTR 139, CMT 19]*

**Response**: Please see response to Comment LTR 79, CMT 11 above, and the second and third paragraphs of response to Comment LTR 139, CMT 11 also above.

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**Comment**: *"For some projects, wind velocity for a wind turbine project is measured at 10 m and then modeled to the height of the rotor. These models may under predict wind speed that will be encountered when the turbine is erected. Higher wind speed will result in noise exceeding model predictions." (Page 25) "...if a turbine is subject to aerodynamic modulation because of shear caused by terrain (mountains, trees, buildings) or different wind conditions through the rotor plane, turbine noise may be heard at greater distances." (Page 25) NOTE: the mountainous terrain and bowl topography of the Whistling Ridge Energy Project area will likely amplify the low frequency noise, more acutely impacting nearby residents than is suggested by the project's dB(A) modeling projections. [LTR 139, CMT 20]*

**Response**: Please see response to Comment LTR 139, CMT 7 above. Also, the individual $L_w$ input for each wind turbine in the model is based on data reported by the manufacturer according to the IEC-61400-11 standard. Above a wind speed of about 8 m/s, the source $L_w$ does not increase further because the rotor speed is limited. Wind speed at the hub may indeed be higher than that at 10 m, but above certain wind speeds the wind turbine is already at its power extraction peak and may even be shut off for safety or equipment life reasons.

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**Comment**: *We feel this white paper is particularly relevant as it was produced by two Ph.D. Toxicologists for a public health state agency as requested by that state's agency equivalent to Washington's EFSEC. It depicts how low frequency noise generated by wind turbine farms may indeed, be more pronounced at night, exacerbating sleep problems and related health issues. It points out that the current methodology of most meteorological wind speed measurements and modeled projections can significantly underestimate the actual noise levels experienced. In our opinion, this paper and its findings, reinforces the need for quality independent sound measurement and modeling, as well as the wisdom of using the Kamperman and James "How To" Guide to Siting Wind Turbines to Prevent Health Risks from Sound. [LTR 139, CMT 21]*

**Response**: Please see response to Comment LTR 79, CMT 11 above regarding health effects. Please also see response to Comment LTR 317, CMT 15 below regarding concerns about the Kamperman & James "siting guidelines."

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**Comment**: *We specifically request: New sound impact determinations/predictions be conducted (not simply review the current estimates) by an Independent Qualified Acoustical Consultant, preferably by Kamperman and James. [LTR 139, CMT 26]*

**Response**: Please see response to Comments LTR 119, CMT 4 and LTR 139, CMT 5 above, for additional modeling results.

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**Comment**: *[We also request t]hat a proven complex, 3-dimensional computerized sound propagation model, using both dBA and dBC scales and based on the most current and best available science, be used to more accurately predict sound impacts in this mountainous terrain in an effort to protect people's sleep, health and quality of life. [LTR 139, CMT 27]*

**Response**: Please see response to Comments LTR 119, CMT 4 and LTR 139, CMT 5 above, for additional modeling results. The Cadna/A modeling program is an example of a 3-dimensional sound propagation analysis tool, like SoundPLAN and others offered in the marketplace for this application. These programs also represent the most current and best industry-vetted software available for this application, as described in the response to Comment LTR 139, CMT 9 above.

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**Comment**: *The DEIS failed to evaluate the potential health effects of wind turbines on local residents. There is ample evidence that low-frequency noises, shadow flicker, and nighttime lighting associated with wind turbines can be injurious to the physical and mental health of people living in the vicinity of turbines. ("Summary of Recent Research on Adverse Health Effects of Wind Turbines," Compiled by Keith Stelling, October 20, 2009.) While many or even most people might not find noises, lights or flickers annoying or even noticeable, they can be severe-and in some cases life-changing-for a minority of the population. Regardless of whether these impacts affect everyone, they can affect some people, and must be evaluated in that light. [LTR 161, CMT 12]*

**Response**: Please see response to Comment LTR 79, CMT 11 above regarding health effects. Additionally, please also refer to Section 3.6, Public Health and Safety.

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**Comment**: *Three blade wind turbine generators are not simple windmills since large variations in wind velocities subject the longest propeller blades ever made to constantly changing stresses and strains. Wind velocities may vary over time for periods of days, hours,*

*minutes, and even seconds (micro wind bursts). These winds create a host of aerodynamic conditions such as laminar flow, turbulence, vortices, and variable angle of attack on the blades, flexing of the blades, tower wind-wake, and ground boundary layer effects. For 100 meter rotor diameter and revolution times of 1 per second, the rotor tips have the velocity of 700 mph, which exceed the local velocity of sound and as such produce audible shock waves. It is obvious that the servo mechanism must rapidly furl the blades to save the system from destruction. A practical operating regime of 3 seconds per revolution produces rotor tip velocities of 230 mph and noise levels of around 50 decibels. A wind turbine with an efficacy of 0.33 and a lifetime of 20 to 30 years may rotate 95 to 142 million times. These millions of propeller rotations produce flexings and stresses in the three blades which can lead to dislocations and stress fractures in the blades. Three-dimensional mathematical modeling of the aerodynamics and stresses associated with revolving turbine blades require the use of large parallel processing computers to solve the tensor Navier Stokes equations and the tensor stress strain equations covering the surface and volume of the turbine blades, rotor, and tower. The computer results are compared to the scaled-up data resulting from aerodynamic wind tunnel tests of smaller versions of the wind turbine which leads to more efficient designs. [LTR 170, CMT 5]*

**Response**: Comment acknowledged. Please note that engineering analysis of wind turbine mechanics and aerodynamics is beyond the scope of this EIS for such devices.

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**Comment**: *[In reference to DEIS] Section 3.7.1.3, Affected Environment: The Applicant intends to harvest trees in the vicinity of the project site prior to construction. This section should discuss whether the harvest of trees will affect the validity of the preconstruction sound study with a specific focus on the residential sites identified in the first paragraph of Section. [LTR 177, CMT 50]*

**Response**: Noise from tree harvesting is considered part of construction noise associated with the Project. These effects were assessed with spreadsheet-based noise calculations in the DEIS. The Project would use conventional construction techniques and equipment, including excavators, bulldozers, heavy trucks (e.g., water truck, dump truck), and similar heavy construction equipment. Specialized construction equipment for logging, foundation building and other tasks using special equipment (e.g., heavy duty cranes) may be needed. Since trees would be harvested mainly to clear wind turbine sites along the ridgeline, not the lower slopes of the ridge, no substantial difference in operational sound propagation below the ridgeline would be expected due to removal of trees only at the top of the ridge. Please see response to Comments LTR 119, CMT 4 and LTR 139, CMT 5 above for modeling results.

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**Comment**: *[In reference to DEIS Section] 3.7.1.3, 3.7.2, Impacts, [t]his section should discuss on-site alternatives regarding the placement of wind turbine towers and potential noise impacts. [LTR 177, CMT 51]*

**Response**: The concerns over turbine corridor A1-A7 are noted. As discussed in the EIS, however, the Project has been proposed as an “integrated whole”, meaning essentially as a single

power plant, not as a dissectible project where some turbines may be eliminated. An alternative that would eliminate turbine corridor A1-A7 therefore was considered and eliminated from further study. Nonetheless, in determining whether to issue a site certificate and enter a site certificate agreement for a proposed generation project, it is within authority of the State of Washington to condition approval of the proposed Project, consistent with RCW 80.50 and other applicable state statutes. In the draft certification agreement, EFSEC is empowered to include "conditions to protect state or local governmental or community interests affected by the construction or operation of the energy facility." See RCW 80.50.100. These conditions essentially serve to mitigate potential environmental or social impacts of the proposed Project. Accordingly, certain conditions, such as limiting the location of proposed turbine corridors, could be considered as a condition for project approval (i.e., as a form of mitigation related to the Project's potential impacts).

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**Comment**: *[In reference to] Section 3.7.2.2, [regarding] Low Frequency Sound: This is an phenomenon that is still being studied, and as such needs to be treated with caution and concern, relating to the impacts to nearby residents. There is ample material to garner sufficient doubt to the claims made in the DEIS. Time to comment is not sufficient, so SOSA must incorporate by reference the comments by Keith Brown and Teresa Robbins. Reference - Exhibit 2E "Tuning and Sensitivity of the human vestibular system to low-frequency vibration," Todd, Rosengren, Colebatch: Neuroscience Letters 444 (2008) pgs 36-41. Remedy - Impose a C-Scale (dBC) requirement for noise emissions from EFSEC permitted projects, in addition to the proposed 35 max total dBA nighttime, and 45 max. total dBA daytime levels mentioned above. [LTR 178, CMT 68]*

**Response**: Please see response to Comment LTR 139, CMT 5 above.

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**Comment**: *Many people are affected by the vibration and sound of the turbines. Again to put them so close to people and towns seems short sighted at best. [LTR 225, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I am a summer resident of White Salmon, near Northwestern Lake. I have visited wind farm sites to the East, in the Gorge, and have listened to the sound levels at various distances. I have also visited the farms at night and noted the impact of the flashing lights.. [LTR 237, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *My observations lead me to believe that noise levels at distances of a mile or more will most likely not be noticeable. [LTR 237, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Opponents, fearful of the turbine "noise" probably don't even notice the "rumble" of the trains at the bottom of Underwood Mountain. As with many daily sounds, it is something to which we can become accustom. [LTR 243, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Proponents dismiss wind power noise, but we know that people do not like the noise. They may seem quiet to a casual listener passing by, but it is different if you live within the sound of the machines and must listen to them every day and every night. Sometimes they are noisier than other times, sometimes they can be very noisy, and as they age they can become extremely noisy. [I]ndustrial noise is significant in rural areas because people are used to hearing natural noises. When Industrial noise is introduced the human ear goes right to it and experiences it as an annoyance. When industrial noise is heard in the country, where it is mostly unexpected, it is experienced as a 100% Increase in noise. This fact is not reflected in noise studies that tend to dismiss wind power noise as insignificant, and also to dismiss the Impacts. It may be of interest to you that nearby Klickitat County had to raise the noise level allowed in rural areas twice before wind power was determined to be within allowed limits. To us, this suggests that noise is a genuine issue. [LTR 256, CMT 15]*

**Response**: As mentioned in the response to Comment LTR 119, CMT 4 above, the World Health Organization (WHO) "Guidelines for Community Noise" (WHO, 1999) indicates the following on "annoyance" in its Executive Summary: The capacity of a noise to induce annoyance depends upon its physical characteristics, including the sound pressure level, spectral characteristics and variations of these properties with time. During daytime, few people are highly annoyed at $LA_{eq}$ levels below 55 dB(A), and few are moderately annoyed at $LA_{eq}$ levels below 50 dB(A). Sound levels during the evening and night should be 5–10 dB lower than during the day. Noise with low-frequency components requires lower guideline values. For intermittent noise, it is emphasized that it is necessary to take into account both the maximum sound pressure level and the number of noise events. Guidelines or noise abatement measures should also take into account residential outdoor activities. The above suggests a range of 50-55 dBA $L_{eq}$ for daytime outdoors, or 45 dBA $L_{eq}$ for outdoors at night. (In fact, 45 dBA is the level indicated for "outside bedrooms" in Table 1 of the Executive Summary.) The levels of 55 dBA $L_{eq}$ for daytime and 45 dBA $L_{eq}$ for nighttime are only 5 dBA different from the WEFSEC regulated limits, and on this basis would suggest that the latter is arguably a reasonable noise impact assessment indicator with respect to minimizing potential annoyance as perceived by project neighbors.

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**Comment**: *We appreciate that EFSEC and BPA recognized that more time was warranted in relation to public comment on the Whistling Ridge DEIS. We purposely limited our attention to the noise element portion of the DEIS and have continued to thoroughly review and research available information. Extensive and thorough perusal has deepened our concern and substantially confirmed the original deficiencies and suggestions we identified in our written and verbal testimonies dated June 16th and July 15th of 2010. We stand strongly by our original analysis. The DEIS is a poorly constructed house of smoke and mirrors ... 'don't look there, just over here', thus sadly misleading the public. It appears that rather than 'sleight of hand' it's 'sleight of facts'. We offer the following DEIS statements as some specific examples of additional deficiencies which are amply contradicted by current research. "Low frequency sound typically ranges from 100 Hz to 20 Hz ..." (DEIS p. 3-119) Multiple sources indicate the upper range of low frequency noise is 200 Hz: Leventhall (2004) Waye (2004) Kamperman and James (2008) Jung et al (2008) Thorne (2009) And even the DEIS cited British Wind Energy Association (2006) "These wind turbines are not a source of substantial low frequency noise." (DEIS p.3-115) "... low frequency noise is not anticipated to be an issue for this project." (DEIS p. 3-130) "... modern turbine designs have been modified to reduce or eliminate low frequency sound." (DEIS p. 3-131) These statements are thoroughly contradicted by the following current research, journal articles and expert opinion, demonstrating that there is significant low frequency noise emission by the upwind turbines slated for this project: Jung et al (2008) Thorne (2009 & 2010) Punch et al (2010) Kamperman and James (2008) James (2010) And even the DEIS cited van de berg (2006) "Research studies of low-frequency noise emissions from wind turbines have determined that low frequency noise is a function of the wind itself... low frequency modulation of audible sound does not imply the presence of actual low frequency sound or infrasound ..." (DEIS p. 3-130) The interaction of the blade with the wind creates low frequency noise. "... the BPF (blade passing frequency) noise of modern large wind turbines belongs to infrasound and low-frequency noise." "" ... the low-frequency noise of ... wind turbines in the frequency range over 30 Hz is found to be audible (or capable of being felt) by the average person and would probably lead to psychological complaints from ordinary adults." -Jung et al (2008) "The extremely low-frequency nature of wind-turbine noise, in combination with the fluctuating blade sounds, also means that the noise is not easily masked by other environmental sounds." -Punch et al (2010) "The blade passage frequency of this "swoosh" is only a temporal modulation of sound and should not be confused with low frequency sounds." (DEIS p. 3-130) "Sound generated by wind turbines has particular characteristics and it creates a different type of nuisance compared to usual urban, industrial, or commercial noise. The interaction of the blades with air turbulences around the towers creates low frequency and infrasound components, which modulate the broadband noise and create fluctuations of sound level." -Soysai and Soysai (2007) this "only temporal modulation of sound" (infra-sound, low-frequency, and higher frequencies) is the factor that makes wind turbine noise far more disruptive and intrusive than smooth noise. -Thorne (2009) Leventhall (2006) (your cited expert) states "A time varying sound is more annoying than a steady sound of the same average level" and should be "accounted for by reducing the permitted level of wind turbine noise." "... environmental noise effects are typically limited to subjective impacts (e.g., annoyance, nuisance, dissatisfaction) and activity interference (i.e., impacts to sleep, speech, and learning.). Despite attempts by prominent acousticians to quantify the association between measurable sounds levels and corresponding reactions of annoyance and dissatisfaction, there is no way to measure the subjective impacts of noise. Further, the aforementioned variability of individual human sensitivity and/or tolerance to noise defies creation of a common standard." (DEIS p. 3-115)*

*"Scientific articles suggest that low frequency noise does not pose a health risk (Leventhall 2006). There may, however, be some correlation between an individual receptor's psychological sensitivity to the noise source (like or dislike for the noise source) and complaints regarding discomfort from that noise source. These are sometimes associated with complaints regarding sleep disturbance. Because sensitivity to noise can be influenced by such psychological factors and can subjectively be deemed significant by an affected individual, regardless of measurable frequency or amplitude level, it is difficult to quantify these impacts or to impose mitigation." (DElS p. 3-130) The cited article by Leventhall addresses primarily infrasound, noting the difference between infrasound and low frequency. It presents, however, no scientific evidence to prove that wind turbine low-frequency noise poses no health risk. Conversely ... " There is no medical doubt that audible noise such as emitted by modern upwind industrial wind turbines sited close to human residences causes significant adverse health effects ... This is settled medical science." "There are many peer-reviewed studies showing that infra and low frequency sound can cause adverse health effects, especially when dynamically modulated. Modern upwind industrial scale turbines of the types now being located in rural areas of North America require study. The extent to which infra and low frequency noise from wind turbines inside or outside homes causes direct adverse effects upon the human body remains an open question." - The Society for Wind Vigilance (2010) "There is ample scientific evidence to conclude that wind turbines cause serious health problems for some people living nearby." "The reported health effects, including insomnia, loss of concentration, anxiety, and general psychological distress are as real as physical ailments, and are part of accepted modern definitions of individual and public health." "The reports that claim that there is no evidence of health effects are based on a very simplistic understanding of epidemiology and self-serving definitions of what does not count as evidence. Though those reports probably seem convincing prima facie, they do not represent proper scientific reasoning and in some cases the conclusions of those reports do not even match their own analysis." -Phillips (2010) "In weighing the evidence, I find that, on the one hand there is a large number of reported cases of sleep disturbance and, in some cases, ill health, as a result of exposure to noise from wind turbines supported by a number of research reports that tend to confirm the validity of the anecdotal reports and provide a reasonable basis for the complaints. On the other, we have badly designed industry and government reports which seek to show that there is no problem. I find the latter unconvincing." (emphasis added) - Hanning (2009) Years of experience and the current research of Dr. Thorne (2010) compels his opinion that noise from wind turbine farms, if placed too close to a residence (within 2000 meters), does pose quantifiable risks for potential adverse health effects. "There is increasingly clear evidence that audible and low-frequency acoustic energy from these turbines is sufficiently intense to cause extreme annoyance and inability to sleep or disturbed sleep in individuals living near them." -Punch et al (2010). The DEIS statements that "there is no way to measure the subjective impacts of noise", and "it is difficult to quantify these impacts or to impose mitigation" lack credibility. The EPA standards were based upon measurements of the subjective impacts of noise. The European Union has invested considerable resources in investigating the impact of wind turbine noise. Current research by Pederson (2007) is devoted to determining subjective impact from various levels of wind turbine noise. The Thorne Ph.D. thesis 2009, Assessing Intrusive Noise and Low Amplitude Sound, specifically addresses this topic. While it may require effort to determine subjective impact and annoyance, to suggest that it is impossible to mitigate for this flies in the face of all the scientific work that has been and is currently being done to mitigate the impact of highway, rail, airline and now wind turbine noise. Need we state the obvious? To mitigate, increase the setback distances so that the most sensitive*

*individuals (typically young children and aging adults) are likely to be unaffected. To provide for the welfare, health and an adequate margin of safety for people, Horonjeff (2010) forwards a well-researched argument based upon current evidence of adverse impact in rural areas. Reduce allowable decibel levels in a rural environment by 15 dB from that allowed in urban and/or suburban areas. This would be considered as recommended practice in the current American National Standard (ANSI S12.0-2005/Part 4). Another approach he recommends to achieve an adequate margin of safety would be to establish set back distances of 1.5 to 2 miles. To determine necessary setbacks, the prediction models need to be based upon best available science and technology. The inadequacies of the prediction model used for the DEIS we identified in our earlier testimony are validated in Chapter 6 of Thorne's 2009 dissertation. It indicates that wind turbines need to be considered as a complex line source and further, that using the hub height in the prediction models (as done in the DEIS) can under predict by 7 decibels. He demonstrates that using broad lines for contours (rather than the fine line contours which are presented in the DEIS) presents a more complete picture of the probable impact. He also quantifies adjustments that must be made to account for other factors, such as 'in-phase beats', and fluctuations from two or more turbines (factors that significantly increase decibel levels experienced over and above the predicted levels). Such factors need to be built into the predictive calculations. These issues are also articulated in his Noise Impact Assessment Report Waubra Wind Farm. -Thorne 2010. A revised DEIS needs to be based on best available science ... not the same old template that obscures reality and significantly underestimates the adverse impact. Continuing to turn a blind eye to the growing and ample body of scientific and medical evidence would simply be unacceptable and potentially tragic. [LTR 261, CMT 1]*

**Response**: Please see response to Comments LTR 139, CMT 5 and LTR 79, CMT 11 above.

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**Comment**: *I am worried about the impact to human health due to turbine noise and light flicker. [LTR 270, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *Wind turbines are dangerous pieces of noisy machinery and they should not be put on top of ridges or on steep slopes. At least this is what I think. The lack of information on the environmental, cumulative impacts of wind turbines on lands and soils [LTR 281, CMT 21]*

**Response**: Comment acknowledged.

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**Comment**: *I will see the turbines from our property, and most likely also hear them. And although I live up in the Little White Salmon River Canyon Valley I can hear the trains running along both sides of the Columbia River, I hear the barges as they go up and down [LTR 282, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section 3.9.3.1, Proposed Action] [s]peaking of moving parts - these turbines are machines. Machines make noise. How much noise does each turbine make? [LTR 286, CMT 60]*

**Response**: Please see response to Comment LTR 60, CMT 6 above. The "machine" noise referred to by the commenter would be the noise from the gearbox, generator, yaw drive, cooling fans, and related systems inside the wind turbine nacelle. These sources of noise are not considered dominant when compared to the aerodynamic noises associated with the rotor blade turning in the oncoming wind, as they are elevated high above ground level. Section 3.7 of the EIS presents an evaluation of potential noise impacts.

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**Comment**: *I fear that the beats from the turbines will have the "dripping faucet" effect. Sometimes, especially at night, our sensitivity to tiny sounds is enhanced [probable adaptive value: detection of predators creeping through the underbrush]... [LTR 315, CMT 14]*

**Response**: Please see response to Comments LTR 79, CMT 11, LTR 119, CMT 4, and LTR 139, CMT 5 above. Note that all predicted noise levels remain below the 50 dBA nighttime threshold per Washington EFSEC guidelines; the maximum combined effect would be about 46 dBA. Section 3.7 of the EIS presents an evaluation of potential noise effects.

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**Comment**: *WEFSEC needs any more prompting to take sound pollution seriously, it should check out an article in the July 31, 2010 edition of the NY Times Online by William Yardley ("Turbines Too Loud for You? Here, Take $5000"). It describes the difficulty Oregon citizens near Ione, OR have had with wind-tower noise, aggravated by the absence of an effective enforcement mechanism for state noise laws. [LTR 315, CMT 15]*

**Response**: Comment acknowledged.

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**Comment**: *New wind developments in Washington should be placed on hold until the nature of sound pollution is more fully understood and rules are established to protect the neighbors of wind farms. How should the WEFSEC react to this concern in a way which does not sink all wind-farm proposals? Start by avoiding sites close to communities and preference sites where there is no serious objection from the neighbors. [LTR 315, CMT 16]*

**Response**: Comment acknowledged.

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**Comment**: *More technical evaluation of wind-turbine "beat" acoustics also is advisable, especially to determine for sure whether there is any reason for concern in the areas of Willard and Mill A with maximum population density, on the order of a mile distant from the wind farm. It also would be valuable to know how wind direction and velocity affect propagation of this kind of sound, as Willard and Mill A are upwind during the most common wind conditions. [LTR 315, CMT 17]*

**Response**: The DEIS mentioned the possibility of "beats" under the right conditions. Please see the response to Comment LTR 119, CMT 4 above, which shows refined Cadna/A model results that include prevalent wind direction.

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**Comment**: *The noise portion of the Draft EIS should accurately predict and fully describe potential adverse impact of the probable and worst-case scenarios. This Draft EIS in our opinion fails to do this. This draft ignores the substantial work that has been done since 1996 in developing regulations and guidelines specific to appropriate and ecological siting of wind turbines. The EPA Region 10 Guidelines stat that an increase of 10 or more decibels over existing background noise will result in significant negative community reaction and would be considered serious warranting close attention. The DEIS proposes to allow 50 decibels. [LTR 317, CMT 14]*

**Response**: Please see response to Comment LTR 119, CMT 4 above, which shows refined Cadna/A model results that include prevalent wind direction; and, Comment LTR 256, CMT 15 above, which compares WHO guidelines with Washington EFSEC requirements. The response to Comment LTR 139, CMT 11 above also discusses regulatory topics. Regarding EPA guidelines, the commenter may be confusing advisable increases above background (effect) with combined levels (background + effect). Note that all predicted noise levels (background + effect) remain below the 50 dBA nighttime threshold per Washington EFSEC guidelines; the maximum combined effect would be about 46 dBA.

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**Comment**: *We provided in May 2009 the extremely useful recent research and relevant Kamperman James, "How to site Wind Turbines to Prevent Health Risks from Sound" which appears to have been ignored in the preparation of this DEIS. [LTR 317, CMT 15]*

**Response**: The "Siting Guidelines" paper from Kamperman and James was not included due to concerns about its content and conclusions. For instance, Leventhall has recently prepared a technical critique (Leventhall, 25 August 2009) which concludes that "*Kamperman & James have: failed to show that there is a general problem from infrasound and low frequency noise from wind turbines, requiring control criteria; failed to show that a C-A difference of less than 20 dB would be an appropriate criterion limit at the low levels of wind turbine noise; failed to give any indication of what proportion of residents they believe to be adversely affected*." The noise analysis instead relies on work such as the recent paper (Colby et al, 2009) mentioned in the response to Comment LTR 79, CMT 11 above. Please also see the response to Comment LTR 139, CMT 11 above for an additional discussion of Kamperman and James.

**Comment**: *Wind turbines noise is annoying to 35% of people at 40 decibels. Zero percent report high annoyance to aircraft, road traffic and railway noise at the same level. Wind turbines are clearly in a different class of sound impact and require a different standard. [LTR 317, CMT 16]*

**Response**: Please see the response to Comment LTR 256, CMT 15 above. While this comment does not reference a citation, authors of statistical tools, such as Schultz and others, realize that attempts to quantify trends of "annoyance" or other human response or reaction are based solely on subjective data and should be used with appropriate caution.

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**Comment**: *No additional measurements to the limited measurements taken during icy conditions originally provided by the SDS consultant. These were not even taken at the closest property lines or homes. Measurements need to be taken at the correct time and location for affected homes. [LTR 317, CMT 17]*

**Response**: Ambient measurements were conducted in winter, which, due to the absence of summertime seasonal noise sources (e.g., insects, birds, increased outdoor activity for recreation, etc.), was considered more likely to produce lower ambient noise levels and thus define a more conservative baseline condition. Measurements were made at representative locations for the two regions west and southeast of the Project Area that are populated with residential land uses.

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**Comment**: *The DEIS analyzed wind speed measured at 10 m high, extensive research shows this will underestimate the wind speeds at the hub by a factor of as much as 2.6 and underestimate the wind turbine noise by as much as 15 decibels. [LTR 317, CMT 19]*

**Response**: Please see response to Comment LTR 139, CMT 20 above.

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**Comment**: *The noise impacts is totally inadequate in the Draft EIS and needs to be redone. [LTR 317, CMT 20]*

**Response**: Please see response to Comment LTR 119, CMT 4 and LTR 139, CMT 5 above for a presentation of refined wind turbine noise prediction results.

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**Comment**: *A study by Michael A. Nissembaum (medical dr.) states that there's absolutely no doubt that people living within 3,500 ft of a ridge line arrangement of turbines in a rural environment will suffer negative effects. [LTR 317, CMT 21]*

**Response**: Please see response to Comments LTR 79, CMT 11, LTR 119, CMT 4, and LTR 139, CMT 5 above. Note that all predicted noise levels remain below the 50 dBA nighttime

threshold per Washington EFSEC guidelines; the maximum combined effect would be about 46 dBA.

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**Comment**: *Please read the entire 200-dissertation of Mr. Van den Berg [LTR 317, CMT 22]*

**Response**: Comment acknowledged.

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**Comment**: *All the noise documentation in the Draft EIS causes me to believe that this can be a problem and really needs more than just an academic dissertation on the topic of sound. The most recent science should be considered in this study. [LTR 317, CMT 26]*

**Response**: Please see response to Comment LTR 79, CMT 11 above.

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**Comment**: *The study did not use the noise level defined by the manufacturer of the proposed towers and the generating station which are larger and noisier than those discussed. It is unacceptable and reckless to conclude the noise would be within limits if you don't think the actual towers that are going to be used or the worst-case towers that are going to be used and the generation facility and all the cumulative effects of those things at once. Please add that to your study. [LTR 317, CMT 27]*

**Response**: Please see response to Comment LTR 60, CMT 6 above.

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**Comment**: *I did not hear any sound coming from the turbines. [LTR 318, CMT 23]*

**Response**: Comment acknowledged.

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## G.3.8 LAND USE AND RECREATION

**Comment**: *As far as the space occupied by these turbines is concerned, they hardly take considerable space. What's more, due to their height, even the land below these turbines can be used for other purposes, such as farming. When we humans build a house or barn on a lot or acre are we not also denying the use of that small portion of land to anything but a house or*

*barn? And God forbid anyone who tells you that you have no right to build a home or barn on your land! [LTR 1, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Although wind turbines can be very tall each takes up only a small plot of land. This means that the land below can still be used. This is especially the case in agricultural areas. [LTR 1, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *We all know that huge subsidies are paying for these developments. Why can't they be placed where the majority of tax payers are benefited and not impacted negatively? [LTR 22, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to support the wind project at Whistling Ridge. This is an industrial forested area and has been subject to harvesting for decades and will continue in that capacity. It is not sensitive habitat and it will not become sensitive habitat--it is industrial timber lands. [LTR 31, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The project is a compliment to the ongoing sustainable foresting operations. Furthermore, the useful life of turbines is expected to be 20 - 25 years. At which point a decommissioning and dismantling would effectively render their impact entirely unnoticeable. [LTR 40, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *I have read that agriculture and wind farming are actually quite compatible land uses… [LTR 43, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This is a good project but quite simply, the wrong place. [LTR 59, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This project is compatible with the forestry zone of the surrounding property and it is compatible with the neighboring lands that are zoned agriculture. [LTR 72, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Wind power is important however every possible location is not the right location for windmills. Every windy ridge is not the right place for a wind farm. It is not necessary to put this wind power development in. There are too many people, livestock and wildlife in this area. [LTR 73, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Eminent Domain: the right of the government to take property from a private owner for public use by virtue of the superior dominion of its sovereignty of all lands within its jurisdictions. Many times, over many years - the government has used the power of eminent domain to take property. Skamania County witnessed this in 1986 when Congress passed Public Law 99-663: The Columbia River Gorge National Scenic Area Act. This action, in and of itself was not a physical taking for which compensation was paid. It was a legislative action that caused, and continues to cause great economic hardships for individuals and communities within its boundaries. Twenty four years later - a different sort of eminent domain is trying to grasp hold, and take something from Skamania County. Again, it isn't a physical taking - but it is a taking that has the potential to exacerbate economic hardships and impede solid, community friendly developments like the Whistling Ridge Energy Project. This taking is done when special interest groups use financial resources to seed public hearings with naysayers, and in essence – drown out the voice of residents whose communities are most directly affected by the proposed project. [LTR 78, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This wind power application involves several precedents: No large wind power installations are in or next to the Gorge Scenic Area, and none in the Pacific Northwest are located on forest lands. Impacts on wildlife and timber harvest in such locations are essentially little studied and unknown. Wind is a legitimate source of power production, but only if it does not conflict overly with other values. In this case, placing multiple wind turbines which would*

*remove hundreds of acres of sustainable tree harvest on forest lands favored by many forms of wildlife immediately adjacent to the Gorge Scenic Area appears substantially unwise. [LTR 79, CMT 19]*

**Response**: Comment acknowledged.

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**Comment**: *Ownership. The Whistling Ridge Energy Project is located entirely on lands owned by two private entities. There are no other private or public parcels intermingled. This may seem like a small detail. However, different ownerships have different management philosophies and perhaps different levels of commitment to a project and can jeopardize the project as a whole. Having essentially a single landowner ensures the commitment to the project and helps guarantee the success. [LTR 155, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *In addition, the draft EIS found no significant impacts to plants and wildlife in the area. The lands in the project area are currently managed for intensive silviculture and have been harvested using heavy machinery multiple times. This area is neither natural nor a pristine environment. These are "working" lands and have been for a very long time. [LTR 155, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Visual resources/site location. The proposed Whistling Ridge project is also important because it would set a precedent for siting wind projects on designated forest land in this state. This is important because many potential wind generating sites are located on Washington's forest lands. As the Whistling Ridge DEIS shows, wind energy and forest management are highly compatible. Wind energy becomes an additional renewable resource to be managed on forest lands. Washington's ailing forest industry needs to diversify whenever and wherever possible. The potential for wind farm siting on forest lands creates additional revenue diversification opportunities for large and small forest land owners alike and will help keep forest lands from being developed or used in other manners incompatible with forest management. With each recession, timber producers are at the mercy of the markets. This most recent downturn has been particularly hard on the industry, its workers and suppliers, and communities like White Salmon, Bingen, Stevenson and Carson. The proposed forest ridgeline site is low value for timber production. The proposed site provides great north/south topography for wind. The proposed site is also surrounded by mountains which significantly limits any visual impacts. Furthermore, the nearest existing residential structure to the proposed project is approximately 2500 feet, which is a greater setback distance than those structures located near the recently-approved Kittitas Valley Wind Power Project. [LTR 162, CMT 3]*

**Response**: Comment acknowledged.

**Comment**: *Surface Mines and Reclamation Issue: DNR permits and regulates surface mining reclamation on state and private lands. The proposal calls for at least 2.5 miles of new road construction as well as significant improvements and widening of the existing forestry roads to handle the oversized loads not associated with timber management. Since this work as proposed is being performed primarily to facilitate a wind power project, the DNR will not allow the use of aggregate from pits or quarries that do not have an active surface mine reclamation permit. Request: Please note that aggregate used to improve/construct roads, or for construction of Whistling Ridge project related foundations and infrastructure must come from a permitted surface mine, not from a forestry pit or quarry locations (exempt/unpermitted surface mine sites). [LTR 172, CMT 19]*

**Response**: This information has been included in the EIS and as part of the mitigation action plan that was produced with the FEIS.

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**Comment**: *LAND USE REGULATION. This section of the DEIS includes discussion of applicable land use regulations. The only land use regulations discussed are the Skamania County's comprehensive plan and land use regulations. EFSEC has previously taken up the issue of land use consistency during proceedings held on May 6, 2009. Comments and briefs were filed by various parties during that time, including SOSA. Instead of making a decision on land use consistency at the time, EFSEC decided that this issue would be passed to the project adjudicative hearings. Accordingly, we find it inconsistent with the Council's responsibility to enter conclusions regarding land use consistency in the DEIS before it hears evidence in adjudicatory hearings. This is plainly prejudgment of a matter before the Council in violation of the appearance of fairness doctrine. As to the sections of the DEIS dealing with land use regulation, a determination made that the proposal is "consistent" with the Skamania County comprehensive plan and development regulations is erroneous. SOSA has provided comments on that subject in its letter to the Council dated May 6, 2009 which is attached hereto and incorporated by reference herein. In that letter SOSA provided detailed legal authority and factual background that demonstrated that the construction and operation of wind turbines at the location proposed by the applicant is clearly contrary to the 2007 Skamania County Comprehensive Plan. Since the zoning code of the county preceded the 2007 comprehensive plan, it cannot be considered to implement any of its terms. Fundamentally, Skamania County has never considered whether or not wind turbines are appropriate in any part of the County, much less within the conservancy designation in the comprehensive plan. As described in SOSA's May 6, 2009 letter, consideration of a draft ordinance that might have regulated the wind turbines was abruptly dropped, and never taken up again, by the Skamania County Commissioners after they learned they had to do an environmental impact statement before considering it. The apparent attempt of the DEIS to blame "local interest groups" for keeping the old zoning ordinance in effect is accordingly misplaced. The statement in the DEIS at page 3-145 that the "proposed updates are currently under appeal by local interest groups" is wrong. As noted in SOSA's May 6, 2009 letter attached hereto, Skamania County did not appeal the ruling against it by the Hearing Examiner and her decision is final. In summary, the proposal is not consistent with local planning and zoning regulations and the findings and conclusions regarding this ISSUE should be revised for the final EIS. [LTR 175, CMT 5]*

**Response**: The first sentence in the first full paragraph on page 3-152 of the DEIS under the subheading "Consistency with Applicable Land Use Regulations" has been deleted. The information presented in the remainder of the paragraph and in the text under the subheadings "Skamania County Comprehensive Land Use Plan" and "Skamania County Zoning Ordinances" is consistent with the position of the Skamania County Board of Commissioners as described in Resolution 2009-54. The phrase "...because the proposed updates are currently under appeal by local interest groups" has been deleted from the last sentence in the first paragraph under "Section 3.8.2.2 Skamania County Zoning Ordinance SCC Title 21" on page 3-145 of the DEIS.

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**Comment**: *[In DEIS Section] 3.8.3.1, Proposed Action, Changes to Existing Land Use Patterns and Recreation, Project Operation, p. 3-151: In this section, the authors suggest that the project will not impact local agricultural tourism because wineries located in southeastern Washington are "thriving" despite the fact that there are four wind power facilities located between Walla Walla and Kennewick. This paragraph should be redacted. Correlation does not establish causation. Without more detailed analysis, the fact that wineries and wind power operations co-exist in Walla Walla County should not be used to predict the environmental impact of this project in Skamania County. [LTR 177, CMT 54]*

**Response**: The referenced text was intended to show that wind power and winery tourism can co-exist in the Columbia River area. As described in Section 3.8.3.1 of the EIS, the Project would not be expected to cause changes to existing land uses, land use activities, or development patterns.

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**Comment**: *General Comment on DEIS - It appears that BPA may have initiated agreements with the landowner for specific parcels of land, which would be premature prior to the completion of an FEIS, perhaps even a ROD. Remedy - BPA must not enter into contractual agreements or commitments until the lawfully allowable time. [LTR 178, CMT 134]*

**Response**: BPA has not entered into any agreement concerning the purchase of land for the proposed BPA substation or any other facilities related to the proposed Project at this time. Nor has BPA begun any negotiations for such an agreement or undertaken necessary activities (such as parcel surveys or assessment of value) to actually purchase the property. As is typical in interconnection requests, BPA and the Applicant have discussed requirements for the proposed BPA substation in order to sufficiently develop a proposal for analysis in the transmission planning and environmental processes. The timing of any possible negotiations and agreement for a land purchase for the proposed substation is unknown at this time.

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**Comment**: *In reference to Exhibit 2D, page 1 - The forested area inside the "red oval" above was not logged. Note that both sides have been clear cut in 2003-4 on this 70%+ slope. Ref FPA's 2702754 and 2702799. This location is on the west slope at the south end of the proposed project, in the middle of Turbine String A1- A7. The SEPA responsible official should*

*investigate the nature of this area being restricted from logging, and what other information the DNR might have on this issue. [LTR 178, CMT 144]*

**Response**: As described in Section 2.1.6, all of the parcels on which the Project is located are managed for a continual cycle of growth, harvest, and replanting. Timber harvests on the site have typically occurred approximately every 50 years; however, the harvest periods vary depending on the market and the demand for the type of timber. Additional harvests are planned and are subject to requirements of a Forest Practice Application.

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**Comment**: *This is the only project for which multiple other agencies, including the United States Forest Service and the National Park Service, have recommended substantial modifications to the project. This is the only project proposed adjacent to a National Forest. This is the only project that would cause significant adverse impacts in two states (not just Washington). This is the only proposed project surrounded by recreational and cultural resources. And last but certainly not least, this is the only proposed project that would cause significant adverse impacts to a National Scenic Area. Because of these unique factors, the agencies must take a special, close look at the impacts. [LTR 179, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS Prematurely and Erroneously Concludes That the Project Would Be Consistent With the Applicable Land Use Regulations. A. The Land Use Consistency Determination in the DEIS is Premature. The DEIS concludes that the proposed project would be consistent with the applicable land use regulations. DEIS 3-152. The DEIS further states that the project would be consistent with the Comprehensive Plan vision and the Conservancy designation in that it would conserve and manage existing natural forest and wind resources to maintain a sustained yield and utilization of both. Id. These and all other statements in the DEIS regarding consistency with applicable land use regulations are premature, because EFSEC has not yet concluded its land use consistency process nor issued a determination as to whether the proposed project is consistent and in conformance with the applicable land use plans and zoning ordinances through the process required by WAC 463-26-110 and RCW 80.50.090(2). The DEIS erroneously contains consistency determinations long before the issue of consistency will be adjudicated in the land use process before EFSEC. EFSEC has effectively prejudged the consistency results by including its premature conclusions in the DEIS. The DEIS should be revised to remove all conclusions as to land use consistency. [LTR 179, CMT 39]*

**Response**: The commenter is correct in stating that EFSEC has not concluded the Land Use Consistency Determination process. However, the information on Pages 3-152 to 3-154 of the DEIS is correct and accurately reports the position of the Skamania County Board of Commissioners, as described in Resolution 2009-54.

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**Comment**: *Instead, the DEIS should state what the potentially applicable regulations are, and then state that EFSEC will reach a conclusion on consistency as part of its adjudicative process, and that the BPA will decide whether it concurs with that determination. At most, the DEIS could summarize the different arguments that have been made to date regarding the applicable regulations. But prejudging consistency long before the consistency process is complete is inappropriate and a violation of Friends' right to a fair and impartial adjudicative hearing. Contrary to the conclusions in the DEIS, the project is not consistent with applicable land use requirements. Friends will continue to address, via EFSEC's adjudicative process, the many reasons why the project is not consistent with the applicable land use requirements. [LTR 179, CMT 40]*

**Response**: Comment acknowledged.

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**Comment**: *We also direct Council to our comments on the land use consistency issues which are attached hereto and incorporated herein by this reference. [Attached are comments from May 7, 2009 Land Use Consistency Hearing, see PDF page 11] [LTR 186, CMT 19]*

**Response**: The distribution of turbines on the site was designed to optimize the use of available wind resources. Eliminating the seven southernmost turbines (A-1 to A-7) would cause the Project to be economically infeasible, according to the Applicant.

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**Comment**: *This site is driven by Greed and not quality of location for wind turbines. ...Bad for the future of wind farming and turbine acceptance. Please don't get me wrong, as I support wind farms and their development and was involved with a small wind turbine company in the late 70's and have witnessed the struggles that wind turbine development has faced. When I moved to the Gorge in 1984 there was a large Boeing proto type turbine in the Columbia hills, I visited often and spoke with the engineers. They were hopeful for this 120' span turbine but pointed out that the wind shear and turbulence was a huge factor in the placement of the turbine and it had to be taken down. This turbine was the prototype for all the turbines that are now being installed in the appropriate locations of the gently sweeping eastern basin of the Columbia River. Where topography and wind quality have created a rush of wind farms that are successful. A very positive point for the industry, Please do not make the a mistake of placing turbines in inappropriate locations as it will hurt the wind industry as well as disfigure a National treasure the Columbia River Gorge. [LTR 226, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Would the fact that SDS has already claimed an economic need for the DNR site, and the fact that infrastructure like transmission lines and roads would be close by encourage SDS to bid once more for the public lands site? We believe they would. [LTR 256, CMT 12]*

**Response**: For the proposed action, the DEIS evaluated what had been proposed to the lead agencies by the Applicant, as required by SEPA and NEPA. What was proposed does not include development of any additional turbines on adjacent DNR land, nor does it include the interconnection of any additional power to the FCRTS. In addition, as discussed in Section 2.3.2 of the DEIS, DNR was not interested in allowing development of wind turbines on the adjacent DNR land, regardless of any previously expressed wishes by the Applicant. Given this situation, not only was wind development of DNR land not part of the proposed action, it was also not considered reasonably foreseeable for the purposes of the cumulative impact analysis in the EIS.

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**Comment**: *[In reference to DEIS Section 3.4.1.1, Regional Environment; PDF pg. 49] If SDS is such a poor steward of their lands so that there is a mosaic of stand ages, few large, old growth conifers, and no late successional stands or old forest habitats, then I'm not quite sure why we would trust SDS to take care of and protect the 1000+ acres on the proposed wind farm site from further fragmentation and degradation! SDS's purported reason for proposing this wind farm is to help reduce the CO2 footprint of the Pacific NW. Then wouldn't it be better if they were growing more older and bigger trees which have been scientifically proven to store more CO2 then younger trees? Instead they have an area which has been under commercial forest production for the last century and average stand age has declined as a result of relatively short stand rotations and probably the practice of clear-cutting, a practice that should be prohibited in active forest management, has not helped the stands, either. [LTR 286, CMT 35]*

**Response**: Commercial timber harvest within the Project Area is subject to approval by the WDNR pursuant to the Forest Practices Act (Chapter 76.09 RCW) and the Forest Practices Rules (Title 222 WAC). The Forest Practices Rules establish standards for forest practices such as timber harvest, pre-commercial thinning, road construction, fertilization, and forest chemical application. The rules are designed to protect public resources such as water quality and fish habitat while maintaining a viable timber industry and are under constant review through the adaptive management program. (Source: *http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesRules/Pages/fp_rules.aspx*)

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**Comment**: *[In reference to DEIS Section 3.4.2.1, Proposed Action; PDF pg.79] Skamania County has failed to update its Title 21A Critical Areas Ordinance, to date. They began the process in 2006 and have not managed to get an updated Critical Areas Ordinance done, and this is 2010. There are new, updated Best Available Science and Best Management Practices that are not in Skamania County's Title 21A. Skamania County has also not updated its Title 21 Zoning, having failed to ram through a version that would have industrialized Skamania County. The version supported by the Skamania County commission was soundly rejected after appeals to the Hearings Examiner, who issued a 37-page decision (see attachment) stating that the county could not implement the commissioners' zoning unless they did an Environmental Impact Statement. The county declined that is the reason they punted (and circumvented the public) Whistling Ridge a.k.a. Saddleback to EFSEC. [LTR 286, CMT 40]*

**Response**: Comment acknowledged.

**Comment**: *I think that rural areas are being discriminated against by being littered with Federally subsidized wind farms whose impermeable surfaces and hundreds of miles of environment-destroying, prairie crisis-crossing maintenance roads are highly destructive to the rural environment. Why aren't these wind farms located in urban areas, areas which they primarily serve with their energy production? [LTR 314, CMT 4]*

**Response**: Utility-scale wind turbine developments typically require large undeveloped land parcels with average wind speeds greater than 15.7 miles per hour (measured at 164 feet above sea level). (Source: *http://www.nrel.gov/gis/wind.html*) These conditions are less likely to be present in urban areas and more likely to exist in rural settings. The Applicant has selected the current site for its proposed Project based on many factors, including: The site has a proven, robust wind resource. The site is large enough to accommodate enough wind turbines to produce a minimum of 70 MW of electricity. The site is owned and controlled by the Applicant. The site has a long history of commercial logging and associated absence of native habitat, reducing or eliminating the need to clear additional forest land. The site is uniquely suited for its access to on-site high voltage transmission in proximity to urban power markets. And lastly, the site is in proximity to the mill site and business offices of the Applicant.

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**Comment**: *I support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. I was raised in Hood River and spent my youth enjoying the White Salmon, Carson, Cascade Locks and Stevenson area natural beauty. I have been traveling and hiking the Gorge all of my life. Other states have sacrificed priceless treasures for expediency. Notably Hetch Hetchy valley to provide water for San Francisco. While the percentage of power/water supplied by this source has been reduced over the years, it is almost impossible to undo the dam and the infrastructure because of the entrenched interests in the system. [LTR 19, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *As there is big game there will hunting still be allowed - my husband would like to know? [LTR 75, CMT 2]*

**Response**: Yes, with land-owner approval.

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**Comment**: *We are writing to express our disappointment in the letter submitted by the National Park Service (NPS) to the Bonneville Power Administration (BPA) regarding the Whistling Ridge Energy Project. This letter mentions the project's proximity to the Lewis and Clark National Historic trail and the Oregon Pioneer National Historic Trail as well as it being adjacent to the Columbia River Gorge National Scenic Area as the basis for the Agency's objections. However, as you know, the National Trails System Act (NTSA) does not give*

*authority to regulate or restrict private land that is not part of the designated trail. In fact the only mention of scenic protection in the Act is in Section 7 (k) authorizing private parties to donate scenic, recreational or conservation easements that enhance the trail and have the donation considered as a public gift for tax purposes. Although the letter was clearly outside any authority the NPS has under the NTSA, you went on to make specific demands, including "at minimum removing turbine corridor A1-A1 from farther project consideration." The letter also asserts that "the visual quality of the region is specifically protected by designation of the Columbia Gorge National Scenic Area (CRGNSA) in 1986." However, the National Scenic Act does not provide any authority to regulate activities outside the National Scenic Area, which the letter acknowledges itself is the case with this project. The relevant section of the Act states: Per Section 17. Savings provisions (Sec. 554o) (a)Nothing in sections 544 to 544p of this title shall… (10) establish protective perimeters or buffer zones around the scenic area or each special management area. The fact that activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas. [LTR 83, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *In this letter, I provide comments on behalf of SOSA regarding the "Land Use and Recreation" chapter of the DEIS found at Section 3.8 at page 3-134 to 3-155. SOSA's comments will be divided between the recreation and land use sections. 1. RECREATION IMPACTS. The DEIS provides only a listing of recreational resources in the area with minimal discussion of the impacts that the wind turbine facilities will have on such areas. This discussion is inadequate. The DEIS should not only disclose the affected areas, but also the impacts on such areas. [LTR 175, CMT 2]*

**Response**: Section 3.8.3.1 of the DEIS included a description of potential temporary effects on recreation facilities during construction and potential long effects during operation. Potential effects on recreation during construction and operation are in most instances expected to be minor. The EIS acknowledges (DEIS page 3-151, fourth paragraph) that minor to moderate visual impacts could affect recreational users. These potential effects were discussed in Section 3.9, Visual Resources.

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**Comment**: *3.8 LAND USE AND RECREATION 3.8.1.2 Recreation The Mark O. Hatfield Wilderness Area is within a 25 mile radius of the proposed project. Environmental impacts to this wilderness area should be identified and discussed in this section. [LTR 177, CMT 53]*

**Response**: The Mark O. Hatfield Wilderness Area has been added to Section 3.8.1.2, included in Table 3.8-1, and shown on Figure 3.8-3. Figure 3.8-3 has also been re-titled "Recreation Areas and Facilities within Twenty-Five Miles of the Project Area." The wilderness area was not considered eligible as a Key Recreation View Point due to the relative lack of

individuals present, the distance of potential viewers in the Wilderness to the Project, and the lack of public accessibility in the area.

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**Comment**: *This is the only project proposed within three miles of the Lewis and Clark National Historic Trail, the Oregon Pioneer National Historic Trail, the Historic Columbia River Highway (designated as a National Historic District on the National Register of Historic Places, as well as a National Historic Landmark), and the Ice Age Floods National Geological Trail. [LTR 179, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Additionally, the Gorge offers unique recreational opportunities with its many side-river canyons, ridge tops, and the Columbia River itself. Hiking, bicycling, river rafting, kayaking, skiing, boating, fishing, camping, kite boarding, windsurfing, bird watching, and wildflower viewing are all pursued actively by the public throughout the Gorge. The overall character of the surrounding region highly scenic, ranging from wilderness to rural areas with quaint towns and spectacular vistas, rather than industrial or commercial. In its November/December 2009 issue, National Geographic Traveler ranked the Columbia Gorge region #6 internationally, and second in the nation, among "iconic destinations." The Gorge was ranked higher than all of the county's national parks that were surveyed, and higher than Tuscany, Italy; the Serengeti Plains; and Mount Kilimanjaro. A primary reason given by National Geographic for the Gorge's high ranking was the Gorge's international reputation for "an incredible job of protecting the views." [LTR 179, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *Today the Gorge contains hundreds of miles of hiking and bike trails through locales as diverse as misty river canyons and arid grassland plateaus. The Gorge also contains dozens of lakes, parks, campgrounds, and other recreational areas. [LTR 179, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *The Columbia River segment, which includes the portions of the Trail that would be affected by the Whistling Ridge project, was designated for three types of trail development: a water trail, a land trail, and a motor route. The Columbia River, Interstate 84 and Washington State Route 14 are designated routes. The Management Plan notes that there was a "nearly continuous string of recreation sites along this segment." Lewis and Clark Trail Management Plan at 70. Individual sites within sight of the Whistling Ridge Energy Project include Viento State Park, which is directly across the Columbia River from where the Lewis and Clark*

*Expedition camped on October 29, 1805 and April 13, 1806, and Starvation Creek State Park. L & C Management Plan at 74. [LTR 179, CMT 67]*

**Response**: Comment acknowledged.

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**Comment**: *As explained above, the Lewis and Clark National Scenic Trail includes the Columbia River, State Route 14, Interstate 84, Starvation Creek State Park, and Viento State Park. The DEIS fails to acknowledge these components of the National Historic Trail. The DEIS fails to acknowledge that Starvation Creek State Park and Viento State Park also provide river access for wind surfing, kite boarding, motor boating, canoeing and other water activities. The DEIS also fails to acknowledge that the City of Hood River is an international hub for windsurfing and that the project would be visible from multiple windsurfing locations. The DEIS also fails to recognize that the Little White Salmon River and the White Salmon River are internationally known in whitewater kayaking communities. [LTR 179, CMT 85]*

**Response**: The types of recreational activities mentioned by the commenter were described in Section 3.8.1.2 (page 3-139 of the DEIS). The level of detail on existing recreation activities provided in the DEIS is commensurate with the anticipated level of effects on those activities.

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**Comment**: *The DEIS states that "[o]n the Oregon side of the Columbia River, land use within the Scenic Area is predominately commercial timber production and residential." DEIS at 3-265. This is one of the more absurd errors in the DEIS. The Forest Service owns thousands of acres of public land within the Scenic Area on the Oregon side of the Columbia that is managed to protect natural resources and provide recreation opportunities, not for timber production. The leading land uses on the Oregon side of the Gorge, excluding urban areas, are conservation and recreation. [LTR 179, CMT 85]*

**Response**: The description of existing land use mentioned in the comment was a description of existing land use located both within the Project Area and the boundary of the Scenic Area. It was not a description of existing land use within the entire Scenic Area.

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**Comment**: *The DEIS states that "no parks or recreation facilities are planned within a 5-mile radius of the site, either as part of the Skamania County Parks and Recreation Master Plan or the Columbia River Gorge National Scenic Area Management Plan." DEIS at 3-139. This statement is patently wrong and ignores plans to restore and develop facilities at Mitchell Point as part of the Historic Columbia River Highway. While Mitchell Point is already owned by Oregon State Parks, the development proposals are certainly new and warrant acknowledgement. [LTR 179, CMT 85]*

**Response**: While additional detail on plans for recreational improvements could be added, the level of detail on existing recreation facilities provided in the EIS is commensurate with the anticipated level of effects on those facilities.

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**Comment**: *The DEIS failed to give proper consideration to impacts to recreational resources, including a failure to analyze whether the project would be consistent with the Management Plan for the Lewis and Clark National Historic Trail and the Historic Columbia River Highway Master Plan, or the recreation resource provisions of the CRGNSA Management Plan. While these plans do not have direct regulatory authority over the project (assuming no ground disturbance would occur in the National Scenic Area), the goals and policies could be frustrated by the project. There needs to be at least a discussion of the potential impacts. [LTR 179, CMT 85]*

**Response**: Section 3.8.3.1 of the EIS discusses concerns regarding the compatibility of the proposed Project with the objectives and policies of the National Scenic Area Plan. Because the Project would be located on private property and the proposed wind turbines would be located outside the boundaries of areas that fall under the Management Plan for the Lewis and Clark National Historic Trail and the Historic Columbia River Highway Master Plan, further discussion of those plans in the FEIS is not warranted.

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**Comment**: *Project construction activities would generate traffic delays that would adversely affect recreational users. Countless residents in the gorge hike, windsurf, or kayak every day of the week and use the roads that would be used as a haul route for this project to access these recreational spots. Industrial traffic and associated delays would have an adverse impact on these resources. For example, use of the east access for Cook-Underwood Road for this project would block access to a recreational trail along the White Salmon River. Similarly, the west access for Cook-Underwood Road is regularly used by whitewater kayakers to access the lower three miles of Little White Salmon River, which has achieved legendary status due to the challenging rapids and consistent water flows. By failing to fully acknowledge such impacts and prepare a traffic mitigation plan for public review, EFSEC and the BPA have foreclosed the opportunity to evaluate the project's true impacts and inform the public of these impacts. [LTR 179, CMT 85]*

**Response**: Potential temporary effects on traffic during the construction phase were acknowledged in Section 3.8.1.2 and were described further in Section 3.11. Please also see response to Comment LTR 179, CMT 87 under Transportation.

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**Comment**: *Project operation would also affect recreation. The DEIS section that addresses direct impacts of project development fails to mention recreation resources. DEIS at 3-153. Similarly, the cumulative effects section of the DEIS does not identify a single impact to recreational resources. DEIS at 3-279–3-280. The DEIS does acknowledge low to moderate*

*impacts to views, but fails to acknowledge that scenery is typically a central part of outdoor recreation. [LTR 179, CMT 85]*

**Response**: DEIS Section 3.8.3.1 concluded that "Project operation would not result in a sufficient increase in population or traffic to impact local recreational facilities and that the only potential impact to recreation users would be the minor to moderate visual impacts discussed in DEIS Section 3.9 Visual Resources." In addition, DEIS Section 3.9.1.2 describes how the visual impact analysis considered recreational viewers such as hikers, water recreationists, and mountain bikers. Furthermore, DEIS Section 3.9.2.3 describes the criteria used to select Key Viewing Areas (KVAs) for the visual impact analysis, which included viewpoints that were "most representative of the different roads, population areas, and recreation areas where views of the wind turbines would occur." The lead agencies believe that the EIS has adequately considered the operational effects of proposed Project on recreation.

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**Comment**: *As stated above, the scenic resource analysis was grossly inadequate. Recreation resources that were not acknowledged through the scenic resource assessment include Little Huckleberry Mountain, Nestor Peak, and Cook Hill. These hiking areas provide dramatic panoramic views of Mount Hood and Washington's southern Cascades. Impacts to these resources were completely ignored. The proposed development would be located in the heart of one of the greatest recreational destinations in the world. Windsurfers, kiteboarders, kayakers, and hikers come from around the world to this area, and the Gorge itself is recognized as a national recreational treasure. Beyond the international and national fame, the area surrounding the project is home to people who hike, boat, bird, view wildflowers, and explore mountains and forests as a primary recreational pursuit. The project would be located in the middle of many of these activities. The recreational impacts analysis warrants substantial revision to reflect the actual impacts to recreational resources. [LTR 179, CMT 85]*

**Response**: Issues related to Visual Resources are analyzed in Section 3.9 of the EIS, including visual impacts on recreation resources and trails.

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**Comment**: *The other marketing push in Hood River? Recreation and scenery, of course. Just as the State of Washington has concluded in its studies, "high-quality, natural, and outdoor recreation resources" are our primary asset and must be leveraged. They must also be carefully guarded to assure our economic health and well being. [LTR 186, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *With the exception of federal lands, and lands acquired by the Federal Government for preservation of trails, the Federal Government has no authority to regulate or restrict the use of private lands near trails designated under the National Trail System Act, for any reason, especially for purported visual effects on trail segments. Moreover, as described in*

*the Interior letter, the "trail" at issue here is coextensive with US Interstate 84 and Washington State Highway 14 which are not pristine "trail" segments - they are major, busy multi-modal transportation corridors, including the only sea level train route (on both sides of the Columbia River) through the Cascades, with over 80 commercial trains transiting per day. [LTR 197, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I have used this area for recreation and while losing this opportunity because of this project I still support the project. I do think this project is on the conservative side and should have been expanded. [LTR 224, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *It would cover more than 1,000 acres of land in an area that is prized as beautiful, wild recreation land, where people in Oregon and Washington go to get away from "civilization" and the city. [LTR 240, CMT 3]*

**Response**: Comment acknowledged.

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## G.3.9 VISUAL RESOURCES

**Comment**: *Many people find wind farms an interesting feature of the landscape. [LTR 1, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *Many people see large wind turbines as unsightly structures and not pleasant or interesting to look at and they disfigure the countryside and are generally ugly (In our current world some people see other people this way). If being Ugly becomes a deciding factor in this country then I will probably be out of a job real soon! [LTR 1, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *In addition, locating 426-foot-tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. [LTR 2, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 2, CMT 3]*

**Response**: Comment acknowledged.

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**Comment** *[The proposed Project] would complement the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. [LTR 3, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 4, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. This project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 5, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama*

*Point. This project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 6, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *We were hiking along the Deschutes River a couple weeks ago, and we could see the giant white wind turbines over on the Washington side of the Columbia. What an eyesore! It looks like "War of the Worlds". Wind energy is great, but why paint them glaring white? They should be a color that blends with the hills - a simple (partial) solution to the destruction of everyone's scenery, and it would not cost any more than painting them white. [LTR 7, CMT 1]*

**Response**: Although a brown turbine color would reduce visual contrast in views where the turbines are seen against the landscape or when the area is covered in snow, it would also accentuate visibility of the turbines where they would be seen against the sky. Section 3.9.4 describes mitigation measures that include the use of non-reflective flat neutral gray or light color since the turbines would most frequently be seen against the sky.

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**Comment**: *I am writing to concerning the DEIS for the Whistling Ridge Energy Project. The proposed project would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. This proposal would degrade the scenic value of the Columbia Gorge National Scenic area by placing turbines and blinking lights in places that would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. [LTR 8, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 9, CMT 3]*

**Response**: Comment acknowledged.

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**Comment** *…and this project will have minimal impact on views in the Gorge or on the surrounding environment. [LTR 10, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I have a comment on the impact of the Whistling Ridge wind project; it includes photos and is online at http://www.lensjoy.com/Blog/windmills_are_coming.htm. I am the author of the online article. Nestor Peak is a key viewing area used by hikers, mountain bikers, ATV enthusiasts, and horseback riders. If this project is built, the view of Mt. Hood from this peak will be permanently spoiled. In addition, the onslaught of wind turbines will continue to encircle the Columbia Gorge and destroy once pristine views of the ridges and horizon that were one of the primary reasons the National Scenic Area was created. Please deny the project application. It is not suited for the proposed location. [COMMENT VIA WEBSITE:] The Windmills Are Coming. The Columbia Gorge faces many development threats. This one wasn't even on the radar screen ten years ago. But in the past few years as I hike and even drive the roads something is slowly creeping into my conscious perception, bit by bit. As I drive east starting near Hood River, in the far distance there's now a white jagged appearance to the horizon. At the top of the McCall Point trail on any clear day the wind turbines are visible. Eastward from there, on just about any high peak one can see a forest of white pinwheels is growing. [PICTURE] The shot above was taken from the top of Stacker Butte, also called Columbia Hills State Park. It is just a small piece of a much larger panorama. I am providing the full image so you can appreciate the impact. Remember that it is copyrighted, so any publication or non-educational use must be licensed by contacting me. The view is toward the east with the farms of the Klickitat River valley in the foreground. Once you open it, you will see thousands of turbines. My camera isn't good enough to show the most distant ones, but if you look closely they extend almost to the left (north) and right (south) edges of the view. They are getting closer to the edge of the Scenic Area boundary. In fact, a project called Whistling Ridge is in the approval process right now just north of Hood River on the Washington side of the Gorge, and it will be on the edge of the boundary and visible from Nestor Peak and Mitchell Point. It is a galling insult to the spirit of the Scenic Area Act to place a wind energy project a stone's throw from the regional boundary and call it compliant with the Act. [LTR 12, CMT 1]*

**Response**: Comment acknowledged.

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**Comment** *…and it's obvious what they do to the view. [LTR 12, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Soon it won't be possible to go on a hike to a viewpoint anywhere in the eastern end of the Gorge and see a pristine east horizon. Most of it is already gone. The view of the horizon was something I took for granted. Today I realized it's been taken from us and might never come back. [LTR 12, CMT 8]*

**Response**: Comment acknowledged.

**Comment**: *The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 13, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 19, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I finally saw a picture of what this development was going to look like throughout the central Columbia River Gorge area. I am shocked to think that we are going to spoil the wonderful vistas and view of the Columbia River Scenic area by more wind mills. Just look to the Eastern gorge... once out of the scenic area you are bombarded with literally thousands of wind mills. Why now, should we start placing these within view of the prime area in the Columbia River Gorge? Once these are built, they will forever be a backdrop to this pristine area. Why, are the turbines 400' tall? This is nearly double the size of other installations. Could more and smaller turbines be used that would not be so visible? These issues are not merely cost/benefit decisions - they will impact the natural beauty of the Columbia River Gorge Scenic area for lifetimes to come. The decision should not be made lightly and should be scrutinized from every perspective. Ask the developers WHY, five times. [LTR 22, CMT 1]*

**Response**: Please refer to Section 1.2.3 which describes the Project's purpose and need. Wind turbine heights and number are chosen based upon the proposed Project needs, current design standards, and site characteristics. For this Project, if shorter turbines were utilized, more of the turbines would be visible due to the increased number of turbines needed to meet the Project's purpose and need. The use of taller turbines permits would result in fewer turbines. The proposed Project would cause some visual impact to surrounding areas where turbines were visible, including some areas inside the CRGNSA and these impacts would largely be low to moderate (see Section 3.9.5; on DEIS page 3-196).

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**Comment**: *Why are the turbines so tall? [LTR 22, CMT 4]*

**Response**: Please see response to Comment LTR 22, CMT 1 above.

**Comment**: *I support clean energy sources, but let's not unnecessarily sacrifice natural landscapes in the process. I've seen what this looks like. These windmills can be seen day and night, for miles around. That's the view from my grandmother's back porch in Haines Oregon now. Once dark night skies are now polluted by flashing red lights. So please, let's proceed with forethought. That said, I endorse this message from Friends of the Columbia Gorge. [LTR 23, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 23, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *The 426 foot turbines will be seen in the center of the Columbia River Gorge National Scenic Area during the day and also at night because of the red blinking lights on the top of the turbines. SDS has understated the visual affect on their maps which are meant to appeal to the public for support. [LTR 30, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Visual Impact – Not only will it be an eyesore for residents of this area, it will also negatively impact tourism. [LTR 33, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The turbines and the handful of lights from this development would be visible from the deck of my home which faces due west but these lights are minimal compared to the lights from downtown Hood River and the Heights of Hood River that are also in my viewscape. [LTR 35, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *We have traveled the mountains of Italy, Spain, and California and found no ill effects of the view or the esoteric feeling of the mountains, [LTR 37, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Locating the turbines on this ridge line where there are already existing electrical towers would cause no additional impact to the scenic value of the Gorge than the already existing utility works, and therefore no significant additional energy development into the forested landscape. [LTR 53, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Please consider the scenic impact of the proposed turbines and that they would be highly visible from several viewing areas in the Columbia River Gorge. We own a Bed and Breakfast here in Hood River and our view would change from a lovely night time star light sky with low household lighting to hundreds of flashing pulsating lights day and night. One reason so many folks come here from all over the world is to enjoy the mountain, rivers and special views our area has to offer. The National Geographic continually recognizes Hood River and the Gorge as one of the most beautiful and special places to visit. Exert below, but wind turbines over 400 ft tall, blades 230 across and flashing lights 24/7 would completely be in direct contrast to the natural beauty that draws in 640,000 tourists a year to the Gorge. [Excerpts from National Geographic Traveler, see PDF] The local economy depends on the tourist dollar and many tourists come to enjoy the view. [LTR 55, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *It is directly across the Columbia River from where I reside and I feel it would seriously detract from the natural beauty of our Columbia River Gorge. This is not a suitable site for this project and represents a special interest not the greater good. [LTR 56, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Typical Cloud line: Proposed Whistling Ridge turbine string will be in cloud/fog for part of the year. This is not covered in the EIS. For Hood River Whistling Ridge equals a major visual impact. [LTR 67, CMT 2]*

**Response**: In Section 3.9.1.3, the simulations prepared for the Whistling Ridge Project were prepared using photographs that exhibit some cloudy conditions.

**Comment**: *I was in Spain in 2008 and saw many windfarms - I found their movement enchanting and a thing of beauty. [LTR 69, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This project is proposed at a right time in our local and national energy needs but placed in the wrong place. The space Needle is around 605 ft. tall; these turbines could all be 426 ft. high. There is no way this project could be defined as "visually subordinate." If I want to see the Space needle, which also has a red light on top, I will go to Seattle. I don't want to see 50 space needles from KVAS in the CRG. [LTR 74, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *Friend of the Gorge has way too much time on their hands. Windmills have impact on views – what about White Salmon and the large houses on cliff! [LTR 75, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Avoidance of negative visual impacts is a primary objective of the Columbia Gorge Scenic Act, a fact that the draft purposely downplays. For example, no wind turbines are now visible from highways within the Scenic Area, but the draft indicates that they are. The draft achieves this misconception by making no distinction between views of turbines from the east end of the gorge outside of the Scenic Area and views from within the Scenic Area itself. Such intentional deception should be removed. [LTR 79, CMT 3]*

**Response**: Section 3.14 (and more specifically Section 3.14.3.10) discusses the cumulative visual effects of the Whistling Ridge Project when it is combined with other (built and as yet un-built) wind projects that are (or would be) either near or visible from the National Scenic Area (NSA). Windy Point is the most visible wind energy project from the NSA.

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**Comment**: *Considering item 3 above, plus information now in the draft (including "Adverse Effects that Cannot be Avoided") and much public testimony about visual concerns, statements like one on page 3-154 are inappropriate and should be excised or restructured; that arbitrary statement claims that: "The project would have only minor to moderate impacts on visual quality as viewed from travel corridors inside the scenic area." [LTR 79, CMT 4]*

**Response**: This statement is a summary of the findings contained within Section 3.9.

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**Comment**: *Subject: Wind farm siting and permitting officials can help lower the visual impact of wind farms by recommending the deployment of new AVWS technologies on wind turbines. While large wind farms generate clean energy, their constantly flashing red strobe lights cause great public annoyance and is usually not noticed until after the wind farm is sited and constructed. The wind farm's legacy can include this "light pollution" and have a tremendous negative impact on the community. For example, a 100-turbine wind farm can have approximately 30-50 turbines with two high-intensity flashing lights on at all times of the night. The effects of these flashing lights on the nearby community should be considered during the wind farm permitting and development process. Recently approved by the FAA, the new generation of "on-demand" lighting systems solves this problem by keeping all wind turbine obstruction lights OFF at all times - unless an aircraft is detected flying on an unsafe heading towards the wind farm. Only then does the turbine-based radar system turn the lights on for aircraft safety, and turn the lights off when the aircraft exits the airspace. [LTR 84, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *An Audio Visual Warning System (AVWS) is an on-demand lighting solution. Wind siting and permitting officials can request wind power developers to implement an AVWS into their wind farms to reduce these adverse visual impacts in your communities. An AVWS will benefit your community by: Lowering the overall environmental and visual impact of wind farms by reducing "light pollution" and increasing public acceptance in wind energy-producing communities. Reducing bird death rates in some areas since migratory birds are less likely to be attracted to wind farm lights and lured toward the operating turbines. Fostering more responsible siting practices and therefore overall positive and growth in the wind industry. [LTR 84, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Naturally, we assume that if a facility was proposed for construction near the CGSA that our EFSC would likely receive numerous comments about the visual impacts. One of the tools we are hoping to test in the near future on some of our joint State/Federal projects is their visual impact model. I don't know much about it, but it is at least a starting point for determining when an impact is significant. Viewshed degradation is becoming a significant issue associated with both the commercial wind projects and the large transmission projects. [LTR 85, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *In addition, locating 426-foot-tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic*

*Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 87, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Your clearcuts and proposed wind turbines will be visible throughout the Scenic Area for close to 20 miles. [LTR 91, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *The project will be very visible to Hood River residents who live at a higher elevation from Hwy 84. The area must remain pristine. Visual pollution is what Whistling Ridge will bring in the proposed location. [LTR 92, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *So you can see them. So what! I don't like green colored cars. Should I start a movement to prevent folks from having green cars who like them? Surely not! [LTR 100, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I find this project disturbing enough, but won't it also set a precedent for even more and possibly even higher windmills? I fear we will have opened Pandora's Box if we allow this project to move forward. Are these super tall, stark white, three-winged towers the only or best technology? Do windmills have to be so terribly "in our faces?" Cell towers are sometimes disguised as trees. Can windmills be more of the "eggbeater" design, painted to disappear a bit more and possibly disguised? Once these windmills are built, they will stand for decades - in use or not. [LTR 117, CMT 2]*

**Response**: Mitigation measures to reduce the visibility are discussed in Section 3.9.4. Mitigation measures would include ensuring that non-reflective flat neutral gray or light color to minimize visual impacts. Another measure includes using lights/strobes on turbines that meet FAA standards which would to some extent be shielded from ground level view due to a constrained (3-5 degree) vertical beam. Please also see also response to Comment LTR 7, CMT 1 above.

**Comment**: *Lights. Another complaint we have read about wind turbines regards aviation lights. We request that the EIS investigate what types of light (color, synchronization, quantity, etc.) would have the least impact to people and wildlife. We also request that the EIS evaluate what, if any visual effects aviation lights will have on the night sky in our community (for example, will we see reflections of the lights in the sky on cloudy nights, or even on clear nights?) Likewise, we have read of complaints' about "shadow-flicker" from wind turbines. We request that the EIS evaluate whether late afternoon "shadow flicker" will affect our residences, or be visible on the ridges to the east of our community: [LTR 119, CMT 5]*

**Response**: Turbine night-lighting impacts were discussed in Section 3.9.2.3. The necessity for night simulations was also discussed in Section 3.9.1. Section 3.9.4, Mitigation Measures, discusses utilizing non-reflective flat neutral gray or light color to reduce visual impacts. The impacts from shadow flicker are discussed in Section 3.6.2.1 (DEIS page 3-104). The closest residence is approximately 2,000 feet from the nearest proposed turbine string.

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**Comment**: *In addition, locating 426-foot tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. [LTR 121, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I hope that all towers can be sited in a way that truly minimizes the visual impact on Gorge residents and visitors… [LTR 133, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *While the Whistling Ridge Wind Project proponents deserve credit for responding thoughtfully to some of the previous objections to their earlier proposals, the revised proposal remains of great concern. If allowed the proposed wind mills will still seriously impact the beauty of the Gorge Scenic Area. As presently proposed viewers from numerous locations including parts of the cities of White Salmon, Underwood, and Hood River, as well as the Columbia River itself will have their views of the Gorge defaced by 425 foot towers of steel, rotating blades and flashing strobe lights. [LTR 135, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We see no evidence that the proposed mere "painting of the wind turbines a gray color" will adequately mitigate the profoundly detrimental effect on the truly unique and exceptional scenic and recreational resources wisely preserved and protected for the enjoyment of all through the Columbia Gorge National Scenic Area Act. "436" foot-tall wind turbines lining the scenic area would surely denigrate the scenic experience and we feel certain, was not remotely foreseen when determining the scenic area boundaries and thus, would undermine the intent of the Act. The draft EIS constructed visual representations of the turbines depicted against backgrounds of haze and clouds obscures the significant adverse impact that will be experienced by viewers. This draft EIS and its simulated pictorial representations shamefully understates the actual impact. [LTR 139, CMT 23]*

**Response**: Section 3.9.1.3 on preparation of visual simulations assumed the 2.5 MW Clipper Liberty model C93 with a height of 415 feet tall. Using this assumption, the EIS found that the Project would have moderate to low impacts from key viewing areas. In 16 USC Section 544O(a)(10), the National Scenic Act specifies that "no protective perimeters or buffer zones shall be established around the scenic area or each special management area." Additional discussion of the National Scenic Act appears in Section 3.9.2.3. As noted in Section 3.9.1.3, the visual simulations prepared likely overstate the visual impact by assuming a larger number of turbines. Atmospheric haze is discussed in Section 3.9.1.3. Simulated views that depict haze or clouds are representative of weather conditions in the Project Area.

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**Comment**: *No significant impact on scenic views. [LTR 140, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *All of the HCRH is a Key Viewing Area within the Columbia River Gorge National Scenic Area (CRGNSA). Portions of the HCRH that are a trail are designated as a National Recreational Trail. Portions of the HCRH are closer to the proposed project than the sites chosen for visual resource analysis. The Mitchell Point overlook is more visually sensitive than Interstate 84, both because it is higher in elevation and because it is a place where people stop and get out of their cars to take photos. It is closer to the proposed project than Viento State Park, Koberg Beach State Park and the Hood River to Mosier section of the Historic Columbia River Highway State Trail that were analyzed. This site should be analyzed for visual impact from the proposed project. [LTR 141, CMT 2]*

**Response**: The criteria used for selecting viewpoints are discussed in Section 3.9.2.3 (DEIS page 3-164). Locations were chosen based upon their representation relative to the Project Area, those that were most accessible to the public, and locations with the largest number of viewers. Mitchell Point features a variety of trails that would probably have views of the Project Area, but was not chosen because it is not frequented by the largest number of viewers and the views are only accessible by trail thus minimizing access and the number of visitors.

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**Comment**: *Residents do not even realize that if this project is built, most will never again be able to see anything but a full moon in the sky. In the last month there have been a plethora of lawsuits across the county initiated by residents dealing with the harmful effects from wind turbines located in their local areas. [LTR 142, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. The Columbia River Gorge is a National Treasure that people travel from around the world to see and experience. The draw is it's natural beauty; waterfalls, cliffs, rivers, mountain vistas. One can drive or hike countless areas in the gorge and be surrounded by exquisite beauty. However, these pristine views are in jeopardy of being lost forever if Wind Turbines are not kept from intruding onto these skylines. [LTR 151, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Also, my husband and I do not believe their placement will hamper the beauty of the Columbia River Gorge. On a recent trip from Carson, WA to Pendleton, OR along 184, we actually stopped along the freeway to take pictures of the windmills there because we thought they were so awesome and beautiful! Thank you for allowing us the opportunity to comment. [LTR 160, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Visual resources methodologies. In drawing the conclusions reached in the DEIS, three federal methodologies were used to evaluate visual impact assessment of the proposed project: (1) the Federal Highway Administration methodology (FHWA); (2) the U.S. Forest Service methodology (USFS); and (3) the Bureau of Land Management methodology (BLM). In addition, a "hybrid" methodology (FHW A and USFS), used in the Kittitas Valley Wind Power Project (KVWPP), was also used, totaling four visual impact assessment methodologies. Visual impacts are purely subjective in nature and vary greatly from person to person. AWB believes the four methodologies used in the DEIS are sound, comprehensive and sufficiently objective to measure potential visual impacts in reaching the DEIS conclusions - particularly when adding the fourth KVWPP standard, which is the most rigorous and comprehensive standard. Opponents of the KVWPP challenged the visual assessment before the Washington Supreme Court, with a unanimous court rejecting that challenge. For purposes of certainty, predictability and fairness, methodologies among various projects should be consistent. Proximity to (not inclusion in) a National Scenic Area should not impose a different standard. To do so would not only establish a buffer on the Scenic Area, but also would set a dangerous precedent of inconsistent visual standards and be very problematic for wind power*

*development throughout the state. In addition, this wouldn't just set a bad precedent for future wind projects - a new, higher standard for proximity to a scenic area could exclude other, non-wind, development such as electrical transmission, residential, commercial or industrial development that is otherwise compliant and consistent with applicable land use laws and regulations, and essential to Washingto's economic viability and ongoing prosperity. [LTR 162, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *U.S. DEPARTMENT OF THE INTERIOR COMMENTS. AWB recently received a copy of the U.S. Department of the Interior (Department) DEIS comment letter dated July 19, 2010. The Department raises concerns about visibility of the proposed project from the nationally designated Lewis and Clark National Historic Trail (NHT) and suggests elimination of several visible turbines from the site. AWB disagrees with this assertion. AWB is extremely concerned with the Department's comments on this application. The National Trail System Act, 16 USC §§ 1241-1251 (NTSA) does not, by mandate or implication, authorize the Department to regulate or restrict private lands or to even negatively comment on or oppose private projects proposed on private lands. In fact, the reference to this Act as authority for the comment letter is an abuse of federal authority and exceeds the policy directives of the NTSA. The Department's comments are particularly egregious here, where the comment would necessitate the conclusion that any land development or activity visible from any trail designated throughout the Western United States under the NTSA should be prohibited. Many thousands of miles of trails are designated throughout the Western United States under the NTSA. Here, the "trail" at issue is coextensive with U.S. Interstate 84 and Washington State Highway 14. These are not pristine "trail" segments - they are major, busy transportation corridors. It should be abundantly clear to the Department that man-made structures and activities are visible and will be seen along these highways where the most visible "impacts" on travelers are the many automobiles, semi-trucks, trains, transmission lines, and dams, as well as residences, commercial buildings and industrial facilities. Finally, consistent with the concerns raised above, elimination of visible turbines from view/proximity of the NHT would similarly be a direct violation of the CRGNSA "savings clause." The National Trails System does not have regulatory authority to affect such an outcome. Again, this would set a bad precedent and have negative implications for other non-wind related projects such as electrical transmissions systems, dams, and residential, commercial and industrial development. Thank you again for the opportunity to provide comments on this important matter! [LTR 162, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *Lewis and Clark National Historic Trail The proposed Whistling Ridge Energy project is located within five miles of the Lewis and Clark National Historic Trail (NHT), a congressionally-designated NHT, which follows the Columbia River and is within the area analyzed in the DEIS for potential visual impacts. In addition, US Interstate 84 and Washington Route 14 are the state designated Lewis and Clark auto tour routes in the project area. Many*

*visitors experience Lewis and Clark NHT by traveling the auto tour routes and stopping at interpretive and recreational sites along the way. The Department considers the viewshed along the river and auto tour routes to be a critical part of the trail visitor experience. The Lewis and Clark NHT was established by Congress in an amendment to the National Trails System Act in 1978. 16 U.S.C. § 1244(a). As administrator of the trail, the National Park Service (NPS) is charged under this Act with the identification and protection of the historic route, remnants, and artifacts of the trail for public use and enjoyment. Based on the analysis of visual impacts in the DEIS, it appears that a varying number of turbines will be visible from the trail's historic river and auto tour routes from near Koberg Beach State Park to Lindsey Creek State Park. This approximately 15-mile stretch of the Columbia River Gorge has numerous recreational opportunities and scenic views that add significantly to enjoyment of the historic trail. Of the five viewpoints along US Interstate 84 analyzed in the DEIS, Viewpoint 14 at Viento State Park, is rated in Table 3.9-2 as having an anticipated moderate to high level of visual impact. However, on page 3-193 of the DEIS, the potential visual impact for this viewpoint is stated as only moderate. Furthermore, it appears that the turbines were inadvertently omitted in the photomontage in Figure 3.9-11. While difficult to discern the impact at this location without clarification on the accuracy of the visual simulation, we believe that the impact should be rated as high given the placement of turbines on the skyline within four miles of a park located along the auto tour route. Turbine string A1-A 7 would be highly visible from numerous locations along the trail due to its placement on a ridgeline close to the Columbia River Gorge. The NPS recommends removing or relocating these seven turbines, if feasible. This would significantly reduce the impact to visual resources along the historic trail. The visual resources in this region-Columbia River Gorge National Scenic Area and Lewis and Clark NHT-are important resources that should be protected. [LTR 164, CMT 2]*

**Response**: This impact to Viewpoint 14 is considered moderate. The text on DEIS page 3-193 has been corrected in the Final EIS to say that that the impact would be moderate. Due to the minimal visibility of the turbines from this viewpoint, the turbines have limited visibility from Viewpoint 14 in Figure 3.9-11. The wireline drawing illustrates the relative visibility of the turbines against an elevational model devoid of vegetation. As noted in Table 3.9-2, the visual quality in the area of Viewpoint 14 is moderately high to high and the viewer sensitivity is moderate to high, therefore the conservative estimate for the level of impact would be moderate. A key factor in this impact assessment is the 6.43 km distance from the viewpoint to the Project, the number and sensitivity of the viewers, and the visibility of the Project from this viewpoint. Visual impacts to the Lewis and Clark National Historic Trail are discussed in response to Comment LTR 179, CMT 68 below.

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**Comment**: *THE WHISTLING RIDGE ENERGY PROJECT. The Whistling Ridge Energy Project is the right kind of renewable energy at the right time, but at the wrong location. Why is this the wrong location? Figure 3.8-2 of the Draft Environmental Impact Statement (DEIS) indicates that the Underwood and Mill A residents are much closer to the visible wind farm than any others, including the residents of Bingen, White Salmon, and Hood River. The tips of the wind turbine blades of the southern most wind towers will rotate within a few feet of the boundary of the Columbia River Gorge National Scenic Area. The wind towers will be highly visible from Underwood and Mill A, and other locations up and down the gorge. We believe this*

*is a visible insult to the unique beauty of the scenic area and the Lewis and Clark trail. How long will it be before developers start building wind turbine sites in juxtaposition to Mt. Rainier, Crater Lake, Yellowstone, Grand Canyon, etc., national parks? A specification for The Whistling Ridge Energy Project enumerated in the DEIS clearly indicates that construction of the project will be a major industrial development in and juxtaposition to the Scenic Area. [LTR 170, CMT 2]*

**Response**: Figure 3.9-2 provides a better depiction of how residences in Underwood and Mill A would be affected by Project visibility. Much of White Salmon and portions of Underwood would not have views of the Project, while Hood River, Mill A, and Bingen would have views of the Project.

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**Comment**: *Of particular concern is the impact that the turbine operations will have on these areas, particularly visual impacts. This section should be expanded to include impacts on key viewing areas within the scenic area and other areas affected by visual and noise impacts from wind turbine operations. [LTR 175, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The proposal has multiple serious environmental impacts, including severe impacts on the visual surroundings of the Columbia River Gorge National Scenic Area. [LTR 176, CMT 2]*

**Response**: Please see response to Comment LTR 22, CMT 1 above. The Project would cause some visual impact to CRGNSA KVAs but these impacts would largely be low to moderate (see DEIS pages 3-177 and 3-196).

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**Comment**: *Adoption of USFWS BMPs: The proponent should adopt the Best Management Practices set forth by the USFWS Wind Turbine Guidelines Advisory Committee. Most of the BMPs suggested by the committee are already in the DEIS, but a good faith effort should be made to meet all of these guidelines to minimize project impacts. One BMP not presented in the DEIS includes appropriate lighting of on-site facilities (in addition to the towers themselves) to control light pollution and maintain the dark skies needed by bats and migrating birds. [LTR 177, CMT 43]*

**Response**: Mitigation measures listed within Section 3.9.4 addressed potential impacts from night lighting. Not every turbine would be equipped with aircraft safety lighting as noted in Section 3.9.3.1. The minimal number of strobes would be intermittent and would not light up the evening sky. Section 3.6.2.1 describes additional measures, namely the use of motion-sensor lighting systems for the operations and maintenance facility. This would further reduce night-time lighting impacts.

**Comment**: *Consistency with Applicable Land Use Regulations, Columbia River Gorge National Scenic Area Management Plan, p. 3-154: Under the bullet point entitled "Scenic Appreciation and Scenic Travel Corridors," strike "only" from the discussion so that the sentence reads: "The project would have minor to moderate impacts on visual quality as viewed from travel corridors inside the Scenic Area." Trails and Pathways. The discussion in this section needs to be clarified. The project will have low to moderate visual impacts on viewpoints from some trails and pathways in the CRGNSA. The statement that "the project would not affect any trails or pathways in the Scenic Area" is incorrect. [LTR 177, CMT 55]*

**Response**: The word "only" has been removed from the second sentence of the second bullet in Section 3.8.3.1, under subheading Columbia River Gorge National Scenic Area Management Plan (page 3-154 of the DEIS). The word "directly" has been inserted after "not" in the second sentence of the first bullet (on page 3-155 of the DEIS).

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**Comment**: *[In reference to Section] 3.8.3.2, No Action Alternative. If a No Action Alternative is pursued, there will be no impact on visual resources. [LTR 177, CMT 56]*

**Response**: Visual impacts from the No Action Alternative are discussed in Section 3.9.3.2.

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**Comment**: *[In reference to DEIS Section] 3.8.5, Unavoidable Adverse Impacts. If the applicant is unwilling or unable to reconfigure turbines to minimize visual impacts, then this section should identify minor to moderate impacts on visual resources within the CRGNSA as an unavoidable adverse impact. [LTR 177, CMT 58]*

**Response**: As most of the viewpoints would experience low to moderate visual impacts, the Project would not have significant and unavoidable impacts as noted in Section 3.9.5 (DEIS page 3-196).

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**Comment**: *[In reference to Section] 3.9, VISUAL RESOURCES, [Section] 3.9.1, Methodology. The methodology applied should be expanded to include the Visual Resource Management system employed by the Bureau of Land Management. The CRGNSA has established visual resource objectives for a large and specific area within the Columbia River Gorge. Although the project is located just outside the scenic area boundaries, it will be clearly visible from within the scenic area and will impact the area's scenic values. That the project is located just outside the scenic area boundary should not exclude it from an analysis that fully identifies and discusses the project's visual impact on this nationally-recognized, high value regional view shed. [LTR 177, CMT 59]*

**Response**: Impacts to the CRGNSA were extensively discussed in Section 3.9. The methodologies employed in the analysis have been used for other wind energy projects in Washington State (see Section 3.9.1). As noted in this section, the use of the BLM Visual

Resource Management system would not be appropriate in this context due to the lack of visual resource objectives for private lands where the Project is situated.

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**Comment**: *[In reference to Section] 3.9.1.3, Preparation of Visual Simulations. The photographs underlying the visual simulations are problematic. Visual simulation photographs should be taken with a 50 mm lens, as this focal length most closely captures human visual perception. See Environmental Impacts a/Wind-Energy Projects, National Research Council (2007) at 247. The use of other focal lengths distorts the image and makes it difficult to compare impacts between different photographs. Id If a digital camera is used, it should be set at the highest resolution possible. Id. The visual simulations should also be re-sized to a 10 x 12 inch format, at a minimum, for comfortable arm's length viewing. Id. at 250. Most of the simulations produced in the DEIS appear to be taken from viewpoints along roads and highways. Additional simulation should be provided with views from the Columbia River, hiking trails, and wilderness areas. See Id at 251-52. The DEIS states that simulations were not prepared for night time conditions. An inventory of current night time lighting conditions would be helpful in assessing the extent to which FAA mandated turbine lighting will impact the night sky. [LTR 177, CMT 60]*

**Response**: Section 3.9.1 discusses the methodology for the preparation of the simulations. While visual distortion is anticipated in the preparation of simulations from focal lengths between 40 to 70mm, this EIS also provides "wireline" simulations as a means of showing a perspective of the Project that is not influenced by atmospheric conditions or other visual objects (other than landforms). Whatever distortion is introduced through the use of digital simulations, the use of wireline drawings provides a consistent means of measuring the visibility of the Project and comparing impacts from different perspectives. The use of larger size photographs is therefore not needed. Furthermore, the criteria used for selecting viewpoints are discussed in Section 3.9.2.3. Locations were chosen based upon their representation related to the Project Area, those that were most accessible to the public, and locations with the largest number of viewers. For a discussion of Mitchell Point, see response to Comment LTR 141, CMT 2 above. No additional viewpoints for the Columbia River, hiking trails, and wilderness areas will be analyzed as they do not fit the criteria noted in Section 3.9.2.3. As Section 3.9.3.1 notes, a generic illustration of night lights can be found in the Draft EIS for the Nine Canyon Wind Project.

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**Comment**: *[In reference to Section] 3.9.4, Mitigation Measures. In addition to painting the turbines an unobtrusive, non-reflective color and following FAA lighting guidelines, the following additional mitigation should be included: Either reducing or reconfiguring the turbine locations to minimize visual impacts. Explore whether vegetative buffers can be grown or maintained to minimize visual impacts. To the extent visual impacts are unavoidable, mitigation should include the preservation of off-site visual resources. [LTR 177, CMT 63]*

**Response**: No further mitigation is required as visual impacts from the Project would not be significant, but instead are low to moderate for most of the viewpoints.

**Comment**: *Save Our Scenic Area (SOSA) is involved with the Whistling Ridge Energy (WRE) project application as an Intervener. SOSA is a non-profit corporation formed by concerned local Gorge citizens. Its primary mission is to help preserve the Columbia River Gorge National Scenic Area view-shed; to further maintain the existing rural and scenic character of Underwood, Washington, and surrounding communities in Washington and Oregon; and work to preserve the intent of the Columbia River Gorge National Scenic Area Act. I am writing today to provide comments on the recently issued draft environmental impact statement (DEIS) for the WRE proposal. SOSA is submitting several different comment letters, covering a variety of subject matter within the DEIS. We have also reviewed the comments submitted by the Friends of Columbia Gorge, agree with them and incorporate them by reference. There are multiple environmental issues involved in the consideration of this project and it is important that each be given through consideration in the EIS process. [LTR 178, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section] 3.9.1.3, [s]imulations were prepared assuming a conservative scenario of 50 turbines. This approach to creating simulations most likely overstates the visual impacts. This is because the Applicant has applied for EFSEC certification for a maximum of 75 MW. If 2.5 MW turbines were to be used, only 30 turbines could be built, and overall visual impact would be less. ... Because the DEIS contemplates the use of 2.5MW turbines to reduce the visual impact of the proposed project, this needs to be one of the Alternatives to consider under Section 1.4 of this EIS. Remedy - Add to the Alternatives in Section 1.4, a proposed project configuration of 30 Turbines of 2.5MW capacity. [LTR 178, CMT 69]*

**Response**: The exact number of turbines to be implemented on the site will be determined during the micrositing process should the Project be approved.

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**Comment**: *[In reference to Section] 3.9.2.3, All 3.9.2.3 Viewpoints (entire section). The assignment of Scenic Quality and Viewer Sensitivity to the Viewpoints are fundamentally bias towards the Applicant's interests. Even if the author wrote this from a desk in the middle of Yosemite or any world class visual destination, one would be challenged to rate most locations in and around the CRGNSA anything but a 5 or 6, based on Table 3.9-1 DEIS at 3-158. The assignment of Viewer Sensitivity are based on a focus of facts only to justify the lowest ratings. Remedy - As opposed to inserting such important analyses in the body text of the DEIS, a truly quantitative analysis needs to be performed by a qualified project personnel (See section 6.3). [LTR 178, CMT 70]*

**Response**: Qualified project specialists were utilized during the preparation of this section (see Section 6). For a discussion of alternative methods of analyzing visual effects, see response to Comment LTR 178, CMT 154 below.

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**Comment**: *[In reference to Section] 3.9.1, All 3.9.1. METHODOLOGY (basis for whole section). The Visual Analysis is NOT complete or meaningful. As presented with only "Scenic Quality" and "Viewer Sensitivity" as separate factors, there has been no coupling of factors in a scientific or statistical basis for decision-makers to relate the visual impacts to a defined standard, or to a relative reference frame. No accurate conclusions could reasonably be made about Visual Impact of the project, given the format existing in this DEIS. Remedy - Professionals in this field would be able to offer guidance on how to identify and quantify the common variables, and to combine them in such a way as to numerically demonstrate a given Viewpoint's potential degradation relative to some tangible reference point. The work done on this subject must by a credential expert. The Visual resource Management System used by the BLM seems more relevant for this EFSEC Application, due to its visual objectives for lands with multiple management objectives. [LTR 178, CMT 71]*

**Response**: Scenic quality and viewer sensitivity are commonly used measures in visual impact assessment (see Section 3.9.1). Other mathematical or statistical models for measuring visual impacts are not typically used by any federal agencies that routinely consider impacts to visual resources. Qualified project specialists were utilized during the preparation of this section. As noted in Section 3.9.1, the use of the BLM Visual Resource Management system would not be appropriate in this context due to the lack of visual resource objectives for private lands where the Project is situated.

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**Comment**: *[In reference to Section] 3.9.2.3, All 3.9.2.3 Viewpoints (entire section). There are a number of important Viewpoints that were omitted, for example - Panorama Point in Hood River County, Oregon. Remedy - The majorly significant viewpoint of Panorama Point, OR must be included in this analysis. It is a KVA within the CRGNSA, one of the most visited. [LTR 178, CMT 72]*

**Response**: Panorama Point was analyzed as it appears in Section 4.2-3 of the Application for Site Certification (Appendix A of the DEIS).

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**Comment**: *[In reference to Section] 3.9.2.3, Viewpoint 23: Ausplund Road End Scenic Quality. This viewpoint represents the view from local area roadways at specific intersections where local area travelers might converge. These roads are old logging roads that have been upgraded to meet the local residential use. However, they are still used for logging and would be used in the construction portion of this project. This would include upgrading and in some instances widening the roads, which can affect visual quality. This view is from the end of the Ausplund Road, which would be used to access the area for construction and maintenance. Very few viewers beyond those associated with the project would see this viewshed. Without the vehicles in the foreground, the scenic quality rating assigned to this view is moderate. Viewer Sensitivity. When considering the distance of the project from this viewpoint (less then 1 mile), the portion of the project that is visible from the viewpoint, the viewer types (local area workers and residence), and the scenic quality rating, the level of sensitivity was rated as low to moderate. 1) This Viewpoint (23) is near the end of Ausplund Road, looking to the NNW*

*direction. This intersection represents a viewpoint central to 4 separate legal parcels, 3 of which have homes on them with active residential use. This site is roughly 1/2 mile from the proposed project. Each of these agriculturally-zoned parcels have about one acre each established for residential use. Submitted for your review is a picture taken from the home at the "end" of Ausplund Road, which is a typical view from most all the homes on Ausplund Road, and many, many homes in Underwood as a whole. This is not a Scenic Quality of 3, but rather a very substantial 6. (ref AusRdEndSouthView.pdf) Reference - SOSA Comment letter of Aug. 27, 2010 - titled Visual Analysis Section 3.9. Remedy - This viewpoint, as with ALL the others in this DEIS, cannot be judged for Scenic Quality SOLEY on its view of the proposed project. The starkly contradictory photo introduced here should establish that most of the Viewpoint analyses are faulty and bias, and must be remanded for reevaluation, or utilize a more appropriate Methodology (3.9.1) and objective consultant. [LTR 178, CMT 73]*

**Response**: Visual quality ratings of six are reserved for landscapes with exceptionally high visual quality that are significant nationally or regionally (see Table 3.9-1). This portion of the Project Area is much more representative of a place with a visual quality rating of "3" - a landscape that is common or typical and exhibits an average scenic value. The vehicles in the picture are representative of the activities that occur in the Project location and the photographs indicate that the area has been affected by existing logging operations. These types of activities are usually not dominant features within landscapes associated with "Outstanding" Visual Quality Ratings.

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**Comment**: *General Comment on DEIS - The State of Oregon has on their books very good scenic protections, not only for the National Scenic Area, but a huge number of State public lands which are deemed appropriate to save from visual intrusion of Wind Turbines. Washington State should prepare and release an analogous document. EFSEC should consider the spirit of Oregon's protections, and apply similar standards when considering the overall benefits to society and the public welfare. Remedy - EFSEC should consider the spirit of Oregon's scenic protections relating to Energy Facility Siting, and apply similar standards when considering the overall benefits to society and the public welfare. Longer term, EFSEC is urged to pass some guidelines similar in spirit to the Oregon statues, either within the Department, or at the State legislative level. [LTR 178, CMT 136]*

**Response**: Comment acknowledged.

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**Comment**: *Topic: Visual Resources, Section 3.9, DEIS at 3 155 [through] 3 196. The Federal Highway Administration process (FHWA) used by the Applicant should be replaced with the BLM methods referred to in the DEIS. If the FHWA methods are retained, then many parts of this methodology must increase in complexity and quantitative analysis, to ensure useful information for EFSEC decision makers. The deficiencies and proposed remedies outlined below serve only as a partial list of issues to address in correcting the DEIS Visual analysis to a level suitable for use as a unbiased, objective decision making "Tool." To this end, SOSA furthermore incorporates by reference, the Friends of the Gorge DEIS comments by Dean*

*Apostle. As the phrase goes "a picture is worth a thousand words," I am focusing my comments on the problems associated with the photomontages. The visual photomontage's size, resolution, contrast ratio, and background sky conditions all serve to completely under represent the likely visual impact created by the proposed Project. In fact they fail to provide any useful measure of the degradation in scenic value. [LTR 178, CMT 147]*

**Response**: As noted in Section 3.9.1, the use of the BLM Visual Resource Management system would not be appropriate in this context due to the lack of visual resource objectives for private lands where the Project is situated.

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**Comment**: *Deficiencies with the DEIS Section 3.9: 1) There is only one lighting scenario provided in the DEIS. The (daytime) conditions provided in the DEIS do not depict other illuminated conditions which will occur namely, sunrise, sunset, and night time. (Reference Exhibit B) [LTR 178, CMT 148]*

**Response**: In addition to Section 3.9, the EIS discusses impacts at varying levels and angles of sunlight (see Section 3.9.3.1). As noted in this section, sunny days account for 39.7% of days in Skamania County. The majority of time some clouds are present. Nighttime lighting impacts are discussed in Section 3.9.3.1. Also, as noted in Section 3.9.1.3, night time simulations are inherently inaccurate, since they do not show the periodic flashing of air warning lights. For a generic illustration of night lights see the internet link in Section 3.9.3.1.

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**Comment**: *There is only one contrast ratio provided in the DEIS hazy. The four that should be used are clear, hazy, front lit and back lit. A Cloudy condition should result in minimal degradation, and should not need to be formally analyzed. (Reference Exhibit A and B) [LTR 178, CMT 149]*

**Response**: Atmospheric haze is ever present in most landscapes (see Section 3.9.1.3). Simulations were used to present worst case scenarios so that impacts could be fully evaluated regardless of lighting condition (see Section 3.9.1.3). In addition, this EIS also provides "wireline" simulations as a means of showing a perspective of the Project that is not influenced by atmospheric conditions, lighting, or other visual objects (other than landforms).

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**Comment**: *The Landscape Scenic Quality Scale (Table 3.9 1, DEIS p 3 158) uses a numeric scale, but its them by appropriate weighting factors, then summing to a final numeric output. (not "Low, Moderate, High") [LTR 178, CMT 150]*

**Response**: Comment acknowledged.

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**Comment**: *The Summary Table (Table 3.9 2, DEIS at 3 177) provides the "Level of Visual Impact" in qualitative terms. This is not a useful output for proper assessment or decision making. Classifying the final output of this "qualitative" process with its 3 step scale underreports Scenic Degradation. It's kind of like asking a person that needs corrective vision to take off their eyeglasses to drive their car. The EFSEC Council, at the least, needs statistical, refined numbers to use in various "what if" scenarios, to probe the effects of various mitigation concepts. Evaluating the effect of removal of various turbines or turbine strings, as an example. A finer resolution, numeric basis will provide a clearer consensus for decision makers. [LTR 178, CMT 151]*

**Response**: The table accurately conveys the findings of the visual impacts discussed in Section 3.9. Mathematical or statistical models for measuring visual impacts are not typically used by any federal agencies that routinely consider impacts to visual resources. The use of untested statistical models would not add clarity to Project impacts.

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**Comment**: *The "Scenic Quality" value of "3" assigned to Viewpoint 23 is flawed. (Reference Exhibit C) Further, other viewpoint "scenic quality" values are likely under valued or under scored. [LTR 178, CMT 152]*

**Response**: Please see response to Comment LTR 178, CMT 73 above.

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**Comment**: *This summer 2010, SDS logged the 80 acres sloping south beneath the proposed A string turbines, from the ridgeline down. (Ref. DNR FPA# 2704293) (Reference Exhibit E primary, and A and B secondary) There is now a huge 80 acre brown patch on the south facing slopes by Chemawa Hill, contrasting with adjacent green forest for the foreseeable future. Furthermore, and more importantly, it removes about 100 feet of vertical distance between the rotor swept area and the now visible ridgeline, thereby aggravating the disparity between the each "A" Turbine and the natural land forms around them. The DEIS's existing visual photomontage's do not account for this recent and dramatic scenic landscape "modification," and thereby understate even further the magnitude of visual impact to viewpoints to the South and to the East. Affected Viewpoints are: 4, 15, and 23. The FPA 2704293 was approved in October 2008, so the Applicant had ample time and knowledge to advise their URS consultants as to the visual site conditions which should have applied to the Photomontages, to have them prepared appropriately. [LTR 178, CMT 153]*

**Response**: The nature and characteristics of logging in the area was discussed in Section 3.9.2.2. The logging of the 80 acres near the Project may make it more visible with the removal of the vegetation but it would also degrade the scenic quality of that particular location. The use of "wireline" drawings assists in understanding the visibility of the turbines against the surrounding landforms but in the absence of vegetation (see Section 3.9.1.3). Several viewpoints also provide perspectives that include views of the Project near areas that have been recently been logged (see photos from Viewpoints 5, 6, 12, and 15).

**Comment**: *Even the most accurate picture cannot replicate the true image in real life. To this end, there must be a more quantitative approach to reaching an "accurate measurable difference", as proposed in paragraph 1 above. There are analogous quantitative tools, which Engineers like myself, use in their profession. For example FMEA (Failure Modes Effects Analysis). These tools put tangible numbers to normally qualitative phenomena, allowing decision makers to make accurate comparative decisions. Objectively applied, I would predict that most all the viewpoints reported in this DEIS would show significantly higher scenic degradation than other application to the Viewpoints appear non objective and bias towards minimizing the appearance of scenic degradation. Imagine not even one "postcard view" rating from the USA's only National Scenic Area (NSA). [LTR 178, CMT 154]*

**Response**: The utilization of other mathematical or statistical models for measuring visual impacts is not typically used by any federal agencies that routinely consider impacts to visual resources. The use of speculative, untested models for measuring visual impacts would not add clarity to the EIS.

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**Comment**: *The three levels of Visual Sensitivity (DEIS at 3 158 and 3 159) provide too coarse a resolution for true numeric analysis, especially given it's a combined parameter. As stated at DEIS 3 158, Visual Sensitivity is defined as a combined parameter of number of viewers, type of viewers, viewing conditions, and quality of the view. It would be far more appropriate to evaluate each parameter separately. To each parameter apply a 6 level scale, then multiplying Wind Turbine Projects in Washington state. I propose that EFSEC, as the EIS responsible official, incorporate a process similar to the above referenced FMEA process, to the existing WRE template and to future EFSEC Applications, as well. Further refinement of visual impact could be achieved by classifying the percent of time a particular viewer will see the Turbines with a given contrast ratio. Meaning from a given location, say 35% of the time, a viewer will see flashing red lights, 16% of the time they will see only cloud cover, 40% of the time clear deep blue sky, 5% sunrise/sunset, etc. Then sensitivity and view value for each situation can be quantified for each location. [LTR 178, CMT 155]*

**Response**: Please see response to Comment LTR 178, CMT 154 above.

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**Comment**: *This author lives adjacent to Viewpoint 23 (DEIS at 3 190), and has produced scaled photomontages to illustrate the dramatic visual difference that lighting direction, and clear blue skies will affect the contrast ratio, and hence visual impact. All of the assumptions are clearly stated on the photomontages, and information is on each for independent confirmation as to scale. These are intended to serve as scaled representations, not photo realistic images, and not dissimilar from the URS supplied image. REMEDIES proposed actions by DEIS responsible official to correct Deficiencies 1) All photomontages should accurately depict the four viewing conditions of: a) clear, bright blue sky, b) hazy, c) back lit(i.e. sunset) and d) night time. [LTR 178, CMT 155]*

**Response**: To provide visual simulations of the Project for all possible weather and lighting conditions is beyond the scope of the EIS. The photo simulations provide representative views of the proposed Project to give viewers an indication of impacts to the greatest extent possible.

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**Comment**: *The contrast ratios should be adjusted higher to closely simulate how the Turbines would beseen in "real life" resolution. ("real life" resolution is clearly articulated in Dean Apostle comments) [LTR 178, CMT 155]*

**Response**: The resolution of the photosimulations in the EIS is similar to those used in other environmental documents which study the visual impacts of wind turbine projects. Furthermore, the "wireline" drawings provide a clear demarcation of the Project's impacts and it's positioning within landforms stripped of color and visually competing landscape components. The use of "real life" image resolution would not add clarity to the level of impacts caused by the Project and is beyond the scope of the EIS.

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**Comment**: *The "Level of Visual Impact" in Table 3.9 2 must be a numeric product of a multi variable analysis, each variable with a numeric scale of at least 6 levels of distinction. The variables identified previously, along with the additional variable discussed above will provide a quantifiable output with clear relative importance being attributed to each viewpoint. [LTR 178, CMT 155]*

**Response**: See response to Comment LTR 178, CMT 154 above.

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**Comment**: *The analysis "output" for Table 3.9 2, "Level of Visual Impact" needs to be a finer resolution, numeric basis to provide a clear consensus for decision makers to enter into "what if" scenarios when contemplating various mitigation opportunities. [LTR 178, CMT 155]*

**Response**: See response to Comment LTR 178, CMT 154 above.

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**Comment**: *For current and future EFSEC Applications, consider evaluating Scenic Degradation compared to a standardized reference view shed say an expansive desert shrub steppe/wheat field environment where most Turbines are effectively located. (One could also consider this same approach for wildlife habitat and mortality impacts...) [LTR 178, CMT 155]*

**Response**: See response to Comment LTR 178, CMT 154 above.

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**Comment**: *Due to clear cutting of the A Turbine String Ridgeline this summer 2010, the visuals from sites 4, 15, and 23 sorely under represent reality, and must be re created using new photographs and properly scaled Turbines, and on a worst case contrast ratio. "Changes to topography," as (vaguely) mentioned in DEIS at 3 9, must also be included. [LTR 178, CMT 155]*

**Response**: See response to Comment LTR 178, CMT 153 above.

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**Comment**: *These slopes of the proposed A1 7 string, if not others, will have permanent land scarring activity. Depending on the geologically allowable locations of Turbines, land scarring may be in full view of, and facing the National Scenic Area. The visual impact of these landform disturbances must be including in the Visual analysis. [LTR 178, CMT 155]*

**Response**: See response to Comment LTR 178, CMT 153 above.

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**Comment**: *As a reference to the magnitude and scale of "changes to topography" (DEIS at 3 9) a photograph of construction activity on a ridge top in Maine is included as Exhibit G. The slope in Exhibit G appears not as steep as the Northwestern and Western slopes of the proposed Project, which are the windward side of the prevailing wind direction. In particular to the A1 A7 proposed Turbines, this is also true, but furthermore, the opposite slope of the A1 A7 string is similar in slope to Exhibit G. This supports our claim that significant and permanent land scarring activity is likely, especially true for the A1 A7 proposed Turbines. [LTR 178, CMT 155]*

**Response**: See response to Comment LTR 178, CMT 153 above. The "wireline" drawings provide an indication of where the turbines will be potentially situated within a sloping landscape devoid of vegetation.

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**Comment**: *Exhibit A : Clear Day Scaled Photomontage Viewpoint 23 - Ausplund Road End compare to Figure 3.9-15 at DEIS pg. 3-190 Note this area was clear-cut since DEIS release Photomontage: Source Tom Drach using Reengineer CAD software and CorelDraw software to overlay scale rendering of Vestas V82 (Exhibit H). Hub Height - 80m (262 ft) from top of ridgeline, Rotor Diameter - 82m (270 ft) Bottom of swept diameter from the ground = 262 ft - 135 ft = 127 ft. Note: Douglas Fir trees at ridgeline at left are assumed fully mature at 110-120 feet, to be conservative. If trees are actually shorter, turbines would need to be scaled LARGER in relation to the photo. Dashed circle for rotor diameter on left included for independent confirmation of scale. [LTR 178, CMT 156]*

**Response**: Please see response to Comment LTR 178, CMT 153 above.

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**Comment**: *Exhibit B : Sunset (back-it condition) Scaled Photomontage Viewpoint 23 - Ausplund Road End compare to Figure 3.9-15 at DEIS pg. 3-190 Note this area was clear-cut since DEIS release Photomontage: Source Tom Drach using ProEngineer CADsoftware and CorelDraw software to overlay scale rendering of Vestas V82 (Exhibit H). Hub Height - 80m (262 ft) from top of ridgeline, Rotor Diameter - 82m (270 ft) Bottom of swept diameter from the ground = 262 ft - 135 ft = 127 ft. Note: Douglas Fir trees at ridgeline at left are assumed fully mature at 110-120 feet, to be conservative. If trees are actually shorter, turbines would need to be scaled LARGER in relation to the photo. Dashed circle for rotor diameter on left included for independent confirmation of scale. [LTR 178, CMT 157]*

**Response**: Please see response to Comment LTR 178, CMT 153 above.

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**Comment**: *Exhibit C : DEIS Visual Quality Rating of "3" Contended Original Photo - unreduced location is the end of Ausplund Road End, looking South, photo by Tom Drach, Nikon 5MP cheapo camera Proposed turbines to the North, reference Viewpoint 23, Figure 3.9-15 at DEIS pg. 3-190 DEIS rates this location as: (Table 3.9-2 at 3-177) Scenic Quality = Moderate (3 on a scale 1 to 6, 6 being postcard quality) ( REALLY ??? should be a 6 ) Viewer Sensitivity = Moderate, hence overall rating of Visual Impact = Moderate Authors Note: How many other Viewpoints "analyzed" in the DEIS suffer from this same disparity in "Scenic Quality" rating? [LTR 178, CMT 158]*

**Response**: Interpretation and conclusions on the degree of visual impact are subjective and dependent upon the viewer. The nature and characteristics of logging in the area were discussed in Section 3.9.2.2. The logging of the 80 acres near the Project may make it more visible with the removal of the vegetation but it would also degrade the scenic quality of that particular location. The use of "wireline" drawings assists in understanding the visibility of the turbines against the surrounding landforms but in the absence of vegetation (see Section 3.9.1.3). Several viewpoints also provide perspectives that include views of the Project near areas that have been recently been logged (see photos from Viewpoints 5, 6, 12, and 15).

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**Comment**: *Exhibit D: Table 3.9-1 Presented in original format, ease of reference purpose only. [LTR 178, CMT 159]*

**Response**: Comment acknowledged.

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**Comment**: *Exhibit E: Due to recent clear-cuts by SDS Lumber Company during this summer of 2010, reference Comment below DEIS table: (table 3.9-2) Comment by SOSA: Due to clear-cutting of the A-Turbine String Ridgeline this summer 2010, the visuals boxed in RED above, [viewpoints 4, 15, and 23] must be re-created using new photographs and properly scaled Turbines on a worst case contrast ratio. Topographic changes must also be included, per This summer, SDS logged the 80 acres sloping to the south-east of the proposed Astring turbines,*

*from the ridgeline down. This now leaves a dramatic brown patch contrasted with the green forest for at least 5 years, and land scarring activity of the turbine foundations and roads, all of which must be included in the applicable photomontages. Furthermore and more importantly, it removes about 100 feet of vertical distance between the rotor-swept area and the closest ground features. The existing visual photomontage's do not account for this recent and dramatic scenic landscape "modification," and thereby understate even further the magnitude of visual impact to viewpoints to the South and East. [LTR 178, CMT 160]*

**Response**: Please see response to Comment LTR 178, CMT 153 above.

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**Comment**: *Exhibit F: original photomontage from DEIS at 3-190, with comment in Grey Box below: Comment by SOSA: Either these turbines are not scaled correctly, or turbine bases are 80-100 feet down on the North face of Chemawa Hill. Foundation height not identified, no mass soil displacement shown for turbine foundations on steep slopes, all slopes now clear-cut, and all soil displacement will be visible for many miles. Turbines would likely be sited on Southeastern slope, due to Northwestern face is identified as unstable slope by DNR in Forest Practices Application (FPA 2702799). [LTR 178, CMT 161]*

**Response**: The siting of individual turbines will be determined during the micrositing process (see Section 3.1.1.3). A 650-foot turbine corridor was analyzed in the EIS to take into account some variations in turbine placement that may occur during the micrositing process.

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**Comment**: *Exhibit G Ridge Carving for Geologic Stability Mars Hill, Maine 2006 Similar visual impacts are likely for WRE Project, but no details are given either visually, geologically, or environmentally. [LTR 178, CMT 162]*

**Response**: Please see response to Comment LTR 178, CMT 161 above.

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**Comment**: *The proposed energy project would be highly visible from several urban areas and unincorporated communities in or near the National Scenic Area. These include Underwood, Hood River, Mosier, Mill A, Willard, and White Salmon. Hundreds of residents of these and other communities are strongly opposed to the project and have expressed their opposition and concerns in comments to the reviewing agencies and to Skamania County. [LTR 179, CMT 10]*

**Response**: Comment acknowledged

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**Comment**: *The DEIS Fails to Adequately Evaluate and Address the Impacts of the Proposed Development on Scenic Resources. SEPA requires that the environmental analysis include*

*discussion of impacts to sensitive areas. The SEPA official "shall" consider whether a "proposal may to a significant degree ... [a]dversely affect environmentally sensitive or special areas, such as loss or destruction of historic, scientific, and cultural resources, parks, prime farmlands, wetlands, wild and scenic rivers, or wilderness." WAC 197-11-330(3)(e)(I). SEPA also requires analysis of impacts to scenic resources. WAC 197-11-440(1)(e)(iv). The current proposal is for a major industrial development towering over ridgelines on the perimeter of the Columbia River Gorge National Scenic Area, overlooking important segments of the Lewis and Clark National Historic Trail and the Historic Columbia River Highway, adjacent to the Gifford Pinchot National Forest, and adjacent to recreational trails on Washington Department of Natural Resources land. The proposed facility would overlook miles of National Scenic Area viewsheds that have been inventoried as some of the highest quality scenic landscapes in the Gorge. Unfortunately, the DEIS grossly mischaracterizes the likely impacts of the Whistling Ridge Energy Project on scenic resources. Instead of following SEPA's mandate to provide an unbiased and objective assessment of likely impacts, the DEIS blatantly misapplies established principles of landscape management to conceal the likely impacts of the proposed action. [LTR 179, CMT 64]*

**Response**: Project impacts to visual resources were discussed in Section 3.9, thus fulfilling the requirements mentioned in this comment. Project effects from most of the viewpoints are anticipated to be low to moderate.

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**Comment**: *The analysis also violates NEPA's requirement that "[a]gencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." 40 C.F.R. 1502.24. The DEIS does not list a single landscape architect, much less a landscape architect with training in scenic resource analysis methodologies, in the list of preparers. DEIS at Section 6.0. The lack of professional and scientific integrity is plainly evident through the scenic impacts analysis. The analysis is fundamentally flawed and violates both NEPA and SEPA. As explained in the attached comments of Dean Apostol, the analysis completely misinterprets and misapplies the Federal Highway Administration's visual assessment system and the Forest Service's Scenery Management System. [LTR 179, CMT 65]*

**Response**: Please see response to Comment LTR 178, CMT 71 above. As noted in this comment, federal agencies "shall insure the professional integrity, including scientific integrity of the discussions and analyses in environmental impact statements." 40 C.F.R. 1502.24. The NEPA regulations, however, do not stipulate that landscape architects be used to evaluate impacts to visual resources. The professionals used for the visual resource analysis for this Project have considerable experience in evaluating visual impacts from wind energy projects. Further, these professionals applied methods that are in common use by other federal agencies and which have been used for wind energy projects on previous occasions (see Section 3.9.1). See also response to Comments LTR 180, CMT 2 through LTR 180, CMT 28 below.

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**Comment**: *Views from the Lewis and Clark National Historic Trail would be adversely affected. The Lewis and Clark National Scenic Trail was created to "stimulate Federal, State, and local agencies and individuals to identify, mark, and preserve for public inspiration and enjoyment the routes traveled by the Lewis and Clark Expedition." Lewis and Clark Trail Management Plan at 1. The Management Plan for the trail recognizes that many of the historic and cultural resources have been altered or lost and the Expedition left scant traces of their passing. However, "In a very real sense, many of the historic resources are the landmarks, vistas, flora, and fauna that make up the Trail's natural resources. It is virtually impossible to find either historic or natural resources along the Expedition route, which have not been altered in some way by man or nature." Lewis and Clark Trail Management Plan at 4 & 13. Thus, the scenic vistas and natural resources of the Expedition route are critical to appreciating the trail. Locations where those vistas and natural resources are intact are exceedingly rare, and warrant the greatest attention during SEPA and NEPA review. [LTR 179, CMT 66]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS fails to acknowledge adverse scenic impacts to the Lewis and Clark National Scenic Trail. Locations along the route with intact scenic vistas that retain some of the same views that the Lewis and Clark Expedition experienced are critical important resources for the trail system. The views from I-84, the Columbia River, Viento State Park, and Starvation Creek State Park are largely intact as evidenced by the Forest Service's resource inventories. The project would dramatically alter these views causing significant adverse impacts to the trail. This conclusion was clearly expressed by the National Park Service in at least two separate letters to the BPA and EFSEC. This conclusion is also supported by the BPA's previous environmental analysis of other projects that would have similar, although less severe, impacts on the Lewis and Clark National Historic Trail. The egregious failure to acknowledge significant adverse impacts to the Lewis and Clark National Historic Trail must be corrected. [LTR 179, CMT 68]*

**Response**: The Lewis and Clark National Historic Trail (LCNHT) is considered a recreational resource and is discussed in Section 3.8.1.2. Visual simulations were prepared for several locations along the I-84 corridor as well as from Viento State Park which are situated along the LCNHT. These viewpoints provide representative views of the Project and adequately illustrate Project impacts to the LCNHT. Other areas, such as the Columbia River and Starvation Creek State Park were not chosen as they did not meet the criteria for choosing viewpoints noted in Section 3.9.2.3.

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**Comment**: *The fundamental aesthetic problem of commercial wind energy development is that it introduces very large-scale, modern, industrial structures into rural, semi-natural, or even wild landscapes. Due to their large scale and unique appearance, modern wind turbines by their very nature result in high visual contrast to most landscapes. High contrast normally results in high impacts to scenery. Wind turbines challenge conventional approaches to scenic resource conservation, which rely on eliminating or reducing the contrast of built facilities or landscape*

*alterations. In most cases modern wind turbines cannot reasonably be "visually blended" into natural or cultural landscapes. They are inherently visually dominant due to their huge scale, unique appearance, high color contrast, moving parts and the need for continuous lighting for air safety. Key factors in assessing the visual impact of wind turbines include: The number of visible turbines and the extent to which they dominate vertically and horizontally. The visual coherence or sense of order they present. Because they tend to be so prominent, turbines have to "make sense" within the view. Wind turbines look best in simple, open, low relief landscapes like farm, prairie or rangeland. They fit uncomfortably in highly complex landscapes with lots of vertical relief and diverse vegetation patterns, like the Columbia Gorge. Roads and power lines serving turbines can add substantially to visual impacts of wind energy developments. Turbine placement may include other landscape disruptions, particularly land clearing and ground disturbance. [LTR 180, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *There is little question that the vertical and horizontal scale of modern wind turbines has the power to transform entire landscapes. The huge size of individual towers and the horizontal scale of large projects can create substantial impacts even when viewed from distances of 10 miles or more. Page 3-172 of the DEIS states: "wind turbines are relatively large." Commercial wind turbines are very large, out of scale with anything in the landscape around Underwood. They are nearly as tall as the tallest buildings in downtown Portland, and they do not look like any rural building or structure in existence. Modern wind towers and blades are nothing like the historic, small-scale, vernacular windmills of the Netherlands, Crete and Portugal. They feature sleek, industrial designs. They are large enough, different enough, and high contrast enough, to transform the surrounding landscape from predominantly natural or rural into an industrial scene. [LTR 180, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Wind turbines are not designed to be place-sensitive. Energy companies are focused on maximizing productivity and minimizing costs. Thus, a one size fits all approach is used, and custom design is almost never considered. Wind facilities are context-free, meaning they look the same anywhere. And while they may be perfectly appropriate as an expression of their own function, they do not aesthetically fit in many landscapes. Every landscape includes the basic elements of form, line, color and texture that provide visual identity. Forms result from large and small scale elements interacting to create spaces. They can be regular or irregular, curvilinear or geometric. Lines are linear features, like roads or the edge of a clearing. Natural colors tend to include greens, browns, tans and blues. Textures can be rough, smooth, fine or coarse grained. To the extent that landscape changes or new objects repeat these elements, contrast is reduced between the proposed development and natural landscape character. This in turn results in less of a visual impact. Large arrays of modern wind turbines easily dominate over the form, line, color and texture of scenic natural and cultural landscapes. It is extremely difficult to relate them to existing landforms, vegetation patterns, and natural lines in ways that*

*reinforce or harmonize. They introduce strong vertical lines and have a color and texture unlike anything that is found in most natural landscapes. [LTR 180, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Ridgelines are places where the land meets the sky, and where the viewer's eye is easily drawn. Wind turbines, including those proposed for the Whistling Ridge Energy Project, are often located on high, visually prominent topographic points, causing them to extend far above the horizon and create "skyline" impacts that accentuate their visibility. This detracts from surrounding landforms. One reason wind turbines look more at home on flat or gently rolling topography is the absence of conflict with prominent land forms, such as those found around the project area. The rotating blades of wind turbines are another unique feature that attracts additional attention. Lighting (including both nighttime and daytime lighting) accentuates visual impacts and extends them to all hours. [LTR 180, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Flawed Methodologies On 3-155 of the DEIS: "It assesses the potential for visual impacts using accepted methods of evaluating landscape quality and predicts the type and degree of effects the project likely would have on those attributes." Two methods were used: The U.S. Forest Service Landscape Aesthetics Handbook and the Federal Highway Administration (FHWA) process for visual impact assessment. In my opinion, the FHWA method is not a suitable method for evaluating the visual impacts of wind energy projects in general, and this project in particular. This system was designed to be used only for assessing impacts from highway related development. It contains no process or method for assessing the visual contrast presented by wind turbines or related energy facilities (such as power lines). This is stated in the very title of the FHWA manual: Visual Impact Assessment for Highway Projects, and is explicitly noted in the opening sentence on page one: "This field guide is intended to help those who prepare or review the coverage of visual impacts in environmental assessments for highway projects" (emphasis added). Unlike the Forest Service and BLM methods, the FHWA process is not a flexible method that can easily be adapted to different project types. The mere fact that other wind projects have used it in the past does not justify its continued misuse. Like all visual impact assessment methods, the FHWA contains terminology, approaches and ideas that can be borrowed or used elsewhere, but the proponent seems to have gone beyond mere borrowing and has assumed this method is more adaptable than it is. The decision to use this method seems based on a single factor, that it is used in lands that do not have assigned visual quality objectives. The flaws and limitations of the FHWA method have been overlooked. [LTR 180, CMT 6]*

**Response**: The comment does not provide specifics on how the FHWA methodology was flawed in its application to this Project - only that in general the use of FHWA method is not a suitable method for wind facility projects. By combining the FHWA and USFS methodologies, the methodology used for this Project provides a clear understanding of how the proposed

Project would affect the visual landscape as seen from key viewing areas, portrays the differing viewer groups and their sensitivity to visual change, defines distance zones, and evaluates the contrast between pre- and post-project conditions as seen from the different viewpoints, by different viewer groups, and from different distances. The FHWA methodology has been used successfully to convey impacts to landscapes for other wind facility projects including the Kittitas Valley, Desert Claim and Wild Horse Projects.

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**Comment**: *Visual Contrast Rating: Degree of Contrast Criteria None The element (wind turbines) contrast is not visible or perceived Weak The element contrast can be seen but does not attract attention Moderate The element contrast begins to attract attention and begins to dominate Strong The element contrast demands attention, will not be overlooked, and is dominant In the BLM method, an objective measurement of contrast is combined with viewer sensitivity to determine the level of impact. A number of factors are considered, including distance, view angle, view duration, project size, atmospheric conditions and motion (i.e. spinning blades). The Forest Service method (Landscape Aesthetics, A Handbook for Scenery Management) has similar applicability, but substitutes the terms Retention (no contrast), Partial Retention (weak contrast), Modification (moderate contrast) and Unacceptable modification (strong contrast). Either of these methods would be appropriate for use on the Whistling Ridge project. A second flaw in methodology is the failure of the DEIS to analyze the landscape character of the project site and its vicinity. Only a general description of the regional landscape and local surroundings is presented on pages 3-161 to 3-163. [LTR 180, CMT 8]*

**Response**: The use of the BLM methodology, particularly the application of the contrast rating, hinges upon the comparison with established visual classifications. As noted in Section 3.9.1 (on page 3-156 of the DEIS), in order to use the BLM process for projects on private lands where no visual resource objectives have been established, it would be necessary to complete a full visual management inventory to delineate all lands in question and then classify each delineated area using the BLM classifications. The EIS does describe the visual setting in Section 3.9.2 (on DEIS pages 3-161 to 3-164). The EIS also provides measures for Landscape Scenic Quality in Table 3.9-1 and applies these measures to each viewpoint. The application of USFS landscape management objectives to private lands would not be appropriate for this Project.

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**Comment**: *The DEIS fails to recognize the visual prominence of the series of landforms and water bodies that comprise the surrounding landscape, including Whistling Ridge, Saddleback Mountain, Underwood Mountain, Underwood Bluff, Chemawa Hill, Dog Mountain, and the mouth of the Little White Salmon River. These are prominent and important focal features. The visual integrity of some of these landforms has already been somewhat compromised due to timber harvest and utility line construction, but that does not make these visually complex landforms any less important or less visible. On the contrary, it argues for being careful to not introduce additional impacts that increase cumulative effects. The DEIS's failure to analyze the impacted area's landscape character is an important omission, because landscape character is the baseline from which changes or contrasts are determined. Natural and cultural landscapes*

*have identifiable form, line, color and texture characteristics that can be documented and described. The extent to which a development either blends or contrasts with these characteristics is a key basis for understanding impacts. [LTR 180, CMT 9]*

**Response**: The EIS does describe the visual setting in section 3.9.2 (on DEIS pages 3-161 to 3-164). The EIS also provides measures for Landscape Scenic Quality in Table 3.9-1 and applies these measures to each viewpoint. Furthermore, photo simulations provide additional visual representations of the Project Area from viewpoints thus accurately portraying the visual character of the Project Area.

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**Comment**: *Another flaw in the DEIS is the way the scenic quality ratings were created. Page 3-158 includes a table (3.9-1) that describes scenic quality ratings 1 (low) through 6 (outstanding). It states that "each viewpoint is assigned a final rating based on this scale." A landscape is either scenic or it isn't based on its intrinsic qualities. Every landscape region has places that are more inherently scenic than other places. In the Washington Cascade Mountains, steep, rugged, complex and diverse landscapes, especially those with water features rank higher on scenic quality scales than do areas with gentle terrain, bland vegetation cover and no visible water. This is true regardless of where the observer happens to be standing. Both the BLM and Forest Service methods are useful in assessing the intrinsic scenic quality of landscapes. These sources and materials should be used, so that scenic impacts can be properly evaluated. Pages 3-159 contains questionable statements and assumptions on viewer sensitivity. Given that the project borders on a federally protected national scenic area and that key viewing areas and visual quality objectives have already been established for this landscape, there seems little need to create new assumptions about sensitivity from these viewpoints. All KVAs are by definition high sensitivity. Viewer sensitivity from KVAs is high based on the very definition the proponent uses on page 3-159: "High. Residential, recreational and viewers congregating in public viewing areas (churches, schools, designated scenic viewpoints, etc) are considered to have comparatively high visual sensitivity." (emphasis added). [LTR 180, CMT 11]*

**Response**: Visual quality is adequately assessed in the analysis. The criteria used for assessing landscape scenic quality are discussed in Table 3.9-1. Not all CRGNSA KVAs can be classified as having high viewer sensitivity as viewer sensitivity to landscape changes for many of the KVAs is moderated by the distance from the viewer to the Project and other factors. As noted in the USFS Scenery Management System, the scale for viewer concern levels include the degree of public importance placed on the landscape and "the visibility of lands in each distance zone" [emphasis added] (USFS 1995). Even the BLM guidance in BLM Manual H-8410-1 encourages coordinating distance zones delineation with Sensitivity Level Analysis (see BLM Manual H-8410-1, Section IV.B). Additionally, the views from KVAs are not "by definition" highly sensitive. According to the Interim Guidelines for the Scenic Area, the KVAs were chosen based upon where large numbers of people view the CRGNSA. Just because there are a large number of people however, does immediately mean it is highly sensitive. The type of viewers, viewing conditions, and scenic quality of the view must also be considered.

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**Comment**: *Additionally, contrary to the statements on page 3-159, sensitivity is not related to distance. A KVA, by definition, is a high sensitivity viewpoint, regardless of the distance to the object viewed. What changes is the degree of contrast experienced. At greater distances contrast is reduced and thus visual impacts normally decrease. Sensitivity, which is related to the observer, does not diminish with distance. On page 3-163, the DEIS states: "The local landscape visual appearance is of moderate visual quality with a moderate level of sensitivity." (emphasis added). For reasons stated above, there is no analytical basis for making this determination. The landscape surrounding the proposed turbines may be of low, moderate or high quality scenically. But viewer sensitivity is inherently high from designated scenic viewpoints such as key viewing areas. For viewpoints outside of the Scenic Area (i.e. Husum) some analysis on sensitivity may be useful. The selection and analysis of viewpoints in the DEIS is flawed. On page 3-164, the DEIS states: "Each viewpoint was assessed for its scenic quality and viewer sensitivity, and a rating was applied to provide an overall average for the area." This sentence makes no sense. The scenic quality of the viewpoints is not an issue. The scenic quality of the project site and how this would change under the proposal is the issue. Viewer sensitivity, as previously stated, should be presumed to be high from any KVA. That is exactly why they were designated KVAs in the first place. There is no such thing as an "overall average" with respect to scenic quality. One cannot average the scenic quality or impacts among differing viewpoints. Each must be assessed on its own merits. [LTR 180, CMT 12]*

**Response**: Comments in regards to viewer sensitivity are addressed in response to Comment LTR 180, CMT 11 above (see also Section 3.9.1.2). The selection of viewpoints is not flawed as they were selected based upon several factors based upon their representation relative to the Project Area, locations that are most accessible to the public and locations with the largest number of viewers (including residences) (see DEIS page 3-164). Several CRGNSA Key Viewing Areas (KVAs) with views of the Project were chosen for analysis as noted in Section 3.9.2.3. The analysis considers the context of the visual experience from each viewpoint (see Section 3.9.1.2). Views from KVAs can vary greatly in terms of the visual quality. The commenter fails to note that in many instances, the views from KVAs include a number of human activities and structures including logging clearcuts, roads, highways, and residences. Further, Hood River County, Skamania County, and the Columbia River Gorge Commission have not ascribed a visual quality score for each KVA within its respective jurisdiction. KVAs are principally designed, rather, as a means for ensuring that development within the NSA is subordinate as the Project is seen from a KVA. One, however, cannot assume that a KVA would necessarily have a visual quality score of a 6 due to this variety of factors.

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**Comment**: *Viewshed and Viewpoint Analysis Figures 3.9-1 and 3.9-2 are useful in assessing the potential visibility of proposed turbines from within the National Scenic area and elsewhere. But they fail to note the full extent to which the turbines would be exposed to key viewing areas. The analysis treats the scenic impact problem as a viewpoint impact as opposed to a view corridor impact, but several of the affected KVAs are corridors, not points. These corridors include designated scenic roads and the Columbia River. The DEIS should be revised to analyze the distance along the entire length of these KVAs from which the project would be visible and to simulate views from multiple points along these KVAs in order to identify where the greatest impacts are likely to occur. As it stands, the viewpoints chosen for analysis may not be truly*

*representative: I-84, the Columbia River and the Historic Columbia River Highway all have multiple possible view locations that may experience greater impacts than the single locations chosen by the applicant. Each of these view corridors come within 3 miles of the project, yet all sample viewpoints are more than 4 miles from the project. Additional views along these three KVAs should be analyzed. For example, a simulation from the Historic Columbia River Highway at Mitchell Point, directly across the Columbia River from the project, is critical. [LTR 180, CMT 13]*

**Response**: As noted in Section 3.9.2.3 (on DEIS page 3-164), CRGNSA key viewing areas (KVAs) (including those along corridors) with no turbines visible were not selected as viewpoints for visual simulations and were not further analyzed. However, the EIS does consider impacts to the various CRGNSA KVA corridors where turbines would be visible. Each KVA along the various corridors was chosen to convey the greatest extent of Project impacts. Furthermore, in describing the levels of visual sensitivity, the analysis considers the type of viewers who travel within a particular corridor as well as those who are more likely to gather in one location. For a discussion of Mitchell Point, see response to Comment LTR 141, CMT 2 above.

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**Comment**: *The visibility maps (Figures 3.91 and 3.92) illustrate that a huge area covering thousands of acres is potentially within line of site of one or more turbines. Given the high visibility of the project, additional viewpoints need to be selected to help analyze visual impacts. For example, the analysis failed to consider the impact from certain KVAs, including Tom McCall Point. Finally, there is a need to identify which turbines are visible from which viewpoints. This will aid the applicant, reviewing agencies, and the public in understanding both the extent of impact and in identifying potential mitigation measures. Photomontages. The applicant is relying heavily on the small number of selected viewpoints and photomontages to determine the level of impact. Regulatory reviewers of this proposal, as well as concerned members of the public, need to understand the inherent limits of what these photomontages can represent. [LTR 180, CMT 14]*

**Response**: The photo simulations, in addition to Figures 3.9-1 and 3.9-2, provide information on the number and location of the wind turbines that would be visible from the various CRGNSA KVAs. The locations of the individual turbines are identified in the two figures and can be cross-referenced with the photo simulations. Additional viewpoints are analyzed in Section 4.2-3 of the Application for Site Certification (Appendix A). A more detailed description for each viewpoint follows the summary table and figures (as noted on page 3-176 of the DEIS). The process of preparing the photomontages is described in Section 3.9.1.3.

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**Comment**: *First, the choice of viewpoints is critical. Are the viewpoints chosen truly representative of the views available in the area? For reasons mentioned, I do not believe this has been shown to be the case. Given the scale of this project and the number of viewpoints potentially affected, additional viewpoints should be analyzed. [LTR 180, CMT 15]*

**Response**: Please see response to Comment LTR 141, CMT 2 above.

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**Comment**: *Second, photomontages are not, and cannot, be true to life representations and should not be viewed as such. The inherent limitations of photomontages should be discussed in the DEIS. Two-dimensional photo images can never replicate a three-dimensional world because people see stereoscopically, and will view real life turbines from within three-dimensional space, not as if they were painted upon a flat plane. Real world resolution is also much greater than what can be portrayed on a photo. Brightness ratio is a measure of contrast between the lightest and darkest elements in any given view. On a clear day, a viewer might experience a 1,000 to 1 brightness ratio. The same image on a computer monitor provides a 100 to 1, or at best 400 to 1 brightness ratio. If this image is printed, the brightness ratio is cut in half or less. What this means is that a photographic image is inherently much lower contrast than what one would see in the real light of day. Additionally, the size of the image one looks at and the distance from which one views that image are crucial. [LTR 180, CMT 16]*

**Response**: The EIS does not claim that the simulations are "true to life," but it does disclose and describe the process by which they are prepared. The term "simulation" intimates that the photomontages are estimates of Project appearance using the best information available at the time the DEIS was prepared. Comments regarding the brightness ratio and image contrast are noted. The simulations were prepared using commonly used computer modeling and printers with adequate resolution.

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**Comment**: *Page 3-160 of the DEIS states that "Visual simulations were developed using photographs taken with a 35 mm digital SLR camera. Various focal lengths from 40-70mm were used with the intent to capture the maximum pixels and resolution for the simulation." A 50mm focal length approximates what the human eye sees. A 40mm length shows a wider angle, and pushes an image farther away, while a 70mm length brings it closer to the viewer. Most people will view the photomontages either on a computer monitor or on a printed page. Research indicates that to get a realistic sense of scale and distance, the original photo should be taken with a 70mm focal length and the image should be printed or viewed at a full page size, either 8 x 11 or 11 x 17 depending on the extent of the area being shown. This is because most people need to hold an image 15-20 inches away from their eyes in order to be focused. Viewing a photo of an object several miles distant, and moving that photo a few inches away adds miles to the effective visual distance. Also, by clipping images together to create panoramas, the photomontages effectively make the turbines recede farther into the background than they would appear in reality. It is nearly impossible for people to judge the true scale of wind turbines when looking at photos of them taken from a distance of several miles. The problem is there is usually no clear frame of reference within the photo to measure the size of a turbine against. Unless there is something of known size near the turbines, a house or barn for example, one cannot tell if the turbines are 100 or several hundred feet tall. In short, the images provided are too few and otherwise limited to be able to accurately assess the potential visual impacts of the proposal. [LTR 180, CMT 17]*

**Response**: The 40-70 millimeter (mm) focal length is a reasonable range that takes into account how the Project will be viewed. Wider angle lengths (up to 40 mm) were used to accentuate panoramic viewer experiences. Higher lengths (up to 70 mm) were used to provide more Project detail. Differences in focal length provide flexibility in the presentation of the simulations to provide reviewers the opportunity to experience broader fields of vision and/or more Project details. While several photos do contain objects that lend the Project some sense of scale, the use of wireline drawings lends additional clarity to the illustration of Project effects and provides a reasonable degree of scale to the viewer. Furthermore, by understanding that the turbines are up to 415 feet tall, the viewer can judge relative distance and scale and hence impacts by analyzing viewpoints with background and foreground Project views.

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**Comment**: *The images included in the DEIS vary greatly in scale. For example, the turbines appear much larger in the simulation for viewpoint 3, a distance of 7.6 kilometers, than they do for viewpoint 1, a distance of 6.4 kilometers. How can this be? The turbines should appear larger in the closer view. The answer must be that the reproduced image provided, no matter what focal length was used, does not reflect the distance. This is also evident in comparing viewpoints 11 and 12, which are similar view angles. The turbines in the simulation for viewpoint 12 appear smaller and farther away than those for viewpoint 11, even though the former is 3 kilometers nearer according to the data provided on the image. [LTR 180, CMT 18]*

**Response**: The methodology for preparing the simulations is described in Section 3.9.1.3. The different sense of Project scale and distance in the simulations may vary due to a number of different variables including viewer positioning, differences in respective viewpoint elevation, intervening landforms, and varying vegetation levels.

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**Comment**: *Lastly, even if the photo images were perfect representations of the wind turbines, they would fail to capture the added impacts due to the motion of spinning blades. Blade motion would attract the eye and add to visibility. Simulations that include motion (animations) should be provided by the applicant to properly assess impacts. Specific viewpoints I have selected a few viewpoints to illustrate the magnitude of impacts that may result from this project as designed. [LTR 180, CMT 19]*

**Response**: The development of animated simulations to represent moving blades is beyond the scope of this EIS. Visual impacts from moving blades are already considered in Sections 3.9.1.3 and 3.9.3.1. The impacts from shadow flicker are discussed in Section 3.6.2.1.

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**Comment**: *Viewpoint 11: I-84 Westbound. As viewed from this viewpoint, the 25 turbines with visible hubs clearly are visually dominant over the natural form, line, color, and texture of the existing landscape. They are high contrast, even with the inherent brightness ratio limitations of the photomontages. They have a strong skyline presence that draws attention to them. Spinning blades would only increase their obvious visual dominance. A key problem from*

*this viewpoint is the chaotic, jumbled appearance of the turbines. They are bunched up and overlap each other, creating too much visual density, with too little space between individual turbines and clusters. The turbines viewed from this vantage point present a very high contrast. Given the huge number of viewers, long view duration, and high sensitivity, the visual impact from the I-84 KVA and the adjacent Columbia River KVA in this area is very high. [LTR 180, CMT 20]*

**Response**: Interpretation and conclusions on the degree of visual impact are subjective and dependent upon the viewer. Because viewers are 14 km from the Project and are typically moving in vehicles in the I-84 corridor, the viewer sensitivity for Viewpoint 11 is considered moderate.

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**Comment**: *Viewpoint 12: Koberg Beach State Park. Impacts from viewpoint 12 are high, but not as high as from viewpoint 11. The angle of view is similar to the previous one, but because the distance is shorter, some of the turbines have ducked behind the horizon. The result is a bit better visual composition and thus somewhat less impact. The turbines are still visually dominant, but their horizontal scale is less, and the array is more coherent. Taking these two images together, one can conclude that the impacts might be even greater when viewed from further east. This is supported by the viewpoint map, which indicates that more turbines are visible from further east. [LTR 180, CMT 21]*

**Response**: While a larger number of turbines may be visible further to the east, impacts further east of Viewpoint 12 would actually be less due to the greater distance from the Project. In general, viewer sensitivity is reduced as distance between the viewer and the Project increases. The factors that lead into measures for viewer sensitivity are addressed in Comment LTR 180, CMT 11 above.

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**Comment**: *Viewpoint 13: I-84 Eastbound. The photomontage included in the DEIS is suspiciously low contrast. Given the much shorter view distance as compared with the previous two viewpoints, and taking the wireframe into account, the 12 turbines seen from here would be visually dominant. The skyline effect is strong, but the horizontal scale is modest. The biggest impact is from the dense cluster of turbines at the high point in the center of the image, best viewed on the wireline (Figure 3.9-10). Again, in looking at the viewpoint map, it appears that the turbines would be visible from along I-84 stretching 2 miles to the west and several miles to the east. This means a long duration view, and possibly more visible turbines. The composition of the turbines from this viewpoint is problematic. There are two areas of overlapping rotors, which create some visual incoherence. Impacts from this viewpoint are high. [LTR 180, CMT 22]*

**Response**: Because viewers are 5.52 km (3.429 miles) from the Project and are typically moving in vehicles in the I-84 corridor, the viewer sensitivity for Viewpoint 13 is considered moderately low. The sense of Project scale and distance in the simulations may vary due to a

number of different variables including viewer positioning, differences in respective viewpoint elevation, intervening landforms, and varying vegetation levels.

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**Comment**: *Viewpoint 14: Viento State Park. This is a very misleading photomontage. The image is very faint, and the size does not correspond to the relatively short view distance of 6.4 kilometers (4 miles). The wireframe view indicates that the 18 turbines seen from this viewpoint would be very high contrast and would have high impacts, similar to those discussed under Viewpoint 11. All 18 turbines break the skyline, there are overlapping rotors and a jumbled, chaotic composition. The turbines located at the high point in the center of the image are particularly strong impact. The turbines would be framed by Dog Mountain, seen on the left side of the photo, and a portion of Underwood Bluff, seen on the right side of the photo (Figure 3.9-11). These are very natural, highly intact landforms, exacerbating the contrast that the turbines would introduce. Existing development prohibitions on these landforms, which lie within the National Scenic Area, are at the highest protection level, allowing no visual contrast. This illustrates the high sensitivity of the viewshed. [LTR 180, CMT 23]*

**Response**: Because viewers are 6.43 km (3.995 miles) from the Project and the number of visitors to the area, the viewer sensitivity for Viewpoint 14 is considered moderate to high. The sense of project scale and distance in the simulations may vary due to a number of different variables including viewer positioning, differences in respective viewpoint elevation, intervening landforms, and varying vegetation levels. See also response to Comment LTR 164, CMT 2 above.

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**Comment**: *Viewpoint 19: Historic Columbia River Highway. This is also a visually misleading photomontage that most likely vastly understates the visibility and contrast of the 11 turbines in view. The image is much too hazy, and the white clouds behind the turbines provide a convenient low contrast backdrop for white turbines. By viewing the wireframe, I conclude that the turbines would be moderate to high contrast, and would be co-dominant to dominant. Impacts would be at least moderate, and possibly high. One visual advantage is that from this angle the turbine composition is reasonably coherent and the horizontal scale (along the horizon) is not great. The location of the turbines at a low point along the ridge presents lower impacts than noted in the previous photos. My concern is that the Historic Columbia River Highway runs within 3 miles of the project boundary west of this site. Selecting a single viewpoint over 7 miles from the project probably does not fully reflect the actual impacts to this Key Viewing Area. [LTR 180, CMT 24]*

**Response**: Because viewers are beyond 10.75 km (6.679 miles) from the Project and moving along the corridor, the viewer sensitivity for Viewpoint 19 is considered moderate. The sense of Project scale and distance in the simulations may vary due to a number of different variables including viewer positioning, differences in respective viewpoint elevation, intervening landforms, and varying vegetation levels.

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**Comment**: *Second, the DEIS mentions new and improved roads, but no roads are shown in the photomontages. Has the proponent determined that these roads will not be visible, or have they simply been left out of the picture? Since the turbines are along prominent, narrow ridges, it is possible that roads will have to be cut into the sideslopes in order to be at an appropriate grade. If this is the case, the road cuts could be visible from some viewpoints. [LTR 180, CMT 26]*

**Response**: As noted in Section 3.9.3.1 (DEIS page 3-174), "New permanent and improved roads will be visually similar to existing secondary and gravel roads in the Project Area and most would be difficult to see from outside the Project Area."

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**Comment**: *Fourth, the analysis does not include an evaluation of impacts from lighting (both daytime and nighttime). Lighting can cause a high contrast with surrounding landforms, dramatically increasing the impacts of development, both during the day and at night. The DEIS does not even attempt to estimate the extent of lighting, instead merely providing general guidance regarding the placement of lights and stating that the FAA will require lighting later. The DEIS needs to be revised to estimate the extent of lighting for this project and its impacts within the affected landscapes. [LTR 180, CMT 28]*

**Response**: The EIS discusses the impacts of light in several places. The impacts from shadow flicker are discussed in Section 3.6.2.1. The simulations provide estimates of Project impacts in varying degrees of light and weather conditions. Turbine night lighting impacts are adequately considered and disclosed in Section 3.9.2.3. The necessity for night simulations is also discussed in Section 3.9.1. As Section 3.9.3.1 notes, a generic illustration of night lights can be found on in the DEIS for the Nine Canyon Wind Project.

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**Comment**: *Findings. The visual impact analysis provided in the DEIS is faulty and incomplete. In addition, the DEIS's conclusions that visual sensitivity is only low to moderate and that impacts would be low to moderate from most viewpoints (Table 3.9-2) are not supported by the facts. The project as presented would have substantial adverse impacts to scenic resources. [LTR 180, CMT 29]*

**Response**: Please see response to Comments LTR 180, CMT 1 through LTR 180, CMT 28 above.

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**Comment**: *MOVING THE "A TOWERS" MITIGATES TOURISM IMPACTS. Facts. The seven "A Towers" sit alone on a clear-cut ridge at the very most southern portion of the proposed project. If installed they would dominate views, day and night, from far more locations than are depicted in the application submitted to Council. To remove any uncertainty about the visual impacts of the seven A Towers, the Agri-Tourism Association hired a pilot to fly a photographer along the ridge where these towers are proposed. In Appendix 7 to our comments,*

*you will find the results. Take note of the photograph that was taken directly over the ridge at an elevation of 300 feet above the ridge. This photograph tells the story of who will see the seven A Towers. Also note that the photograph was taken 120 feet below the top of the proposed towers. Then take note of the next photograph that shows the locations of existing businesses along the Underwood Agri-Tourism Loop. The impacts are clear. The solution is also clear. The re-siting of the seven A Towers eliminates all visual impacts to the Underwood Agri-Tourism industry, as well as the visual impacts to a vast area throughout the Gorge. [LTR 186, CMT 16]*

**Response**: The removal of the seven A-towers would not meet the objectives established in the Project's purpose and need.

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**Comment**: *Comment on: Whistling Ridge Energy Project Draft EIS Concerning: FAA aircraft safety lighting requirements. Viewpoint associated with my full-time year round residents: Viewpoint 1: Pucker Huddle (Within Scenic Area), 16-25 Turbines visible. Lighting Suggestion Based On Reference: The U.S. Department of Transportation FAA Advisory Circular (AC 70/7460-1K) "Obstruction Marking and Lighting" Web Link to FAA Advisory Circular (AC 70/7460-1K): http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/B993DCDFC37FCDC486257251005C4E21?OpenDocument&Highlight=obstruction marking,lighting. [LTR 188, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *My suggestions here are to help minimize the visual impact while still adhering to the FAA aircraft safety lighting requirements. My house was built to take advantage of the view I have of Underwood Mountain, and because of this my Master Bedroom, Living Room, Dining Room and Kitchen windows all face Underwood Mountain. During the day, the wind turbines for me add to the scenic view, but at night the flashing lights can be extremely distracting, if not configured properly. My reference for the lighting being distracting are the wind turbines outside of Goldendale. When you are driving south on hwy 97 from Goldendale, the flashing lights are surprisingly distracting due to the fact that every wind turbine in the row had a light on it and possibly the speed at which the lights were flashing. This drive south on hwy 97 seemed representable of what the view from my house would be. My suggestions are based off of what I experienced driving south on hwy 97, and what I believe could reduce the distraction. The greatest issues were: 1. The number of lights, since every wind turbine appeared to have one. 2. The rate at which they flashed. 3. How they flashed, which was either off or on. [LTR 188, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *My suggestion would be to: 1. Put lights on the minimum number of towers based on the FAA Advisory Circular (AC 70/7460- 1K). For linear turbine configurations, this would be one at each end of the line with no more than 1/2 mile between lights in the line. Based on this requirement, a possible lighting configuration for Whistling Ridge could be placing lights on: A1, A4, A7, A8, A13, F1, F3 ,B1, B7, B13, B18, B21, D1, D3, E1, E2, C1, C4, C5, C8. 2. Set the flash Per Minute of the lights to 20 FPM (Flashes Per Minute). This suggestion is based on if the L-864 light is used, which is allowed to flash between 20 and 40 FPM. 3. Have the lights fade off and then fade on, as opposed to being either completely on or completely off. There was nothing in the FAA Advisory Circular (AC 70/7460-1K) that indicated the lights could not fade off then on, as opposed to being on or off when flashing. That is the extent of my suggestion. Thanks for extending the comment period. [LTR 188, CMT 4]*

**Response**: The Project will comply with FAA requirements as a condition of the site certification agreement. See also Sections 3.9.3.1 and 3.9.4 in regards to complying with FAA requirements and mitigation respectively. See also response to Comments LTR 119, CMT 5 and LTR 177, CMT 43, both above.

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**Comment**: *The DEIS wrongly concludes that visual impacts will be low to moderate. Page 3-171 describes the north facing view from Hood River Hospital, an urban setting in the middle of town, but fails to describe the impact to any of the viewpoints along the waterfront, residences in town and recreation areas scattered throughout Hood River and The Gorge. These viewpoints are cherished and attract tourists and residents alike to the area. Industrial wind turbines 400' high will have a high impact on the scenic quality of these view sites, not a low impact. [LTR 190, CMT 3]*

**Response**: Please see response to Comment LTR 141, CMT 2 above. The viewpoints in the EIS adequately illustrate the potential impacts from the Project. The viewpoints were selected for their representation relative to the Project Area, locations most accessible to the public, and locations with the largest number of viewers. The number of turbines that would be visible from the areas the commenter mentions is illustrated in Figure 3.9-1, which shows the locations of the simulation viewpoints relative to the Project Area.

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**Comment**: *The DRAFT refers to micrositing of towers, however I do not see anywhere in the draft that a site-by-site, micrositing analysis was done for each specific turbine or meteorological tower. Certainly the turbine & meteorological towers sited in the project area foreground as viewed the crucial viewpoints I identified above will have high visual impact. I recommend site-by-site, micrositing analysis be done for each specific turbine or meteorological tower within view from: Hood River, Columbia River Waterway (adjacent to Hood River), Columbia River Shoreline Recreation Sites (Adjacent to Hood River and Mosier), I-84 Freeway (From Hood River to Mosier in both directions). [LTR 194, CMT 2]*

**Response**: The EIS analyzes the impacts of a project that would occur within a wind turbine siting corridor and the analysis conducted assumes the worst case scenario of turbine placement

so that the greatest potential project impacts can be analyzed. The visual resource section was prepared based upon this assumption as noted in Section 3.9.1.3.

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**Comment**: *The Board finds: Many man-made structures and activities are visible and will be visible along these "trails" that follow Interstate highways, where the most visible of "impacts" on travelers are the many semi trucks, trains, transmission lines, dams, industrial facilities, mines, and coal, gas and nuclear power generating facilities, as well as many cities, homes, commercial buildings, advertising signs and billboards, that they pass by. It is a gross abuse of federal authority to negatively comment on, and seek to obstruct a renewable energy project on private lands merely because a small portion is remotely visible from an Interstate highway. [LTR 197, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Nestor Peak and Mitchell Point are key viewing areas used by hikers, mountain bikers, ATV enthusiasts, and horseback riders. If this project is built, the view of Mt. Hood from Nestor Peak and the view of Mt. Adams from points along the Oregon side of the Columbia Gorge will be permanently spoiled. [LTR 201, CMT 1]*

**Response**: Please see response to Comment LTR 141, CMT 2 above.

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**Comment**: *Please deny the project application and institute a moratorium on further wind development within 20 miles of the Gorge Scenic Area boundary until we can understand the long-term impacts of wind development on animals and develop a meaningful plan that mitigates the visual impact of these projects. BPA and the Army Corps of Engineers took Celilo Falls away from us in 1957. Now it is 2010, and BPA plans to take away the horizon as well. The ongoing rape of natural beauty to fuel mankind's greed for energy and dollars must stop, here and now. [LTR 201, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I personally think the generators are beautiful and do not detract from the Gorge view. [LTR 212, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The mailing that SDS sent out was very troubling. Our neighborhood is comprised of $500,000 and up homes that moved here for the view. Our view will now be looking at windmills all day and blinking lights all night. We will receive no benefit from these windmills and we are in a different county. SDS gains the money, we gain nothing except a destroyed skyline. [LTR 213, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *My only compromise would be to lower the windmills below the ridgeline so we don't have to look at these unsightly beasts. [LTR 213, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I think the turbines look graceful and I do not mind them during the day. At night the red hazard lights are an eyesore. I would vote no just to avoid seeing the lights at night. Probably not possible to get rid of the lights... but it sure would be nice. [LTR 214, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Called to comment because he's too busy to attend the meetings for Whistling Ridge because he's hosting a beautiful event, a 15th birthday party, at the bed and breakfast. He loves to see the view of the gorge the way it's always been, and he believes it's inappropriate to place 50 decibel, 500 foot tall towers there. It's just not a good trade off for the small amount of power. When he got permits to build his B&B, he had to plant lots of trees as to not upset his neighbors. [LTR 218, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Whistling Ridge is outside the delineated boundary of the National Scenic Area and totally exempt from its restrictions but due to the scale and proximity of the proposed turbines to the boundary, the project applicant has not ignored evaluation of aesthetic and other impacts from within the National Scenic Area. The Visual Resources section (3.9) consists of what appears to be a thorough and objective analysis of relevant impacts. I found no reason to doubt the completeness of the data or the validity of the methodology or findings. It is worth noting that the analysis rated no visual impacts as "High". Rather, most were rated moderate or low and only one, Viento State Park rated up to "Moderate to High". The DEIS's evaluation of viewer sensitivity states on Page 3-171: "When considering the distance of the project from this viewpoint (greater than 5 miles), the portion of the project that is visible from the viewpoint, the viewer types (recreational), and the scenic quality rating, the level of sensitivity was rated as*

*moderate to high." This is the worst visual impact of this project documented by the DEIS thus it is reasonable to conclude that scenic resources of the National Scenic Area would not be compromised by the proposed action. [LTR 231, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I think people will get used to seeing the wind turbines. We need all forms of energy generation and this project is just one piece of that energy needs. [LTR 232, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The effects on human habitation, which is fairly close, would be for the persons living nearby, very, very bad and of course this is right in line of sight of the Columbia Gorge Highway, the national scenic area. So this is not a satisfactory project. [LTR 233, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *However, the visual impact of the large array of flashing red lights will create a disturbing visual impact when directly viewed at night, and may reflect off low clouds, when present, and seriously affect the darkness of the night sky. Direct observations of the red lights on wind farms in Washington, from the Oregon side, creates a very distracting and potentially disturbing effect on the darkness of the environment. [LTR 237, CMT 3]*

**Response**: Turbine night lighting impacts are discussed in Section 3.9.2.3. The necessity for night simulations is also discussed in Section 3.9.1. As Section 3.9.3.1 notes, a generic illustration of night lights can be found in the DEIS for the Nine Canyon Wind Project.

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**Comment**: *This project would ruin the beautiful view in the area. [LTR 240, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *The Mitchell Point overlook is even more visually sensitive than Interstate 84, both because it is higher in elevation and because it is a place where people stop and get out of their cars to take photos. It is closer to the proposed project than Viento State Park, Koberg Beach State Park and the single location on the Hood River to Mosier section of the Historic Columbia River Highway State Trail that were analyzed. This site must be analyzed for visual impact from the proposed project. [LTR 242, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *When the highway was constructed in 1913-1922 Samuel C. Lancaster wrote: "our first business was to find the beauty spots, or those points where the most beautiful things along the line might be seen in the best advantage, and if possible to locate the road in such a way as to reach them." This was accomplished by directing curves to draw attention to dramatic viewsheds and design features that enhance the appreciation of dramatic scenic landscapes. These design techniques are a critical component of the historic value of the Historic Highway, the first scenic highway in the country. Harming the views from these viewing locations directly undermines the historic integrity of this nationally important historic resource. The view from Mitchell Point in particular highlights the important relationship between highway design and maximizing appreciation of scenic landscapes. The original Tunnel of Many Vistas provided enhanced views of the Columbia River and the geologic features across the river on Underwood Bluff. The recreated tunnel will also highlight similar views. The proposed development would directly harm these views. As evidenced by the attached photos and the design features that highlight views from the "Tunnel of Many Vistas" underscore the views' significance to the highway designers. [LTR 242, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS fails to acknowledge the scenic resource inventory or how the proposed development would impact this view. The development would include enormous industrial structures with moving parts and flashing lights that would break the sky-line of this view. Attention would be drawn away from the historic view and be focused on modem industrial development. This would cause significant adverse effects to the views. While the most severe impacts would occur to views from the HCRH at Mitchell Point, significant adverse impacts to views from miles of the HCRH would occur. The DEIS must be revised to accurately reflect the impacts to the length of the HCRH. The single simulation of a view from the Mosier to Hood River section of the HCRJ-I State Trail (Viewpoint 19) is both misleading in its presentation and incomplete. There is no analysis of impacts to the view corridor. [LTR 242, CMT 5]*

**Response**: Turbine night lighting impacts are discussed in Section 3.9.2.3. The necessity for night simulations is also discussed in Section 3.9.1. As Section 3.9.3.1 notes, a generic illustration of night lights can be found on in the DEIS for the Nine Canyon Wind Project. Viewpoint 11 is indicative of the visual impacts from the Project within the Hood River to Mosier segment of I-84. No additional simulations for this I-84 segment will be prepared. For a discussion of Mitchell Point, see response to Comment LTR 141, CMT 2 above. Response to Comment LTR 180, CMT 13 above discusses project impacts to CRGNSA KVA corridors.

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**Comment**: *In sum the DEIS fails to adequately analyze the likely impacts to views from the Historic Columbia River Highway. Because the impacts were not adequately addressed,*

*appropriate alternatives were not analyzed and appropriate avoidance and mitigation measures were not considered. Friends of the Historic Columbia River Highway encourage EFSEC and the BPA to revise the DEIS to actually reflect the likely impacts of the proposed development on the Historic Columbia River Highway. [LTR 242, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *The revised EIS must include alternatives that would not include any turbines within viewsheds from the HCRH. At the least, the agencies must consider an alternative that would avoid impacts viewsheds from important viewpoints such as Mitchell Point. Thank you for the opportunity to comment on this DEIS. [for the following attachments see PDF] View from Mitchell Point – 2010 [picture] Historic Views of Mitchell Point [3 pictures] HCRH Reconnection Strategy – Segment 8 Mitchell Point Tunnel [map and article] [LTR 242, CMT 8]*

**Response**: The photo simulations provide within the EIS give an indication of the greatest potential Project impact to visual resources. This visual resources section (Section 3.9.1) takes into account both the size and movement of the turbines. Interpretation and conclusions on the degree of visual impact are subjective and dependent upon the viewer. Additionally, removing or reconfiguring the location of turbines that would be visible from the CRGNSA would be contrary to the Project's purpose and need.

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**Comment**: *Mr. Bushman phoned on 8/25 to register his opposition to the Whistling Ridge wind farm that is being proposed. He is not opposed to alternate means of energy such as wind, but he does not want it in the scenic area of the gorge. [LTR 246, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Our area has this beautiful scenic area and she doesn't understand why people want to ruin it by adding windmills. Her and her husband were over at friends the other evening, and they had the perfect view of the river and the gorge. It was absolutely beautiful! [LTR 247, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *She said they should focus on another project. This would ruin the gorge -- and the view. [LTR 251, CMT 2]*

**Response**: Comment acknowledged.

**Comment**: *She agrees with the Friends of the Gorge that it is not a good idea to build the windfarm where proposed. She would like it denied as it will ruin the beauty of the gorge. [LTR 252, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Washed out photographs and simulations of wind towers may lead you to conclude that the visual impact of wind power is insignificant. Once again, the studies do not reflect how the human mind actually works. First of all, the human eye is drawn to movement, and the wind tower blades are huge and moving. At night the blinking lights attract your attention. Then there is the problem of size. The human eye is attracted to size, especially on ridgelines. The photographs and simulations simply do not capture the actual human experience when these wind machines come into view. The studies diminish the impact where the actual experience is that the machines command your attention, even when you try to ignore them. [LTR 256, CMT 16]*

**Response**: The photo simulations provide within the EIS give an indication of the greatest potential Project impact to visual resources. This visual resources section (Section 3.9.1) takes into account both the size and movement of the turbines and the need for aircraft warning strobes (see Section 3.9.1.3 and response to Comment LTR 177, CMT 43 above). Interpretation and conclusions on the degree of visual impact are subjective and dependent upon the viewer.

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**Comment**: *As described in your analysis on Table 3.9.2 (Viewpoints 13 and 14) the Columbia River gorge has moderately high to high levels of visual quality. Visitors and residents within the gorge place a high value on scenic quality and viewer sensitivity is substantially higher than described in the DEIS. As such, I would ask that you consider potential scenic effects throughout project design and implementation. Considerations such as turbine placement, color and size through project design and implementation will help to ensure scenic quality, as viewed from within the CRGNSA, will be maintained and/or scenic modifications minimized. [LTR 257, CMT 3]*

**Response**: Please see response to Comment LTR 180, CMT 11 above.

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**Comment**: *The Wind Towers will have a clearly definable adverse impact on the CGNSA. In the Management Plan for the Gorge are a list of "Key Viewing Areas" and guidelines for color, height, etc. for anything built that can be seen from a key viewing area. (See below.) The guidelines are there to prevent new structures from having an adverse impact on key viewing areas. The wind towers proposed would be visible from several key viewing areas in the Gorge, and do not meet the guidelines in the management plan, so they will have a clearly defined adverse impact. [LTR 262, CMT 1]*

**Response**: For a discussion on the applicability of the Skamania County Code as it pertains to the CRGNSA, see response to Comment LTR 301, CMT 5 below.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. [LTR 265, CMT 3]*

**Response**: Views from the HCRH are considered in Viewpoint 19.

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**Comment**: *The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 265, CMT 4]*

**Response**: Many factors, as described in the EIS, were considered in assessing visual impacts and whether they could be considered significant. Viewer sensitivity, visual quality, and distance from the nearest turbines were three key factors in determining the level of Project impacts to visual resources. Using the methodology described in Section 3.9.1, and after considering CRGNSA KVAs and other viewpoints, it was determined that for most viewpoints impacts were low to moderate.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 266, CMT 4]*

**Response**: The EIS notes that the turbines are up to 415 feet tall so the viewer can judge relative distance and scale and hence impacts by analyzing viewpoints with background and foreground Project views. Additional viewpoints are analyzed in Section 4.2-3 of the Application for Site Certification (Appendix A). A more detailed description for each viewpoint follows the summary table and figures (as noted on page 3-176 of the DEIS). The HCRH is considered in the visual resource analysis (see Viewpoint 19 on page 3-189 of the DEIS). For additional discussion regarding CRGNSA KVAs, see response to Comment LTR 265, CMT 4 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and*

*other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 270, CMT 4]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *"Facts". The promoters of this project have concentrated their money and power on a sales job based on selective misinformation in an attempt to promote the economic and political benefits (which have been grossly exaggerated) to Skamania and Klickitat Counties and WA State. Photos and "facts" have been specifically chosen or rejected to distort the realities as well as to quote old studies that are no longer appropriate. For example, there is a blatant omission (and highly selective inclusions) in the Draft EIS document of any photos of potential visual impacts from the Strawberry Mountain area in White Salmon. How about from the Mark O. Hatfield State Park scenic hike/bike trail along the Columbia River between Hood River and Mosier? [LTR 273, CMT 3]*

**Response**: All analysis prepared by the Applicant has been objectively reviewed by EFSEC. In some instances, EFSEC has requested and received additional information from the Applicant to improve the analysis presented in the DEIS and for the Final EIS. Strawberry Mountain was analyzed in Section 4.2-3 of the Application for Site Certification (Appendix A). According to this document, the scenic quality from Strawberry Mountain was rated as moderate, viewer sensitivity was rated as moderate, and the level of impact was anticipated to be low to moderate. Viewpoints from hiking trails would not meet the criteria used for determining viewpoints for the visual resources analysis as noted in Section 3.9.2.3.

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**Comment**: *Light pollution. Visualize a peaceful summer evening enjoying the sunset view of the Gorge from Strawberry Mountain in White Salmon where we live (and from many other areas in the Gorge), and seeing 50 blinking red lights all going off at once as the sun goes down behind them! One of the big draws to rural areas is the beauty of the night sky devoid of city lights. We hope you will conclude as we have that this is the absolute wrong location for this project, and probably the wrong technology for this time. ~ Please let's use some good old NW common sense that we are known for. Rely on facts and not just somebody's sales pitch, political pressure, and the enticement of big "free" subsidies, going into private pockets paid for by all US citizens. Please recommend the denial of this project in its proposed location to Governor Gregoire. It is the right decision. [LTR 273, CMT 6]*

**Response**: The details concerning obstruction lighting have not been determined but it is not likely that each wind turbine would need to be lit with a warning strobe given FAA requirements. Turbine night lighting impacts are discussed in Section 3.9.2.3. Impacts from night lighting are not expected to be significant.

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**Comment**: *We will focus on three areas in which we feel we do have a certain amount of expertise: Scenic resources, Transportation resources and Recreation resources. As a former Commissioner serving at the pleasure of Governor Mike Lowry on the Columbia River Gorge Commission, Sally has a more than passing interest in (and acquaintance with) the local landscape. She also worked as a school bus driver for Mill A School, traversing Cook-Underwood Road between Mill A School and the Underwood Community Center for over 10 years. As a professional driver, she had a unique perspective on the safety aspects of this road, as well as SR14, which was often used to transport students to games and field trips. Paul has lived in Underwood all his life, and for the first 10 years of his adult life worked for Broughton Lumber Company at the Willard Mill, commuting on Cook-Underwood Road from Underwood to Willard. Both of us are avid horsemen, riding and packing in and around Underwood, Mill A and Willard, as well as on the nearby Buck Creek Trail System and in the Gifford Pinchot National Forest. To the scenic component of the DEIS, we would point out that the photographs purporting to depict the scenic impacts from various vantage points were obviously selected to minimize the impacts in the eye of the beholder. Importantly, NONE of the photographs depict the way these views will look at night, with red aviation lights destroying the appearance of the ridgelines in the moonlight. After all, it is dark about half of the time, and we think the scenic value of the project area at night should be a consideration, especially since there is currently nothing. In the area that generates the kind of scenic distraction that a string of red aviation lights (visible for 20 miles) strobing every few seconds will. These are not low to moderate impacts, especially if they are visible from YOUR living room windows. While the project is (just barely) outside the Columbia River Gorge National Scenic Area, we feel that a project that impacts a national treasure should be evaluated carefully. Buckets of money, not to mention blood, sweat, tears and emotional distress on all sides have been expended to preserve the scenic, natural, cultural and recreation resources of this place, and to encourage economic development in a way that is compatible with that preservation. It makes no sense to us, after 25 years of effort, for the State of Washington to produce a 1500 page document that fails to properly consider the impact this project would have on the CRGNSA. When the boundaries for the scenic area were established, no one could possibly have conceived that just 25 years later, the state would be considering allowing structures 400 feet high a mere 50 feet outside that boundary, and clearly visible from major viewing areas, including two population centers within the CRGNSA. We are among the many people who have invested their lives and their life savings in this beautiful place with the understanding that is a special, protected place, recognized by our government with special status to allow it to remain beautiful for future generations to enjoy. We are among the people who willingly, through design and landscaping, try to make our homes and other structures blend with the surrounding landscape. We are among the many people who understand that even though we own a fairly large piece of land, will not be able to divide it among our children and grandchildren, in the service of a larger public ideal. And that's okay with us, as long as the sacrifice is shared equally. It seems to us that for the state to allow a desecration of the scenery of this kind makes a mockery of that sacrifice in the name of lining the pockets of a wealthy local dynasty. We didn't notice any analysis of that in the DEIS. [LTR 277, CMT 2]*

**Response**: Please see response to Comment LTR 256, CMT 16 above.

**Comment**: *The DEIS is also deficient in the area of recreation. The Buck Creek Trail System receives short shrift in the DE IS. This trail system was built years ago by a local couple, with the cooperation and assistance of the Washington Department of Natural Resources. There was a trailhead, known as the Whistling Ridge Trailhead, complete with corral and campsite immediately adjoining the project area to the north. That trailhead has disappeared, along with the trail connecting it to the rest of the Buck Creek Trail System. The local chapter of Backcountry Horsemen of Washington recently had a work party on the trail system, and after much searching, found the northern end of the trail, but lost it in the clear-cut to the south. The trailhead is depicted on the wooden map near Northwestern Lake, and on paper maps distributed by DNR as recently as three years ago. Figure 4.2-27 purports to depict recreation facilities and key viewpoints. It shows the trailheads, but fails to clearly depict the trails and topography in a way to meaningfully show the potential visual impact on trail users. These include, but are not limited to the Buck Creek Trail System, and the Monte Cristo and Monte Carlo trails north of it. There are many places in the Gifford Pinchot that the project would be visible from, like Little Huckleberry Trail north of Willard. The project will be highly visible from the best southerly views from Little Huckleberry and the Buck Creek Trails, and could preclude the rebuilding of the Whistling Ridge Trail due to degradation of the trail experience. The DEIS does not discuss the disruption of a backcountry campout by aviation lights flashing to the south, and generally makes light of the impacts that will be suffered by recreationists subjected to the deterioration of their experience due to the scenic impacts associated with the project. In sum, we think your DEIS is deficient and that the Whistling Ridge Energy Project has the wrong name, in the wrong place. [LTR 277, CMT 4]*

**Response**: Please see response to Comments LTR 318, CMT 44 and LTR 302, CMT 11 below.

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**Comment**: *[In reference to Section 3.6.2.1, Impacts, Proposed Action; PDF pg. 157-158], [t]he industrialization of Skamania County and other counties in the region is NOT preserving the rural character of the area! The Futurewise article, Planning for Sustainable Rural Areas, written in March 21, 2005 has a definition for rural character: 'The rural area is the land located outside the urban growth area and outside resource lands. Resource lands are agricultural, forest, and mineral lands of long-time commercial significance.' "Rural character" refers to the patterns of land use and development established by a county in the rural element of its comprehensive plan: (a) In which open space, the natural landscape, and vegetation predominate over the built environment; (b) That foster traditional rural lifestyles, rural-based economies, and opportunities to both live and work in rural areas; (c) That provide visual landscapes that are traditionally found in rural areas and communities; (d) That are compatible with the use of the land by wildlife and for fish and wildlife habitat; (e) That reduce the inappropriate conversion of undeveloped land into sprawling, low-density development; (f) That generally do not require the extension of urban governmental services; and, (g) That are consistent with the protection of natural surface water flows and ground water and surface water recharge and discharge areas. "Rural development" refers to development outside the urban growth area and outside agricultural, forest, and mineral resource lands designated pursuant to RCW 36.70A.170. Rural development can consist of a variety of uses and residential densities, including clustered residential development, at levels that are consistent with the preservation of*

*rural character and the requirements of the rural element. Rural development does not refer to agriculture or forestry activities that may be conducted in rural areas.' I don't think that putting up 50+ industrial wind turbines and constructing maintenance roads throughout the landscape conforms to the definition of rural character " (a) In which open space, the natural landscape, and vegetation predominate over the built environment"!! [LTR 286, CMT 55]*

**Response**: The existing setting and landscape was considered in the analysis upon visual resources. Through the scenic value assessment (Section 3.9.1.2) and the affected environment (Section 3.9.2) sections of the DEIS, the existing character of the visual resources were described and evaluated at the regional and local levels. For additional information concerning the applicability of RCW 36.70A.170, please see the discussion on Land Use and Recreation in Section 3.8 of the EIS.

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**Comment**: *[In reference to Section 3.9.1, Proposed Action; PDF pg. 165], [t]hese 400-foot turbine towers break up the horizon, are visible to the eye, and don't belong in the visual landscape of the Columbia River Gorge National Scenic Area. Klickitat County has pillaged their entire prairie landscape with turbines and maintenance roads and these turbines are intrusive to one's enjoyment of the rural environment. The view shed would be ruined by these monstrous entities. [LTR 286, CMT 57]*

**Response**: The visual impact to existing visual resources is expected to be low to moderate for most of the viewpoints as analyzed in Section 3.9 of the EIS.

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**Comment**: *[In reference to Section 3.9.3.1, Proposed Action; PDF pg. 182], [t]his statement "turbines will therefore blend with the background" is an opinion and is not factual. Those of us who live in the NSA and surrounding areas certainly would notice, as I can state from personal experience, 400 foot spinning turbines in the landscape! These suckers are BIG and they do impinge on one's visual area of interest. [LTR 286, CMT 61]*

**Response**: Most viewpoints located in the NSA would have views of the Project, however, due to the distance from the viewer to the Project, as well as the presence of atmospheric haze, varying levels of scenic quality, and the varying levels of viewer sensitivity effects are expected to be low to moderate for most of the viewpoints analyzed.

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**Comment**: *[In reference to Section 3.9.4, Impacts, Proposed Action; PDF pg. 193], [t]hese are not "potential" visual impacts! These are real impacts and they would be very annoying and intrusive in our rural environment. [LTR 286, CMT 63]*

**Response**: Impacts are referred to as "potential" due to the fact that the Project is being "proposed" at this stage of the regulatory process. Therefore, anticipated levels of impact can

only be referred to as potential. EFSEC and the BPA are required to disclose these anticipated impacts in the DEIS.

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**Comment**: *I wish to make comments on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines. I live in Hood River, OR and I am concerned this project will cause visual pollution of our view shed, which is one reason tourists visit here. In addition this proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. [LTR 287, CMT 1]*

**Response**: Visual impacts are discussed in Section 3.9. Impact to wildlife and other biological resources is discussed in Section 3.4. Your concerns regarding the potential Project impacts to these resources are noted.

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**Comment**: *The DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the Boundary of the Columbia River Gorge National Scenic Area. [LTR 288, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Furthermore, the DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 288, CMT 4]*

**Response**: Please see response to Comment LTR 22, CMT 1 above. The Project would cause some visual impact to KVAs within the CRGNSA, but these impacts would largely be low to moderate (see Sections 3.9.3.1 and 3.9.5 ,DEIS pages 3-177 and 3-196).

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 289, CMT 5]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 290, CMT 5]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 291, CMT 6]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 292, CMT 5]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 294, CMT 5]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *I am firmly opposed to the proposed Whistling Ridge wind energy project. These unsightly towers do not belong at the very edge of a National Scenic Area. We mustn't let one individual's greed and ambition ruin a national treasure. If California must have the power*

*generated by these wind turbines, then they should be located in California or at the very least, way out in eastern Oregon or Washington where their visual and environmental impact is less egregious. Please do not permit this project to go forward. We hike often in the eastern end of the Columbia Gorge -- it is a wonderful area. The presence of huge wind turbines would ruin the experience completely! Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 295, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am totally opposed to this wind project in the gorge. The Whistling Ridge project is a disaster. Proposed to be located seven miles northwest of White Salmon, Friends of the Gorge writes "the proposed wind turbines would cover more than 1,000 acres of highly visible ridgelines and would be seen from several designated key viewing areas in the Gorge including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would also be highly visible from communities and cities such. as Mill A, Underwood, Hood River, and White Salmon." [LTR 296, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The photo simulations are poorly accomplished. Please allow the time to consider other viewpoints, including views from the Historic Columbia River Highway and the Native tribes that may be impacted by the proposed projects. Thank you for extending the public comment period. [LTR 297, CMT 6]*

**Response**: Please see response to Comment LTR 266, CMT 4 above. For a discussion of tribal consultation, see Section 3.10.

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**Comment**: *Starting on page 3-155, the DEIS uses the same methodology and visual simulations, though fewer viewpoints than in the SDS application. It appears to completely ignore the risks of significant impacts and recommendations identified in the USFS scoping letter. It simply depicts the same inaccurate and misleading conclusions presented in the SDS application. We ask, as Lynn Oliver of the USFS asked, "Was a qualified landscape architect consulted in the preparation of the DEIS?" None appear in the List of Preparers (pages 6-1 to 6-7). We must conclude one was not. The quality of this DEIS would have been substantially improved had the recommendations of Diana Ross, CRGNSA landscape architect been utilized. Her analysis of the application and our comments regarding relevant points of the DEIS follow. [LTR 300, CMT 1]*

**Response**: For a discussion on the methodology used for the visual analysis see response to Comment LTR 180, CMT 6 above. A discussion of how Visual Resource analysis was

performed – Methodology – please see Section 3.9.1. For viewpoint selections, please see response to Comment LTR 141, CMT 2 above, or you may also refer to Sections 3.9.1.1, 3.9.1.2, and 3.9.1.3, as well as Section 3.9.2.3. For a discussion on the professionals who conducted the visual resource analysis, please see response to Comments LTR 178, CMT 71 and LTR 179, CMT 65 above, or refer to Section 6.0, List of Preparers.

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**Comment**: *Key Viewing Areas (KVAs): As mentioned in the application, the effects to scenic resources in the Scenic Area are assessed by analyzing the effects of a project on lands visible from 26 selected public vantage points from which the public views the landscape. It was not foreseen at the time the Act was passed that any development outside of the Scenic Area would be seen from these viewpoints. However, it is clear from the application that several Scenic Area Viewsheds (the land seen from these vantage points) will be affected 9 of the 21 viewpoints analyzed are also Key Viewing areas (#6 & 9 were missing). DEIS table (page 3-177) shows that Key Viewing Areas #6 (SR-14) and #9 (Tom McCall Point) are still missing and that #10 (Panorama Point) has been deleted. Why were these not included in the DEIS? Clearly, they are required in order to accurately analyze the visual impact of this proposed project. [LTR 300, CMT 1]*

**Response**: The selection of viewpoints is based upon the criteria developed in Section 3.9.2.3. The SR-14 (Viewpoint 6) and Tom McCall Point (Viewpoint 9) were not chosen to be analyzed due to their limited visibility of the Project and because there were other viewpoints that offered a better representation of Project effects. Visual impacts, as viewed from Panorama Point, are analyzed in Section 4.2-3 of the Application for Site Certification (Appendix A of the DEIS). It was not chosen to be placed in the visual resource section of the EIS, due to its limited views of the Project and because other viewpoints offered a better representation of Project effects. As noted in Section 3.9.1.3, the visual simulations prepared likely overstate the visual impact by assuming a larger number of turbines.

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**Comment**: *Methodology and Summary of Scenic Impacts: There are many unknowns in the summary of methods on page 4.2-30-31 of the application. For example, the methods section did not disclose the heights used for the turbines or whether the software placed and sized the turbines or whether this was done in Photo Shop as an art project. The simulations created using these methods are seriously flawed and do not represent an accurate visual depiction of what the viewer will experience. This is documented in the August 19, 2010, Dean Apostol, Landscape Architect memo on the DEIS presented to BPA and EFSEC ... "In short, the images provided are too few and otherwise limited to be able to accurately assess the potential visual impacts of the proposal. The images included in the DEIS vary greatly in scale. For example, the turbines appear much larger in the simulation for viewpoint 3, a distance of 7.6 kilometers, than they do for viewpoint 1, a distance of 6.4 kilometers. How can this be? The turbines should appear larger in the closer view. The answer must be that the reproduced image provided, no matter what focal length was used, does not reflect the distance. This is also evident in comparing viewpoints 11 and 12, which are similar view angles. The turbines in the simulation*

*for viewpoint 12 appear smaller and farther away than those for viewpoint 11, even though the former is 3 kilometers nearer according to the data provided on the image." [LTR 300, CMT 1]*

**Response**: The height of the turbines used is disclosed (415 feet - see Section 3.9.1.3). The method of creating the visual simulations is also discussed in Section 3.9.1.3. Visual Nature Studio, widely-used three-dimensional Geographic Information System (GIS) software, manufactured by 3D Nature, LLC, was used to model the turbine locations on terrain built from USGS digital elevation model data. The use of Adobe Photoshop, commonly used software for developing photo-composites, is also discussed in Section 3.9.1.3. For a discussion on the variability of turbine size from different perspectives, see response to Comment LTR 180, CMT 18 above.

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**Comment**: *The USFS 2009 scoping analysis continues ... "There are also several questions concerning the methods used to 1) choose viewpoints, 2) define visual quality and viewer sensitivity, and 3) represent and make conclusions about impact. 1) Choosing viewpoints in the Scenic Area should be based on Key Viewing Areas. Several of these were missing from the discussion (SR-14, Tom McCall Point) and others are linear viewpoints where only one or no views were picked in the NSA (Columbia River, Hwy 35, 1-84, Historic Columbia River Highway). Therefore, it is unclear whether the impacts to NSA scenic resources were adequately captured." As pointed out earlier, SR-14 and Tom McCall viewpoints are still missing and Panorama Point has been deleted in the DEIS. It is abundantly clear from Dean Apostol's WRE DEIS analysis (2010) that the impacts to the NSA were not adequately captured in the DEIS. [LTR 300, CMT 1]*

**Response**: Please see response to Comments LTR, 300 CMT 1 above. Scenic Quality is adequately defined in Section 3.9.1.1 and viewer sensitivity is defined in Section 3.9.1.2.

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**Comment**: *Figures 3.9-1 and 3.9-2 are useful in assessing the potential visibility of proposed turbines from within the National Scenic area and elsewhere. But they fail to note the full extent to which the turbines would be exposed to key viewing areas. The analysis treats the scenic impact problem as a viewpoint impact as opposed to a view corridor impact, but several of the affected KVAs are corridors, not points. These corridors include designated scenic roads and the Columbia River. The DEIS should be revised to analyze the distance along the entire length of these KVAs from which the project would be visible and to simulate views from multiple points along these KVAs in order to identify where the greatest impacts are likely to occur. As it stands, the viewpoints chosen for analysis may not be truly representative: 1-84, the Columbia River and the Historic Columbia River Highway all have multiple possible view locations that may experience greater impacts than the single locations chosen by the applicant. Each of these view corridors come within 3 miles of the project, yet all sample viewpoints are more than 4 miles from the project. [LTR 300, CMT 1]*

**Response**: The selection of some of the viewpoints within several of the corridors mentioned in this comment adequately conveys the extent of impacts from positions where viewers would

be most heavily impacted. The selection of viewpoints is further discussed in response to Comment LTR 141, CMT 2 above. Figures 3.9-1 and 3.9-2 convey the extent of potential Project impacts along the corridors noted in this comment by depicting the expected number of turbines that would be visible from these locations.

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**Comment**: *Additional views along these three KVAs should be analyzed. For example, a simulation from the Historic Columbia River Highway at Mitchell Point directly across the Columbia River from the project is critical. "Mitchell Point is a significant view point" [LTR 300, CMT 1]*

**Response**: Please see response to Comment LTR 318, CMT 44 below. A simulation was prepared for the HCRH as shown in Figure 3.9-14.

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**Comment**: *Continuing, the USFS scoping analysis (2009) points out ... "2) The NSA is a nationally known and protected landscape of high quality and high sensitivity. All KVA scenic analyses should reflect this. The results of the applicant's analysis are heavily weighted on the assignment of existing scenic quality and viewer sensitivity. These methods were not tracked and do not represent the reality of the Scenic Area." The visual sensitivity assessment is heavily influenced by what appears to be an arbitrary decision. Quoting from the DEIS: "Moderate levels of sensitivity were assigned to areas where turbines would be visible from 0.5 mile to 5 miles within the primary view of residences and roadways" (page 3-159). This is not based on any scientific studies presented. It is, in our opinion, self-serving and results in a measurement scale purposely designed to create faulty conclusions the proponent wants to support... namely that any turbine sited further than 0.5 mile will not have a high level of viewer sensitivity. This is not analyzing the facts to determine the impact, but skewing the measurement tools and analysis to achieve the desired results for the proponent. The visual contrast method, as thoroughly discussed in the Dean Apostol comment (2010), is a more objective method and would be less susceptible to manipulation by such arbitrary decisions. The analysis should be redone using the visual contrast method rather than the Federal Highway Administration Process that was used. "In my opinion, the FHWA method is not a suitable method for evaluating the visual impacts of wind energy projects in general, and this project in particular. This system was designed to be used only for assessing impacts from highway related development". "... visual contrast is a useful way of measuring impacts regardless of whether a resource management objective has been established, because it relies on simple and time tested analytical standards" This visual contrast method was indeed recommended in the USFS scoping comments (2009), but once again ignored in the preparation of the DEIS ... [LTR 300, CMT 1]*

**Response**: Visual quality is adequately assessed in the analysis. The criteria used for assessing landscape scenic quality are discussed in Table 3.9-1. Not all CRGNSA KVAs can be classified as having high viewer sensitivity as viewer sensitivity to landscape changes for many of the KVAs is moderated by the distance from the viewer to the Project. As noted in the USFS Scenery Management System, the scale for viewer concern levels include the degree of public importance placed on the landscape and "the visibility of lands in each distance zone" [emphasis

added] (USFS 1995). Even under an alternative visual analysis system (like the BLM's VRM) coordinating distance zones delineation with Sensitivity Level Analysis is encouraged (see BLM Manual H-8410-1, Section IV.B). For a discussion on using alternative methods for evaluating Project effects, see response to Comment LTR 180, CMT 8 above.

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**Comment**: *The conclusions made on the summary chart would more accurately be made using degree of contrast with the natural landscape both during the day and at night, and distance of the viewer from the project area. This assumes that the most visually impacted viewpoints have been found and that the simulations accurately depict the degree of contrast. The impact summaries starting on page 4.2-68 discuss these contrasts but the ratings do not reflect the discussion. For example the text for viewpoint #1 states that "the presence of the turbines would reduce the scene's degree of intactness by introducing a large number of highly visible engineered vertical elements" but the impact rating is low to moderate. Rather than adjusting the rating to reflect the discussion in the original application, the sentence referenced just above regarding viewpoint #1 was deleted from the DEIS. A discussion was added in an attempt to justify the proponents desired low to moderate ratings. The "average scenic value"(DEIS 3-168) within the NSA is high scenic value in contrast to most other landscapes outside the NSA, not moderate. "The American Society of Landscape Architects included the Columbia River Gorge as one of the 100 most outstanding landscapes in the United States, ranking it along with Yosemite, Yellowstone and other national icons." (Apostol 2010). [LTR 300, CMT 1]*

**Response**: The comment regarding the significance of the CRGNSA is acknowledged. For a discussion on using BLM's methodology and its use of a contrast rating, see response to Comment LTR 180, CMT 8 above, or consult Section 3.9.1. While alterations to the text involving Viewpoint #1 occurred between the preparation of the Application for Site Certification and the preparation of the DEIS, the findings of the analysis has remained the same.

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**Comment**: *The USFS scoping comments (2009) continues, "The Summary of Existing Scenic Quality and Project Visual Impacts on page 4.2- 67 did not rate any viewpoint as having a high level of impact defined as: turbines "highly visible in areas with a high number of sensitive viewers" and greatly altering levels of vividness, unity, and intactness. Viento State Park was rated as highest impact (moderate to high) but the photo print did not show any turbines (Figure 4.2-17). The Summary of Existing Scenic Quality and Project Visual Impacts in the DEIS (page 3-177), incredulously does not rate the anticipated visual impact on any viewpoint as high. The same flawed methods were used in the DEIS as in the SDS application. None of the needed changes suggested by the USFS were addressed. The Viento State Park photomontage in the DEIS (Figure 3.9-11), still does not show a single turbine. The same "photo prints" used in the SDS application are used in the DEIS. Despite a year to prepare the DEIS, no new photos or photomontages were utilized nor were the former photos even corrected. As Dean Apostol (2010) points out: "This is a very misleading photomontage. The image is very faint, and the size does not correspond to the relatively short view distance of 6.4 kilometers (4 miles). The wireframe view indicates that the 18 turbines seen from this viewpoint would be very high*

*contrast and would have high impacts, similar to those discussed under Viewpoint 11. All 18 turbines break the skyline, there are overlapping rotors and a jumbled, chaotic composition. The turbines located at the high point in the center of the image are particularly strong impact. The turbines would be framed by Dog Mountain, seen on the left side of the photo, and a portion of Underwood Bluff, seen on the right side of the photo (Figure 3.9-11). These are very natural, highly intact landforms, exacerbating the contrast that the turbines would introduce. Existing development prohibitions on these landforms, which lie within the National Scenic Area, are at the highest protection level, allowing no visual contrast. This illustrates the high sensitivity of the viewshed. [LTR 300, CMT 1]*

**Response**: For issues pertaining to Viewpoint 14, refer to response to Comment LTR 164, CMT 2 above. It should be noted that there are also several landscape components to this view that show alterations to the viewshed by other activities such as logging and transportation (roads). Another factor that would not make the visual impact from Viewpoint 14 high is the distance of the Project from the viewer. No new photo simulations were prepared because the existing analysis provides an approximation of project effects given the best available information.

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**Comment**: *Pointing out further limitations with the pictures, the USFS scoping comments (2009) continue ... "It is generally very difficult to fully depict the visual effect of viewing the landscape in a small photo and because of these limitations, pictures with clouds at the skyline should not be used". [LTR 300, CMT 1]*

**Response**: For a discussion on the use of photomontages that show a range of weather conditions, see responses to Comments LTR 180, CMT 28; LTR 178, CMT 155; LTR 300, CMT 1; and LTR 139, CMT 23 above. For a discussion on the focal lengths used for the individual photographs, see response to Comment LTR 177, CMT 60 also above.

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**Comment**: *In addition, many non-NSA viewpoints and non-KVA viewpoints were added making it difficult to assess the effects in the Scenic Area. The scenic impacts both at night and during the day would be better depicted using photos of existing turbines in the Gorge. The existing development east of the Scenic Area provides a better indication of the impact on the scenic resource than represented in these visualizations. The visualizations are important for finding the number and location of the visible turbines, but have limited utility for assessing scenic impact. [LTR 300, CMT 1]*

**Response**: Table 3.9-2 clearly shows which viewpoints are within the CRGNSA, which viewpoints are also KVAs within the CRGNSA, and which viewpoints lay outside the CRGNSA. The simulations use turbine models that may be used for the Project as a way of conveying the Project's effects to visual resources.

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**Comment**: *The exact same small photos used in the application with clouds are used in the DEIS, disregarding the comments of the USFS. We agree with Dean Apostol's (2010) statement: The photomontage images in the DEIS are flawed. The scale and distance appear to be inconsistent. Atmospheric conditions on some photos are hazy. Use of a white cloud background reduces apparent color contrast of turbines skylined on visually prominent ridges. This should have been addressed in the preparation of the DEIS. It must be addressed with more realistic depictions of the turbines both during the day and at night in a revised DEIS. The public will be more accurately informed and then could make relevant comment. [LTR 300, CMT 1]*

**Response**: Please see response to Comments LTR 180, CMT 2 through LTR 180, CMT 28 above.

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**Comment**: *We agree with the findings of Dean Apostol (2010) ... "The visual impact analysis provided in the DEIS is faulty and incomplete. In addition, the DEIS's conclusions that visual sensitivity is only low to moderate and that impacts would be low to moderate from most viewpoints (Table 3.9-2) are not supported by the facts. The project as presented would have substantial adverse impacts to scenic resources." [LTR 300, CMT 1]*

**Response**: Please see response to Comments LTR 180, CMT 2 through LTR 180, CMT 28 above.

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**Comment**: *Finally the USFS scoping comments (2009) made the following recommendations, which were either ignored or not adequately addressed. "3) Recommendations In order to assure that the scenic resource impact is adequately analyzed, I recommend the following improvements to the scenic resource impact assessment: Include a discussion or summary of the most visible turbines. [LTR 300, CMT 1]*

**Response**: The DEIS summarizes the effects of the Project upon each viewpoint in Table 3.9-2.

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**Comment**: *Include photographs of existing energy projects visible in the NSA. [LTR 300, CMT 1]*

**Response**: Please see response to Comment LTR 79, CMT 3 above. The cumulative effects from other wind energy projects visible within the CRGNSA are discussed in Section 3.14.3.10. Insertion of additional photographs would not add clarity to the discussion of cumulative effects.

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**Comment**: *Do not use visual simulations (at a small scale with clouds in the picture) to depict the visual impact of visible turbines. [LTR 300, CMT 1]*

**Response**: Visual simulations are an important part of the visual analysis as it provides an estimate of the Project's impact upon visual resources. The images also convey the Project within its representative setting which includes varying weather and atmospheric conditions.

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**Comment**: *Make certain that the most visible viewpoints have been covered, especially with respect to the linear viewpoints. [LTR 300, CMT 1]*

**Response**: Please see response to Comment LTR 141, CMT 2 above.

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**Comment**: *Make certain to include the night-time effects in your analysis. Instead the DEIS does not include photographs of existing energy projects visible in the NSA. Uses, "visual simulations (at a small scale with clouds in the picture) to depict the visual impact of visible turbines" Leaves out the two specifically USFS requested viewpoints SR-14 (#6), Tom McCall Point (#9) and eliminates Panorama Point (#10). Does not "include the night-time effects" in the analysis. [LTR 300, CMT 1]*

**Response**: Please see response to Comment LTR 119, CMT 5 above.

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**Comment**: *The USFS scoping comments (2009) concludes with the following: "In order to prevent the scenic impact of the turbines visible from the Scenic Area Key Viewing Areas, I also recommend that the applicant eliminate turbine locations found to be visible from Scenic Area KVAs. I am hopeful that close attention to these impacts will result in a solution which will fit the unique area that this project will potentially benefit." [LTR 300, CMT 1]*

**Response**: The removal of the towers visible from the CRGNSA would not meet the objectives established in the Project's purpose and need.

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**Comment**: *The proposed Whistling Ridge Energy Project is illegal under Title 22 of the Skamania County Code [LTR 301, CMT 1].*

**Response**: Please see response to Comment LTR 301, CMT 5 below.

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**Comment**: *The proposed wind turbines are 430+/- feet tall and must be equipped with strobe lights at the top to satisfy FAA regulations. [LTR 301, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Because the proposed Whistling Ridge Energy Project cannot meet the test of visual subordination the project is illegal. The proposed project violates both the letter and the spirit of Title 22. [LTR 301, CMT 5]*

**Response**: The Project lies outside the National Scenic Area and is therefore not subject to Skamania County Code Title 22. Furthermore, the National Scenic Act states that "no protective perimeters or buffer zones shall be established around the scenic area or each special management area. Activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas" (16 USC Section 544O(a)(10)).

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**Comment** *…to the extent any of the turbines and/or their strobe lights are visible from Cook Underwood Road, (or any other key viewing area) the requirements of Section 22.18.030 must be met. In order to meet the requirements of Section 22.18.0308, the portion of the Whistling Ridge Project which is visible from Cook Underwood Road must be "visually subordinate to its setting as seen from" Cook Underwood Road. [LTR 301, CMT 7]*

**Response**: Please see response to Comment LTR 301, CMT 5 above.

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**Comment**: *Clearly, the proposed wind turbines and their strobe lights which are visible from Cook Underwood Road cannot pass the test of visual subordination. Additionally, Section 22.18.030L of Title 22 provides that "Exterior lighting shall be directed downward and sided, hooded and shielded such that it is not highly visible from key viewing areas". [LTR 301, CMT 8*

**Response**: Please see response to Comment LTR 301, CMT 5 above.

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**Comment**: *Application of Title 22 to the Cook Underwood Road "Key Viewing Area" results in the proposed project being illegal. Because the proposed project would impact the Cook Underwood Road view shed in a manner that is prohibited by Title 22. [LTR 301, CMT 10]*

**Response**: Please see response to Comment LTR 301, CMT 5 above.

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**Comment**: *Title 22 clearly asserts jurisdiction over visual impacts seen from Cook Underwood Road which originate from outside the NSA boundaries and clearly prohibits intrusions on the Cook Underwood Road view shed which originate from outside the NSA. Viewshed is defined in Section 22.04.010 as "a landscape unit seen from a key viewing area". (emphasis added) This definition is not limited to landscape units which originate from within the NSA boundaries. [LTR 301, CMT 11]*

**Response**: Please see response to Comment LTR 301, CMT 5 above.

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**Comment**: *…if Title 22 had been intended to protect the view shed of the Cook Underwood Road Key Viewing Area (or any other key viewing area) only from visual impacts originating from within the boundaries of the NSA, the Ordinance would have specifically done so by including that limitation in the definitional sections discussed above. Since no such limitations exists in Title 22, it is clear that the View Shed of Cook Underwood Road is protected by the express provisions of Title 22 from visual impacts originating from both within and outside of the NSA boundaries. [LTR 301, CMT 12]*

**Response**: Please see response to Comment LTR 301, CMT 5 above.

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**Comment** *…one of the major flaws of the DEIS is a failure to include much analysis of the visual impacts from hiking trails or viewpoints from within the Gifford Pinchot National Forest. [LTR 302, CMT 11]*

**Response**: In general hiking trails that would provide views of the Project did not meet the criteria for selecting viewpoints (see Section 3.9.2.3). Viewpoints were chosen based upon their representation relative to the Project Area, those that were most accessible to the public, and locations with the largest number of viewers. However, Viewpoints 7 and 5 provide representative views of the Project from areas just east of the Gifford Pinchot National Forest.

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**Comment**: *One of the potential impacts to the view shed is looking toward the northeast to Mount Adams and to the southeast to Mount Hood. We would like additional visual analysis done from areas on the GPNF which include visual simulations of the views from that area to be included in the Final Environmental Impact Statement. [LTR 302, CMT 12]*

**Response**: Please see response to Comment LTR 302, CMT 11 above.

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**Comment**: *Please don't allow SDS to put the wind turbines in the natural beauty of the Columbia River Gorge… Please consider how poorly it will effect our wildlife and views. [LTR 304, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. [LTR 307, CMT 5]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 307, CMT 6]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. [LTR 308, CMT 5]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 308, CMT 6]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. [LTR 309, CMT 5]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 309, CMT 6]*

**Response**: Please see response to Comment LTR 266, CMT 4 above.

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**Comment**: *May 2010 Draft EIS is fundamentally and legally deficient in applying well known principles of perceptual psychology to the assessment of the visual and auditory impacts of the proposed wind farm. [LTR 315, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *[P]roject proponents, and Jason Spadaro in particular, have kept up a steady public drumbeat to the effect that scenic impact is irrelevant because the project lies outside the CRGNSA. This position is a spectacular example of the Fallacy of the False Inverse...the proponents' position is not only fallacious as a matter of logic; it is wrong legally. The lawful authority of the WEFSEC to determine the impact of the Whistling Ridge Energy Project on scenic values inside and outside of the CRGNSA exists independently of the authority of the Gorge Commission in this matter...The standards that the WEFSEC applies in order to minimize wind-farm visual impact may not be the same as the CRGNSA rules, but that does not make them any less permissible or necessary. [LTR 315, CMT 3]*

**Response**: Visual impacts are not considered irrelevant during the environmental review process. The EIS considers visual impacts in Section 3.9.

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**Comment**: *In outlining the theoretical components of visual-impact analysis, the Draft EIS does not consider three elements of perceptual psychology which will aggravate the visual impact of any wind farm, especially in the Gorge. (a) In evaluating scenery the mind pays special attention to skylines: the shapes and complexity of the profiles of ridges and peaks. Anything which interrupts a smooth contour is immediately homed in on to assess whether it is a natural or unusual feature. [LTR 315, CMT 4]*

**Response**: Project lines and shapes and their positioning against ridgelines have been considered in Section 3.9. See various discussions of the individual viewpoints in Section 3.9.2.3.

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**Comment**: *The text states that at higher rotation velocities (i.e., in strong winds), turbine blades would become blurred essentially to the point of invisibility, reducing visual impact. This assessment ignores some hard-wired brain circuitry, which is primed to seek out and focus on*

*motion [possible adaptive value: spotting moving predators/prey against a complex, camouflaging visual background]. Modern turbines have relatively low maximum velocities, slow enough that viewers will find their attention drawn toward their rotation even in strong winds. [LTR 315, CMT 5]*

**Response**: Visual impacts from moving blades have been considered in Sections 3.9.1.3 and 3.9.3.1. The impacts from shadow flicker are discussed in Section 3.6.2.1.

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**Comment**: *Moon illusion will make the wind turbines on the horizon look larger than they really are. As a result, the photo simulations used in the Draft EIS to evaluate wind-turbine visual impact systematically underestimate the perceived size of the turbines to human viewers. [LTR 315, CMT 5]*

**Response**: Comment acknowledged. Interpretation and conclusions on the degree of visual impact are subjective and dependent upon the viewer.

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**Comment**: *It is suggested that since the Whistling Ridge area has only about 140 sunny days a year and sunny days are the only ones when the turbines will present a visual contrast to the background sky, the net visual impact of the facility will be minimal. This is nonsense, for any number of reasons. This is the time the gorge receives the most visitors and people come out to enjoy the view... [LTR 315, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *It is suggested that because the local scenery near Whistling Ridge already is significantly degraded by high-tension power lines and towers and by clear-cuts, the additional visual impact of wind turbines will be mitigated by the high background visual degradation. This is essentially the classic argument of polluters that since the environment already is degraded by others, they should have their own license to pollute. Now we don't like to look at clear-cuts and power lines any more than the next guy does. However, we've also learned over the decades that clear-cuts grow out remarkably rapidly to the point that their view is not as jarring as that of a fresh clear-cut; relative to a fresh clear-cut, turbines are forever. [LTR 315, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *Views 6 and 9 are missing from the visual analysis [LTR 315, CMT 9]*

**Response**: Comment acknowledged.

**Comment**: *The creator of the photos for view analysis power over the perspectives shows. This can cause bias... For example, the images of views #7 (Mill A), #17 (Providence Hospital), #20 (OR 35), and #21 (Kollock-Knapp and Scoggins Roads) include foreground (power lines, buildings, or trees) which tends to obscure and de-emphasize the wind-farm view. Selection of a different viewing spot in the same vicinity would have increased dramatically the subjective impression of visual impact. The Mill A case is especially obvious, because the Draft EIS commentary employs the considerable baseline visual pollution of a power line in the foreground to decrease the significance of scenery degradation by the wind farm [LTR 315, CMT 10]*

**Response**: The viewpoints noted in this comment fit the criteria for viewpoint selection (as described in Section 3.9.2.3) and are representative of their respective visual environments. Movement of the viewpoint to other nearby areas would not necessarily provide clearer views of the Project due to the nature of the built environment, different viewer perspectives, differences in vegetation, and distance from the Project.

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**Comment**: *The editor of the May 2010 Draft EIS also chose not to present and analyze views #2 (Strawberry Mountain), #21 (Kollock-Knapp and Scoggins Roads), and #22 (Cook-Underwood and King Roads), even though these images, available on the Whistling Ridge Project website, show some of the greatest wind-farm visual impacts in the entire dataset. These examples reinforce the impression that the sponsors of the EIS already know what conclusions they want to reach. Visual Pollution: How Much Is Too Much? [LTR 315, CMT 11]*

**Response**: Viewpoints 2, 21, and 22 are analyzed in Section 4.2-3 of the Application for Site Certification (Appendix A), which were distributed in conjunction with the release of the May 2010 Draft EIS. The impacts at these viewpoints would be low to moderate, moderate, and moderate respectively. These three viewpoints were not included in Section 3.9 of the EIS due to their representative and repetitive nature and because other viewpoints conveyed impacts more clearly.

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**Comment**: *[T]here are no views from within structures through windows facing Whistling Ridge, from the Columbia River itself or from within the Mark Hatfield Wilderness. [The framing of a scene by a window can induce a particularly strong version of the moon illusion, and in any case eliminates a lot of visual background which might de-emphasize a wind-farm image.] [LTR 315, CMT 12]*

**Response**: The selection of viewpoints within structures facing Whistling Ridge, from the Columbia River, and from within the Mark Hatfield Wilderness would not meet the criteria for selecting viewpoints as noted in Section 3.9.2.3. However, Viewpoints 8, 11, 12, 13, and 14 provide reasonable approximations of views from the Columbia River. Viewpoint 14, while at a lower elevation, provides a reasonable approximation of the views from the Mark Hatfield Wilderness. And lastly, Viewpoints 4, 5, 7, and 15 are taken in close proximity to private residences which would approximate views from inside dwellings.

**Comment**: *How much Viewer Sensitivity would one have to show in order to conclude that wind-project visual pollution might suffice to sink this project? The Draft EIS does not discuss a threshold level of visual pollution, avoiding any need to defend such an evaluation and rendering completely arbitrary any decision on this point. Hence, all a critic can do is to invoke the Golden Rule. How much Viewer Sensitivity of visual pollution seen from your front yard would it take for you to conclude that the impact is unacceptable? [LTR 315, CMT 13]*

**Response**: The EIS measures relative distances from the Project and establishes criteria for establishing viewer sensitivity, visual quality, and levels of visual impact that are consistent with FHWA and USFS guidance. Interpretation and conclusions on the degree of visual impact are subjective and dependent upon the viewer. The EIS's discussion of visual quality and the discussion on visual impacts provide roughly similar terminology for discussions concerning visual pollution.

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**Comment**: *Realistic projections in mountainous and irregular terrain require a complex, three-dimensional program rather than the simple two-dimensional program used in the Draft EIS. [LTR 317, CMT 18]*

**Response**: Comment acknowledged.

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**Comment**: *If individuals are arguing that they are going to lose value in visual amenities from their property, they are also admitting they are receiving the same amount of value and what would they be willing to pay to keep the value as is? Why does a neighbor's property rights extend to everything they can see from their boundary? [LTR 317, CMT 41]*

**Response**: Comment acknowledged.

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**Comment**: *The fact that I can see something a long ways out should not affect someone's right to build something. I think turbines are pretty [LTR 317, CMT 50]*

**Response**: Comment acknowledged.

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**Comment**: *The visual analysis in inadequate…This is one of the most scenic places in the Country. The industrialization of placing wind towers would ruin this unique area of the world. This is not the right place for the project. [LTR 317, CMT 55]*

**Response**: Comment acknowledged.

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**Comment**: *The wind turbine will be 42 stories tall when the blade is at its highest, to say there is no impact - I disagree [LTR 317, CMT 65]*

**Response**: Comment acknowledged.

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**Comment**: *Anti-collision lights are strobes you can see for 20 miles…strobes on 50 turbines will not be acceptable. The EIS should come up with another solution (with the FAA) including restricted air space. If the lights can be seen below horizontal, everyone in the Gorge will see them. That is a real problem that needs to be addressed. [LTR 317, CMT 69]*

**Response**: Turbine night lighting impacts have been discussed in Section 3.9.2.3. The FAA requirements for aircraft safety lighting are mentioned in Section 3.9.3.1. Under these standards there would be far fewer than 50 strobes as noted in the comment. The necessity for night simulations is also discussed in Section 3.9.1. Section 3.9.4, Mitigation Measures, discusses utilizing non-reflective flat neutral gray or light color to reduce visual impacts. The impacts from shadow flicker are discussed in Section 3.6.2.1.

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**Comment**: *Do we have to make the turbines white? Why can't we paint them up like trees to make them less of a visual aspect? [LTR 317, CMT 74]*

**Response**: Although a brown and/or green turbine color would reduce visual contrast in views where the turbines are seen against the landscape or when the area is covered in snow. It would also accentuate visibility of the turbines where they would be seen against the sky. Section 3.9.4 describes mitigation measures that include the use of non-reflective flat neutral gray or light color since the turbines would most frequently be seen against the sky.

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**Comment**: *Drive a route to see how the turbines will stick up. This will cause visual impact. [LTR 317, CMT 89]*

**Response**: Comment acknowledged.

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**Comment**: *My suggestion is to say – "The maximum capacity of turbines today is 2.5-MW. If you did that 70-MW, that's 30 turbines. You could eliminate the first 11, A-1 though 11 on this whole procedure and get this project back far enough from the scenic area that a lot of public concerns would be mitigated." [LTR 318, CMT 16]*

**Response**: The precise number and location of turbines may vary and will not be known until the micrositing process is complete. The EIS describes and analyzes a 650 foot wide wind turbine corridor as a means for allowing some variation of turbine placement to occur during the

micrositing process. The visual impact analysis analyzes the worst case scenario using the tallest possible turbines at the most visible locations as noted in Section 3.9.1.3.

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**Comment**: *People come from all over the world to see the vistas of the Gorge, I don't think they want to see manmade structures. [LTR 318, CMT 36]*

**Response**: Comment acknowledged. Interpretation and conclusions on the degree of visual impact are subjective and dependent upon the viewer.

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**Comment**: *The EIS states that some comments were made during scoping about concern over viewshed… That is incorrect. During scoping 92% of the written comments were opposed to or had concerns about scenic impacts. They EIS should be very clear and state that most commenter's have raised concern over this. [LTR 318, CMT 43]*

**Response**: Comment acknowledged.

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**Comment**: *There have been no analysis of the impacts from a number of the key viewing areas and viewpoints within the scenic area. Including Mitchell Point, Columbia River, State Route 141 and 4 in Washington or Oregon Highway 53, or Tom McCaw Point or Panorama Point in Oregon. In addition, there should be analysis of the impacts visible from the Buck Creek Trail to Nestor Peak which is due north of the project area. [LTR 318, CMT 44]*

**Response**: The criteria used for selecting viewpoints is discussed in Section 3.9.2.3 (DEIS page 3-164). Locations were chosen based upon their representation relative to the Project Area, those that were most accessible to the public, and locations with the largest number of viewers. Mitchell Point, Columbia River, Washington State Routes 141 and 4, Oregon Hwy 53, Tom McCall Point, Buck Creek Trail, and Nestor Peak were not chosen because they are not frequented by the largest number of viewers and the views are only accessible by trail thus minimizing access and the number of visitors. However, Panorama Point was analyzed and appears in Section 4.2-3 of the Application for Site Certification (Appendix A).

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**Comment**: *The wind turbines by Hawker Road own the entire landscape. People talk about jobs, but what about those that no longer have jobs due to the turbines? [LTR 318, CMT 64]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to ask that the visual analysis be shifted from just key viewing areas to an analysis of what the experience is along the entire key viewing area I-84 or Historic Columbia Highway of Columbia River, for instance. [LTR 318, CMT 66]*

**Response**: Comment acknowledged.

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## G.3.10 HISTORICAL AND CULTURAL RESOURCES

**Comment**: *We have reviewed the recent Draft Environmental Impact Statement (DEIS) complied for the Whistling Ridge Energy Facility. In doing so, we notes under section 3.10.2.2 no mention has been made of the finding of the Yakama Nation Cultural Resources Program study which resulted in the findings of Traditional Cultural Property within the proposed wind project lands. The DEIS states that: "A field investigation by Yakama Nation cultural resources specialists occurred in December 2009. The Yakama Nation's finding, currently in preparation, will supplement the information contained in this EIS." However, the results of the field investigation were reported to SDS Lumber and the Department of Archeology and Historic Preservation in December of 2009, shortly after the site visit was completed. We, therefore, are taking this opportunity to resubmit this report to the Energy Facility Siting Evaluation Council (EFSEC) and the Bonneville Power Administration (BPA). It is our directive that this report be included in the Final Environmental Impact Statement as a portion of the consultation responsibilities held by BPA and EFSEC. [ATTACHMENT: YAKAMA NATION CULTURAL RESOURCE REVIEW AND CONSULTATION FOR THE WHISTLING RIDGE ENERGY PROJECT SEE PDF] [LTR 11, CMT 1]*

**Response**: Although 40 C.F.R. 1502.25 states that studies should run concurrently if possible, BPA did not have a detailed project description for its APE, and therefore consultation with the Washington Department of Archeology and Historic Preservation Office (DAHP) and with the interested Tribes began after the DEIS was issued. The Tribes that were consulted were The Confederated Tribes of the Umatilla Indian Reservation, The Cowlitz Indian Tribe, The Confederated Tribes of the Warm Springs Reservation of Oregon, The Nez Perce Tribe of Idaho, The Confederated Tribes and Bands of the Yakama Reservation, and The Columbia River Inter-Tribal Fish Commission pursuant to 36 CFR 800.4(a)(4). BPA initiated consultation with the DAHP and with the interested Tribes on August 2, 2010, regarding BPA's interconnection APE. On May 27, 2010, the Yakama Nation provided its cultural resources review and consultation report. On September 10th, 2010, BPA received a letter from the Yakama Nation stating that they did not agree with BPA's interconnection APE and believed that it should include the Applicant's APE as well. A BPA archaeologist spoke with a Yakama Nation archaeologist on March 31, 2011, regarding BPA's interconnection APE. Further, on May 2, 2011, BPA representatives and Yakama Nation representatives met to discuss the Tribe's request for an expanded APE. It was discussed that BPA has no jurisdiction over siting of wind development facilities, a matter left to Washington EFSEC, and that BPA's APE and Section 106 review was limited to the proposed interconnection. BPA's findings that the proposed interconnection

should result in *no historic properties affected* was finalized with the DAHP on June 2, 2011, thus concluding BPA's required consultation process under Section 106 of the National Historic Preservation Act (NHPA).

The Yakama Nation participated in the adjudicative process as an intervenor. During the adjudicative hearing the Yakima Nation formerly withdrew as an intervenor. The applicant is committed to continue working with the Yakama Nation throughout the life of the project. This includes adjusting the number of proposed towers to be located on Chemawa Hill.

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**Comment**: *Also, why have the Yakama Nation not been involved in the DEIS when they, as a sovereign nation, have legitimate cultural resource concerns. Any EIS is required to ensure that there are no impacts to cultural resources. [LTR 74, CMT 5]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *I would like to express concerns about the proposed Whistling Ridge Energy Project's potential impacts on the National Scenic Area and in particular the Historic Columbia River Highway (HCRH), a district listed in the National Register of Historic Places. I have been working with OPRD and ODOT on the restoration of Mitchell Point for several years and in particular the design of several overlooks to be located along the HCRH State Trail. I am concerned that the existing analysis does not adequately address this section of the HCRH Key viewing area. This area is due south of the proposed project and within the Special Management Area of the CRGNSA. The HCRH is a linear scenic and historic resource in Oregon, extending from Troutdale to The Dalles. [LTR 141, CMT 1]*

**Response**: As described in the response to Comment LTR 179, CMT 84 below: The Historic Columbia River Highway (HCRH), a National Historic Landmark (NHL) lies outside the Area of Potential Effects (APE) as defined for the Project in Section 3.10 of the EIS. For indirect effects, the APE was 1.5 miles out beyond the boundaries of the Project Area and thus does not include the HCRH. Indirect and direct effects to historic properties lying within that area were analyzed in Section 3.10. Views from the historic highway have been simulated (see Viewpoint 19, page 3-172 of the DEIS), and an impact assessment has been completed as a part of the visual resources analysis conducted in Section 3.9 of the DEIS. The visual effects were determined to be low based on the distance from the Project and viewer types. Direct impacts to historic and archeological features were disclosed in the cultural resource section of the assessment; and, visual assessments from these landmarks are included in the Section 3.9. The baseline for the visual analysis includes a landscape that is not historically intact. Past, present, and future foreseeable actions that have changed the historical nature of the area were considered in this analysis. The effects of the Project on the existing conditions of the corridor are the basis for the visual determination.

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**Comment**: *We have reviewed the Draft EIS and would like to bring to your attention Section 3.10, specifically page 3-204 which accurately summarizes our position. Several times, we have reviewed the property where SDS proposes to develop wind energy and have never found any issues related to cultural resources or traditional cultural properties of concern to us as Chiefs of the Klickitat and Cascades Tribes of the Yakama Nation. We provided this information directly to the applicant's specialists who wrote the cultural resources report used for the Draft EIS. This area where SDS Lumber proposes wind energy is within our homeland and we feel that we are uniquely qualified to determine what areas have been traditionally used by our people and what traditional cultural properties for this area are. As knowledgeable individuals with ancestral ties to the Columbia River Gorge in the immediate vicinity of the Whistling Ridge Energy Project, we have been consulted with in the past on other development projects, and have provided information on traditional properties so that they could be avoided. There are no traditional properties within the Whistling Ridge Energy Project area. The site has been in commercial timber production for many years. Prior to timber harvesting on the site, it was heavily forested. The area of the project is surrounded by steep terrain, there are no streams or significant east-facing views and the he land is rocky and rigid with a lot of natural brush. Our people have never used this area as a vision quest site, burial area, resource gathering area, travel route, or for any other significant purposes. [LTR 168, CMT 2]*

**Response**: Comment acknowledged. The viewpoints of the Chiefs of the Klickitat and Cascades Tribes of the Yakama Nation have been presented within Section 3.10.2.2 of the FEIS under the Tribal Consultation and Traditional Cultural Resources subheading. Under BPA's Section 106 responsibilities, BPA must consult directly with The Confederated Tribes and Bands of the Yakama Reservation. The Tribe's Cultural Resources Department has identified areas that are considered culturally-sensitive areas within the Project Area. Both viewpoints will be considered during the evaluation of this Project. Furthermore, BPA is also undergoing consultation with other interested Tribes as noted in response to Comment LTR 179, CMT 82 below.

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**Comment**: *T3N-R10E-S7 - There is an historic site and there are potential unstable slopes indicated. [LTR 172, CMT 9]*

**Response**: The site noted was discussed in Section 3.10.2.3 of the EIS.

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**Comment**: *T3N-R10E-S8 - There is an historic site. [LTR 172, CMT 10]*

**Response**: This site and its eligibility to the National Register of Historic Places were discussed in Section 3.10.2.3 of the EIS.

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**Comment**: *[In reference to DEIS Page] 3-209, "The Haran Farmstead is recommended as ineligible for the NRHP." This statement may or may not be accurate. This site has been listed*

*in Dine's GIS FP Risk Assessment Tool as a site that may require protection if there is any potential for disturbance to the site. Any potential impacts to the historic site may require a site protection plan. Request: Contact the Washington State Department of Archaeology and Historic Preservation. Document why there will be no adverse impacts or how such impacts can be mitigated with a site protection plan if necessary. [For further information regarding this comment,] [c]ontact: Joseph L. Blazek office: 509-925-091, cell: 509-856-6465 joe.blazek@dm.wa.gov. [LTR 172, CMT 18]*

**Response**: The FEIS has been updated to reflect BPA's interconnection APE with respect to the Applicant's APE as seen in the revised Figure 3.10-1. Therefore, as stated in the DEIS, "[i]f a resource is determined eligible for the NRHP, then Section 106 of the NHPA (80 Stat. 915; 16 USC 470) and its implementing regulations (36 CFR 800) require that effects of the proposed Project to that resource be addressed. If a property eligible for the NRHP would be adversely affected by the proposed action, the action agency must evaluate alternatives or modifications to the proposed action that would avoid, minimize or mitigate adverse effects." Since the Haran Farmstead is outside of BPA's interconnection APE, it is not being consulted upon as part of BPA's Section 106 responsibilities. The Farmstead was nonetheless evaluated, but found ineligible for the National Register.

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**Comment**: *[In reference to Section] 3.10, HISTORICAL AND CULTURAL RESOURCES, [Section] 3.10.2.2, Cultural Resources Overview, [t]he FEIS should incorporate the results of archaeological field inventory conducted by Yakama Nation's Cultural Resources Department. [LTR 177, CMT 64]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *The DEIS Fails to Adequately Review the Likely Impacts of the Proposed Development on Cultural Resources. 1. The DEIS Fails to Analyze Impacts to Cultural Resources and Fails to Integrate Adequate Consultation with Tribal governments. The DEIS acknowledges that the BPA has an obligation under Section 106 of the National Historic Preservation Act ("NHPA"), 16 USC 470 et seq., to consult with Tribal governments about the likely impacts of the proposal. DEIS at 4-6. The BPA also explains that the "BPA's 1996 government-to-government agreement with the 13 federally-recognized Native American Tribes of the Columbia basin provides the guidance for the Section 106 consultation process with the Tribes." DEIS at 4-6. The Draft EIS explains that the BPA will conduct formal government-to-government consultation. DEIS at 3-204. The DEIS fails to acknowledge that NEPA regulations also require that the BPA must prepare the Draft EIS "concurrently with and integrated with" the required consultation under the NHPA. 40 C.F.R. § 1502.25(a). SEPA requires EFSEC to consult with the Yakama Nation as well. Under SEPA, EFSEC is required to consider the likely impacts to cultural resources. "Cultural preservation" is an element of the environment that must be addressed through the SEPA process. WAC 197-11- 444. [LTR 179, CMT 82]*

**Response**: At the time of the DEIS, a detailed project description was not yet available for the BPA's interconnection APE, which is limited to the construction of the BPA substation and the associated tap to the North Bonneville-Midway 230-kV transmission line. Once that project description was attained, consultation on the APE was initiated with the Washington Department of Archeology and Historic Preservation office as well as with the Tribes that have an interest in this location as described in the response to Comment LTR 11, CMT 1 above.

Also, BPA has modified Section 4.8 which states that "BPA's 1996 government-to-government agreement with the 13 federally-recognized Native American Tribes of the Columbia River basin provides the guidance for the Section 106 consultation process with the Tribes." This sentence has been replaced with the following: "BPA fully respects tribal law and recognizes tribal governments as sovereigns. BPA consults affected tribes about potential cultural and/or other tribal impacts prior to taking project and program actions. As a federal agency, BPA is responsible for conducting NHPA review and Section 106 compliance activities during NEPA environmental review processes. As necessary, BPA's Tribal Policy of 1996 further commits the agency to policy level government-to-government consultation upon request of tribal policy makers and elected officials to better understand the technical and legal issues necessary to make informed decisions."

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**Comment**: *In addition, the environmental checklist, which must be prepared for proposed actions, requires consideration of impacts to cultural resources. WAC 197-11-315; WAC 197-11-960. SEPA also requires that EFSEC consult with agencies with expertise in the impacted environment. RCW 43.21C.030(2)(d); WAC 197-11-408(2)(a). EFSEC's SEPA regulations also require that EFSEC works with interested agencies throughout the preparation of the DEIS. WAC 463-47-140(5). The Yakama Nation's Cultural Resources Program is an agency with expertise in Yakama Nation cultural resources. Finally, the 1989 Centennial Accord between the State of Washington and federally recognized tribes mandates that EFSEC undertake government-to-government consultation with representatives of the Yakama Nation regarding the measures necessary for adequate environmental review and appropriate mitigation measures. Based on the above-referenced sources of law, both EFSEC and BPA must engage in direct government-to-government consultation with the Yakama Nation. The BPA has already failed to comply with the NEPA requirements to integrate this consultation into preparation of the DEIS. See 40 C.F.R. § 1502.25(a). This consultation should have occurred months ago. Both EFSEC and the BPA have heard testimony from the Yakama Nation explaining that a cultural resources report was submitted in December 2009. There is no legitimate explanation for why this information was not included in the DEIS, which was issued in May 2010, or why government-to-government consultation was not undertaken concurrently with the environmental review process. Industrial wind energy development in Klickitat County that has proceeded without adequate consultation and review for impacts to cultural resources has led to irreparable harm to cultural resources. This harm is evidenced by a media report in the Yakima Herald-Republic on the destruction of cultural resources during the construction of the Windy Point Wind Energy Facility in neighboring Klickitat County, a copy of which is attached hereto. EFSEC and the BPA must not allow this type of mistake to repeat itself. The agencies must perform adequate consultation, analyze likely impacts, and ensure that Yakama Nation cultural resources would not be adversely impacted by the proposal. [LTR 179, CMT 83]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *The DEIS Fails to Demonstrate Compliance With the National Historic Preservation Act. The project would be highly visible from the Historic Columbia River Highway ("HCRH" or "Historic Highway"). This invaluable historic treasure, built between 1913 and 1922, was the first road planned as a scenic highway in the United States. Today, the Historic Highway is listed on the National Register of Historic Places, as a Historic District, as a Scenic Byway, and as a National Historic Civil Engineering Landmark by the American Society of Civil Engineers. Even more significantly, the Historic Highway has been designated by the Secretary of the Interior as a National Historic Landmark for its "exceptional value as commemorating or illustrating the history of the United States." More than other historic places on the National Register, National Historic Landmarks are granted special protection against impacts caused by federal action. Indeed, section 110(f) of the National Historic Preservation Act ("NHPA") requires federal agencies to undertake, "to the maximum extent possible," such planning and actions as may be necessary to minimize harm to these properties. Portions of the Historic Highway are being restored by the Oregon Parks and Recreation Department ("OPRD") and the Oregon Department of Transportation ("ODOT") as part of the Historic Columbia River Highway State Trail. Acting on a 1987 directive by the Oregon Legislature to preserve and restore the Historic Highway, ODOT and OPRD are creating a series of long, narrow parks in the Columbia River Gorge that will be open to pedestrians, bicyclists, children, and people in wheelchairs, and closed to all motor vehicle traffic. More detailed information on the HCRH can be found in the "Historic Columbia River Highway Master Plan: HCRH Segments," a copy of which is attached to these comments. It is important to note that the BPA is under special obligations with regard to protecting this National Historic Landmark. Section 110(f) of the NHPA provides as follows: Prior to the approval of any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. 16 U.S.C. § 470h-2(F). Section 106 of the NHPA and its implementing regulations adopted by the Advisory Council on Historic Preservation entitled "Protection of Historic Properties" (36 C.F.R. Part 800), describe agency responsibilities when an undertaking will affect properties listed in the National Register of Historic Places, including National Historic Landmarks. The Whistling Ridge project would adversely affect views from the Historic Columbia River Highway. The HCRH was built as a scenic highway. Its historic features include design elements that accentuate views of the remarkable scenic landscapes of the Columbia River Gorge. Curves and pullouts in the HCRH were designed to focus the traveling public's attention on scenic landscapes. The highway includes substantial tunneling in numerous places, with tunnels designed to optimize views. The Mitchell Point Tunnel, known as the "Tunnel of Many Vistas," included multiple windows that presented views of the Columbia River, Underwood Bluff, Dog Mountain, the mouth of the Little White Salmon River, and the diverse array of vegetative and geologic textures on these landforms. East of Mitchell Point, the HCRH traversed parallel to Underwood Bluff and crosses Ruthton Point, where the curve of the road presents spectacular views of the Columbia River, Underwood Bluff, and Dog Mountain, along with rural pastoral land above Underwood Bluff. Other important segments of the HCRH include the segment*

*between Starvation Creek and Viento State Park, which have the added importance of being part of the Lewis and Clark National Historic Trail. The HCRH segments from Hood River heading east include the Hood River Loops and the Mark O. Hatfield West Trailhead. This segment also includes spectacular views of the Gorge, particularly Underwood Bluff, Chemewa Hill, and Underwood Mountain to the north and northwest. To the east of the Mark O. Hatfield West Trailhead is the fully restored Hood River to Mosier segment of the HCRH. Several tunnels along this stretch have been reopened, fulfilling the plans of the HCRH Master Plan and setting an example for the ultimate goal of restoring the entire Highway for recreation and historical interpretation. While the views from the West Trailhead to Mosier become more distant from the project the views are nonetheless highly important to the HCRH. Impacts from these locations are also likely to be high. While the "Tunnel of Many Vistas" was destroyed during the construction of Interstate 84, segments of the original HCRH are present through this area. The sections that were lost are currently being restored and recreated through ongoing efforts of ODOT, the Oregon State Parks and Recreation Department, and Friends of the Historic Columbia River Highway. The "Tunnel of Many Vistas" will likely be re-created within the next ten years. If the Whistling Ridge Energy Project is constructed, the view from the "Many Vistas" would not include a historically intact landscape. Rather, the vistas would be transformed to include an industrialized skyline with moving parts and flashing lights less than 3 miles away. The impacts to opportunities for historic interpretation and impacts to this National Historic Landmark were not analyzed in the DEIS. The proposed development would directly impact these views and undermine opportunities for historic interpretation. This constitutes a major adverse impact to the environment that needs to be reviewed and addressed. F. The DEIS Fails to Adequately Review the Likely Impacts of the Proposed Development on Recreational Resources. The DEIS fails to adequately review the likely impacts to recreational resources. The project site is centered within a wide array of significant recreational resources, ranging from internationally recognized landmarks to local hikes with epic views. The DEIS fails to inventory all of the recreation resources in the vicinity and fails to adequately analyze the likely impacts to those resources. The recreation resources in the vicinity include numerous locations to the south including the Columbia River Gorge National Scenic Area, The Lewis and Clark National Historic Trail, the Oregon Pioneer National Historic Trail, the Ice Age Floods National Historic Trail, the Historic Columbia River Highway Trail, Starvation Creek State Park, Viento State Park, Spring Creek Hatchery State Park, the Columbia River, the Mitchell Point Trail, Indian Head, and hiking along the Lower White Salmon River near the confluence with the Columbia. Locations to the north include the Lower White Salmon Wild and Scenic River, the Little White Salmon River, Nestor Peak, the Little Buck Creek Trail, the Grassy Knoll Trail, Cook Hill, Little Huckleberry Mountain, and numerous other hiking trails and drive-up viewpoints in and near the Gifford Pinchot National Forest. The DEIS fails to adequately inventory these resources. [LTR 179, CMT 84]*

**Response**: The Historic Columbia River Highway (HCRH), a National Historic Landmark (NHL) lies outside the APE as defined for the Project in Section 3.10 of the EIS. For indirect effects, the APE was 1.5 miles out beyond the boundaries of the Project Area and thus does not include the HCRH. Indirect and direct effects to historic properties lying within that area were analyzed in Section 3.10. Views from the historic highway have been simulated (see Viewpoint 19, page 3-172 of the DEIS), and an impact assessment has been completed as a part of the visual resources analysis conducted in Section 3.9 of the DEIS. The visual effects were determined to be low based on the distance from the Project and viewer types. Direct impacts to

historic and archeological features were disclosed in the cultural resource section of the assessment; and, visual assessments from these landmarks are included in the Section 3.9. It must be noted that the baseline for the visual analysis includes a landscape that is not historically intact. Past, present, and future foreseeable actions that have changed the historical nature of the area were considered in this analysis. The effects of the Project on the existing conditions of the corridor are the basis for the visual determination.

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**Comment**: *Notably, this section of the HCRH are part of a separate multi-agency restoration project that reconnected and restored the HCRH for public enjoyment. Millions of dollars were spent to restore this resource so the public could enjoy pristine and historic views. The DEIS fails to take this context into account. [LTR 242, CMT 6]*

**Response**: Please see response to Comment LTR 179, CMT 84 above.

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**Comment**: *In addition, the BPA and EFSEC have not adequately consulted with the Yakama Indian Nation to ensure the protection of cultural resources. The Gorge is priceless. Please help protect it. [LTR 265, CMT 5]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *In addition he BPA and EFSEC have not adequately consulted with the Yakama Indian Nation to ensure the protection of cultural resources. [LTR 265, CMT 5]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *Furthermore, the high cultural and historic values of this area in the early exploration and settlement of this country dating to Lewis and Clark should make any development which affects land use subject to the highest scrutiny which has obviously not been the case with regard to this project. [LTR 267, CMT 2]*

**Response**: A thorough background review and cultural resources survey for the Project was completed. Please refer to Section 3.10.2.3 for the survey methodology and results.

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**Comment**: *In addition he BP A and EFSEC have not adequately consulted with the Yakama Indian Nation to ensure the protection of cultural resources. As the Gorge Commission has recently held EFSEC must determine if this project would require any road construction or ground-disturbing activities in the National Scenic Area. [LTR 270, CMT 5]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *Thank you for providing an additional opportunity for comment regarding the Whistling Ridge Energy Project Draft Environmental Impact Statement (DEIS). The Whistling Ridge Energy Project is located within the Ceded Lands of the Yakama Nation, the legal rights to which were established by the Treaty of 1855, between the Yakama Nation and the United States Government. The Treaty set forth that the Yakama Nation shall retain rights to resources upon these lands and, therefore, it is with the assistance and backing of the United States Federal Government that Yakama Nation claims authority to protect traditional resources. Yakama Nation's comments are provided by the Cultural Resources Program (CRP) of the Yakama Nation, established by Tribal Resolution T-66-84 as an arm of the Tribal Government. Comments are respectfully submitted by those whom the Tribal Government has designated to speak on behalf of the Yakama Nation regarding the protection of cultural resources in this matter. A Yakama Nation Traditional Cultural Property (TCP) has been identified within project boundaries on Chemawa Hill, the proposed location of turbines AI-A7. At this time, the Yakama Nation Tribal Council is meeting to discuss potential impacts, proper treatment, and recommendations regarding the TCP. These recommendations of the Tribal Council will be available by mid-September. A report identifying the presence of a TCP on Chemawa Hill was provided to the applicant by Yakama Nation CRP in December 2009. However, despite the availability of that information to the applicant, discussion regarding impacts to the TCP were omitted from the DEIS. This omission is highly concerning. The applicant has, on numerous occasions, suggested a willingness to work with Yakama Nation, however, the omission of this important information from the DEIS, does not currently indicate a willingness to consider the Tribe's concerns. Yakama Nation CRP was not the only agency to express concerns regarding construction of wind turbines on Chemawa Hill. Several other organizations and agencies stated similar concerns and were also omitted from the DEIS. The Skamania County Agri-Tourism Association asked that the "A Towers" be re-sited; the USDI National Park Service recommended removing the AI-A7 turbines to alleviate negative visual impacts; Friends of the Columbia Gorge identified sensitive viewsheds that would be affected by the proposal, and the USDA Forest Service Columbia River Gorge National Scenic Area expressed concerns about visual impacts of the project from key viewing areas of the National Scenic Area. Additional comments not fully considered under the DEIS included comments from agencies such as the Washington State Department of Fish and Wildlife, which expressed concerns about impacts to bats and birds, and the Attorney General of Washington Counsel for the Environment, who requested analysis of plant and animal species and habitats. Further comments regarding impacts to the natural and cultural environment included the Washington Department of Archaeology and Historic Preservation, which discussed the TCP identified by the Yakama Nation among other topics; The Seattle Audubon Society, which brought attention to Northern Spotted owls and other avian species; Friends of the Columbia Gorge, which discussed threatened and sensitive animal species, and Save Our Scenic Areas who provided comments regarding a number of important environmental concerns. Given the above listed omissions, the Yakama Nation does not believe that the current information provided in the DEIS has adequately analyzed the environmental impacts associated with development of a wind facility at the proposed location. Furthermore, placement of turbines on Chemawa Hill must be addressed and analyzed with the fair consideration of all concerns submitted through this process. Among*

*the concerns identified, Yakama Nation has notified the applicant and EFSEC of the presence of a Yakama Nation TCP on Chemawa Hill. As mentioned above, this issue is currently before the Yakama Nation Tribal Council and a decision regarding the appropriate treatment of this site will be forthcoming. The protection of traditional resources within the Ceded Lands of the Yakama Nation is of utmost importance to CRP and the Tribal Government, which it represents. Diminishing habitat caused by development has greatly increased the scarcity of traditional plant and animal resources, as well as diminished access to and altered traditionally important places. Continued and unchecked development will immeasurably harm the traditional resources enjoyed by tribal members if a true and careful analysis of impacts and alternatives is not practiced. [LTR 271, CMT 1]*

**Response**: Please see response to Comment LTR 168, CMT 2 above.

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**Comment**: *In addition he BPA and EFSEC have not adequately consulted with the Yakama Indian Nation to ensure the protection of cultural resources. [LTR 274, CMT 4]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 287, CMT 5]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *And I believe that the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 288, CMT 5]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 289, CMT 6]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 290, CMT 6]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

**Comment**: *In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 291, CMT 7]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 292, CMT 6]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. In the early 1990's the Department of Energy made similar misjudgments when first attempt to site the Environmental Molecular Sciences Laboratory (EMSL) at the edge of the Columbia River in Richland, WA and then were forced to relocate the facility after excavation was started during to the discovery of Native American grave sites. This was a multi-million dollar expense. We should not put this project in the same potential position without serious research and thought regarding its appropriate siting location. [LTR 293, CMT 5]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 294, CMT 6]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 307, CMT 7]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 308, CMT 7]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources. [LTR 309, CMT 7]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *There is outstanding cultural information - tribal consultation is not complete. This DEIS is incomplete [LTR 317, CMT 37]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *In December of 2009, the cultural resources program did a survey of the project area and generated a report. We found in this report a particular area that is sensitive to the tribe. This has not been included in the draft for consideration and for public review. Please include this in the final EIS. [LTR 317, CMT 43]*

**Response**: Please see response to Comment LTR 11, CMT 1 above.

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**Comment**: *Because the NPS-administered Lewis and Clark National Historic Trail (Trail) passes through a corridor near the Project, we provided comments concerning potential environmental and scenic impacts to the Trail. The specific comments regarding turbine string A1-A7 were offered as a recommended way to mitigate visual impacts to the Trail. In making these comments, it was not the intent of the NPS or the Department to impose a permitting condition on the Project. The Department notes that the permittee has planned an overall reduction to the number of turbines that will be installed, as well as a reduction along the ridgeline within the southern end of the Project. [LTR 320, CMT 1]*

**Response**: Comment acknowledged.

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## G.3.11 TRANSPORTATION

**Comment**: *I previously worked for a company that did wind farm start-up and have the following information for residents to consider: TRANSPORATION: Trucks transporting wind mills and turbines are regulated and permitted by the State DOT. Segments of each turbine is considered and 'oversized load' in both length and width. They can only be transported during certain times of the day, and require a pilot car in the front as well as the back of the transported section. One of the major concerns you will have to consider is the logistical barriers of the*

*actual transport to the generator site. The turning radius of these oversized loads is in excess of standard tractor-trailers. Narrow and/or winding road will prohibit navigation of these over-sized loads. [LTR 64, CMT 1]*

**Response**: See Section 3.11.2.2 (DEIS page 3-233 to 3-234) for details on mitigation for impacts to transportation. Skamania County requires that private individuals and entities proposing to use oversize or overweight vehicles on County roads enter into a road haul agreement with the County. These arrangements are approved by the Board of Commissioners and authorize the County Engineer to issue a county right-of-way use permit. Prior to the issuance of the right-of-way use permit the applicant must submit an acceptable traffic control plan, signing plan, and traffic management plan.

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**Comment**: *CONSTRUCTION: To construct 50 wind turbines you will have to accommodate several, hundred oversized trucks, cranes, transformers and substations, etc. The actual construction of each wind turbine requires a concrete foundation which would ultimately require hundreds of cement truck deliveries on a 24-hour basis, 7 days per week. Once construction commences you cannot stop the pouring process. [LTR 64, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *EIS: It was mentioned that new or improved roads would not be required to the generating site. It is my understanding that the initial draft EIS referenced road construction needs while the new EIS eliminated that segment all together – because it was deemed insignificant. To that I would like to suggest the following: That you provide the community with an honest assessment of the impact that transportation of machinery and equipment will have on the community such as traffic noise, traffic flow interruption and generation of dirt/dust. Staging of trucks and other equipment if there is an interruption in access to the construction site. Is there an alternate route in the project plan or is it just a single access road to the site? [LTR 64, CMT 4]*

**Response**: The Applicant has considered alternative access routes and determined that the proposed access route from SR 14 to the site using Cook-Underwood Road, Willard Road, and West Pit Road is the only feasible alternative. Please also see response to Comments LTR 64, CMT 1 above and LTR 179, CMT 87 below.

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**Comment**: *Construction traffic will undoubtedly cause some issues for the local residents. But this too will not last forever, and will soon become a distant memory. [LTR 96, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *There was no discussion on the impact to the military flight route VR-1355. The A1-A7 turbines cut across the introduction of the route as the aircraft fly over the Hood River Bridge and make their turn onto this route. Also, helicopters transiting from Fort Lewis to the Yakima proving ground transit the Columbia Gorge, and this would eliminate any impact to their routing. [LTR 124, CMT 3]*

**Response**: As stated in Section 3.11.2.1 (DEIS page 3-232), all towers would meet Federal Aviation Administration (FAA) regulations regarding lighting and a Determination of No Hazard to Air Navigation would be obtained from FAA prior to construction of the Project. See also Section 4.22 (DEIS page 4-14) which explains that information on the final locations of structures and structure heights would be submitted to the FAA for review and approval because the proposed turbine heights are greater than 200-foot above ground level.

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**Comment**: *The project construction requires: a. 150, 150- ft long, 17.5 ft high, 14.5 ft wide, 55 ton gross wt specialized truck loads of power sections traversing State Route 14 and Cook Underwood Road to the SDS logging roads. It is one thing for an empty log truck to go up onto Whistling Ridge and come down with a load of logs. It is a completely different situation for the large heavy specialized trucks to travel up the steep logging roads. Will this require D-8 caterpillar tractors pushing and pulling the trucks? b. 150, 150- ft. long specialized truck loads of wind turbine blades traversing the same logging roads. c. 5000, 20-ton truck loads of construction gravel. d. 2000, concrete mixer truck loads (5 cubic yards per mixer load). e. 50 20-ton truck loads of construction reinforcing steel for the concrete power bases. f. 2, 500-ton capacity cranes for erecting the power hub, nacell, and turbine blades. g. Many low boy trucks to haul all of the bull dozers, back hoes, front end loaders, etc. h. Many truck loads required for the construction of the supporting structures for the wind farm. Needless to say, all of the thousands of trucks will pass within 50 ft of our house on Cook Underwood Road. [LTR 170, CMT 3]*

**Response**: Table 3.11-7 (DEIS page 3-228) compared the estimated traffic volumes within the Project to estimated traffic volumes during the peak construction period. As shown in this table, it is expected that at the peak of construction (a period of three to five months) during the morning (a.m.) peak hour, approximately 210 construction vehicles would travel through either junction of SR 14 and Cook-Underwood Road. During the afternoon (p.m.) peak hour, approximately 10 construction vehicles would be expected to travel through this same junction. Also during this construction peak, an increase of up to 275 vehicles total would be southbound on Cook-Underwood Road from the Project Area during the afternoon (p.m.) peak hour.

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**Comment**: *The DEIS must adequately review the likely impacts to the local and regional transportation system. The proposed development would generate thousands of vehicle trips through areas that are predominately used for recreation, agriculture, rural residential, and forest uses. Industrial development and land uses are prohibited in the areas that the proposed haul route would travel through. The transportation impacts would likely be substantial. Impacts would include significant delays due to increased traffic and the size of vehicles*

*associated with the use. The vehicles associated with the proposal would also be incompatible with local uses. Whistling Ridge would make thousands of vehicular trips across the proposed haul route, including the hauling of heavy construction materials and equipment exceeding the Washington State Department of Transportation's legal load limit of 52.75 tons. See RCW 46.44.041. There would be more than 1,700 trips using specialized over-sized trucks designed specifically for the industrial purpose of hauling the enormous turbine components. These specialized trucks are up to 150 feet long, 17.5 feet high, and 14.5 feet wide. Since October 11, 2007, trucks longer than 125 feet in length have been prohibited on Washington SR-14 along the haul route. [LTR 179, CMT 87]*

**Response**: All impacts to local and regional transportation systems were analyzed and discussed in Section 3.11 of the EIS. The current Project plan is to install up to 50 wind turbines on the site. Each turbine requires nine truckloads of components, seven of which would be overweight and/or over-length. The total number of over-size loads would be: 150 turbine blade transports, 150 tower section transports, 50 nacelle transports. The route to be used for transporting large components would start at the the Applicant's facilities at Bingen, WA. The loads would move north from the the Applicant's facilities on Maple Street, then west on SR-14, then north on Cook-Underwood Road and Willard Road, and finally, east on West Pit Road. Loads will travel in caravans of no more than six specialized truckloads at one time to minimize traffic flow interruptions. Rolling traffic slowdowns and temporary single lane traffic stoppages would be required to maintain public safety during component transportation. To minimize impacts on traffic flow, transportation of turbine component caravans would not be allowed during the following time periods: 7:00 am to 9:00 am; 11:00 am to 1:00 pm; and 4:00 pm to 6:00 pm.

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**Comment**: *In addition, the DEIS provides internally inconsistent information about the true extent of the traffic impact. At pages 1-29 and 3-233, the DEIS states that traffic flow could be restricted for up to 20 minutes during the construction phase. But at page 3-228, the DEIS states that traffic delays would increase by only six seconds as a result of this project. The agencies should explain the inconsistency. [LTR 179, CMT 90]*

**Response**: The noted difference is the difference between intersection operations (i.e. Level of Service and average delay per vehicle) and the maximum length of time traffic flow would be restricted on County roads. These are two different ways to describe potential traffic impacts during construction.

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**Comment**: *Transportation Studies. Now that the Oregon Court of Appeals recently upheld the Gorge Commission's right to approve the Broughton Mill development project, new transportation studies should be incorporated in the EIS to address the impact of these two Stevenson family projects, perhaps concurrent, on transportation. [LTR 273, CMT 4]*

**Response**: See Section 3.14.3.12. The Proposed Action would contribute to cumulative traffic levels in the Project vicinity, but generally only during the construction phase of the Proposed Action. Construction of the Project is scheduled for a one-year period.

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**Comment**: *We feel it is worth mentioning that the wealthy local dynasty mentioned above recently won a decision from the Oregon Court of Appeals that will enable it to construct a major destination resort along SR14 on the site of the old Broughton Mill at Hood, directly south of Underwood. Construction and operation of that resort will significantly impact local traffic as well as recreation uses at the Hatchery State Park, and needs to be considered in the transportation and recreation sections of the DEIS. The transportation section of the DEIS fails to mention the five tunnels between Cook and Underwood on SR 14. It does mention the tunnels at Lyle in its analysis of potential haul routes, but the ones between Cook and Underwood are omitted. Those tunnels are so dangerous that Mill A School doesn't allow its busses to use them when students are being transported. They are so low that there are very few local drivers who haven't witnessed semi trucks crossing the center line inside those tunnels to take advantage of the added height in the center of the tunnel's arc. We were nearly killed by one of these ourselves. We would not have considered that to be a moderate impact. The only viable way for SDS to get those turbines to Bingen would be by barge or rail, in our opinion. Getting them to the proposed project site with "low to moderate impacts," will be far more difficult. Section 4.3 purports to analyze transportation issues associated with the project. Section 4.3.1.1 Regional and Site Area, fails to even mention the community of Underwood. While it is an unincorporated community, we would guess the population at (conservatively) 2500, based on information obtained from the Skamania County Assessor in the early 1990's. Attempts to update that information from several county departments were unsuccessful, but with the new census nearing completion, we would hope that EFSEC would obtain that information for a final EIS. We contest the DEIS's conclusion that impacts to these residents during construction would be low to moderate. Underwood has only one road connecting it to SR14, and there is no viable alternative route to any other state or county road that would get one to White Salmon or Stevenson. Cook-Underwood Road is Underwood's lifeline to the outside world, and any disruption to its use will impact residents, especially in emergency situations. The proposed haul route from Bingen to Underwood over SR14 underestimates the dangers posed by existing local conditions. The DEIS fails to even mention the dangers posed by traffic attempting to enter SR14 at Dock Grade Road. This intersection is the site of many accidents every year, and these will be exacerbated by the presence of many oversized, overweight trucks westbound on SR14. Dock Grade is the main route for folks from White Salmon to SR14, commuting to Hood River or elsewhere for work, shopping and recreation. People take crazy chances there, and sight distances are deceiving. The intersection of SR14 and SR141 is so dangerous that WDOT placed a warning sign with flashing lights just east of the blind corner leading into it. SR141 is the main route to the White Salmon River Valley, and the communities of Husum, BZ Corners, Glenwood and Trout Lake. Population in these places has grown considerably over the past 20 years or so, along with recreation use. Trout Lake is the gateway to Mt. Adams and the Gifford Pinchot National Forest in this area. It is the road to the White Salmon Wild and Scenic River and associated rafting and kayaking opportunities. SR14 is so narrow between these two intersections that it is a challenge for a passenger car, a semi truck and a bicycle to share the road. There is no shoulder whatsoever in many places, and we'd measure the lanes in a couple*

*of spots to contest the DEIS's assertion of 12 foot lanes if it wasn't such a dangerous proposition. An Underwood man was killed there a couple of years ago walking his dog. In order to safely move oversized loads through there, we think one-way traffic with flaggers will be needed, but the DEIS does not mention this. Traffic volume through this stretch is heavy by local standards, but the DEIS contains no analysis. It uses "typical rural highway traffic patterns," to reach its conclusions. Is it too much to ask that counters be placed on the roadways to determine actual usage during the proposed construction season?? The mix of traffic is horrendous, especially in the summer and early fall months ... you'll see bicycles, pedestrians (crazy people), long-haul semi's and log trucks, along with RV's of every description, school busses and passenger vehicles. The DE IS generalizes the width of SR14 from SR97 and SR395, and doesn't really talk about SR14 from Bingen to Underwood. This is an unconscionable omission. The analysis of Cook-Underwood is all rosy, too. At the top of page 4.3-5, the DEIS states that "very little as-built information is available regarding existing pavement and base thickness along the proposed haul route." Cook-Underwood Road was built many years ago to accommodate local traffic, agricultural hauling and log trucks. Maintenance has consisted of occasional treatments with chipseal and gravel. There are many sections where the asphalt is already showing some distress, and it runs along a steep, unstable bluff up to 1000 feet above SR14. SR14 runs along the river at almost sea level, and most of Cook-Underwood is 500-1000 feet in elevation. The DEIS doesn't mention the very steep grade coming up from SR14 at both ends, and it doesn't say anything about how slow those big overweight loads will be going, but there will be serious deterioration of LOS going on there, too! Table 4.3-1 indicates 240 commuters will be trying to come up the hill at Underwood at peak pm drive time .. . we'd like to see counters on that, too. Imagine those folks following these slow, giant trucks all the way to their driveways, because many of them will have to. A trucker friend of ours said they would need to hook two semis together to move the heaviest loads up the worst part of the grade ... would there be a delay associated with that practice? Where is the analysis of that? Between Highland Orchard Road and Chenoweth Road is a steep hill with a series of sharp curves and limited shoulder. There will likely be lots of delays for local traffic there, too, but there is no mention in the DE IS. There are many parts of Cook-Underwood which are narrow with little or no shoulder, and as mentioned before, a steep, high and unstable bluff on the south side. What happens to the folks up here if the road just gives way at some point? Our guess is that the LOS would suffer for years to come. It could even cause a home to have to give up its yard to enable the road to be re-routed. The DEIS is silent on this point. If the rest of this DEIS is as deficient as the transportation section, it is a shoddy document indeed! Garbage in; garbage out. EFSEC needs to calculate LOS using real traffic counts and hard data, not HCS+algorithms. It is not unusual to wait 10-30 seconds to enter SR14 from the east outlet of Cook-Underwood Road as it is. Add traffic associated with a major construction project at the old Broughton mill site and oversized loads for windmill construction to the current situation and there will be serious impacts to local transportation. In addition, parts of Cook-Underwood along the bluff are narrow enough that flaggers and one-way traffic would be needed to allow the big loads through, but there is no mention of the LOS impact of that. Kids on school busses in Underwood have a 45 minute ride to Mill A School, and about the same to White Salmon. Traffic delays could mean the difference between arriving at school ready to learn, and missing breakfast and playing catch-up all day long for them. We were struck by the lack of information about the numbers of local people who will be impacted by the construction phase. The economic impact of the jobs generated by the construction phase could well be offset by visitors who will never return after tangling with the traffic nightmare that will ensue. There is nothing in the DEIS speaking to the roads themselves,*

*about the damage those giant loads are liable to cause. The road being built on SDS land is 60 feet wide. How on earth will our little, old, 24 foot roadways accommodate these trucks and cranes? The DE IS needs to tell us that. The fact that Skamania County has no over-size or over-weight restrictions in place at this time doesn't mean the roads will accommodate these loads ... this county has been through 4 or 5 county engineers in the past few years. The head of the county's Public Works department has no engineering credentials. [LTR 277, CMT 3]*

**Response**: Please see response to Comments LTR 179, CMT 87, and LTR 170, CMT 3, both above as well as LTR 318, CMT 12, and LTR 286, CMT 54 below.

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**Comment**: *I am greatly concerned about what I feel is a very inadequate analysis of the actual impacts to our roads and byways by the transport of the wind turbines and other construction paraphernalia for the Whistling Ridge wind farm project. The "specialized" trucks that are needed would, I believe, create havoc on our roads and there would also be serious damage to our rural, scenic public roads. The whole issue of which roads SDS would actually use if this wind farm is approved, has not been adequately addressed in the DEIS. Skamania County authorities also fail to address impacts to our roads and byways from all the overweight traffic for this wind farm proposal. Waiting to figure it all out after the fact is not good public policy and it certainly is not public disclosure. I needed to educate myself on this issue and the following disturbing information is about what it really takes to transport wind turbine components. My emphasis is in bold red. The following is an article on what makes wind energy possible: http://www.go-explore-trans.orgl2009/nov-dec/wind_turbines.cfm. Trains, trucks, and ships make wind energy possible by Katie Greenwood [For article see PDF page 2-8] In conclusion, some of the issues and disturbing facts about what it really takes to transport and build a wind farm: many turbines come from factories outside of the United States; A single turbine is transported in up to 12 pieces; Each section of the tower is about 120 feet long and weighs up to 70 tons. An empty semi-truck and trailer weighs about 15 tons; Nacelles weigh 50-70 tons; A 3-blade rotor hub can almost cover a football field!; Route planners study several factors including traffic, road construction, surrounding buildings, and environmental issues to detel1nine the best route; assesses the steepness of hills and inclines along the route; Turbines can safely ascend and descend grades of less than 15%. Steeper grades can potentially lead to accidents that damage turbine parts or cause erosion of the soil and structure beneath the road; If the surveyor assesses the grade at greater than 15%, it may be necessary to level the roads or put in erosion control measures for that part of the route; So to build even small wind farms, there are many large loads that must travel long distances; A single train can haul 50-70 cars of wind turbine parts. It costs less to move turbine parts by train because more can be moved at a time, but the train routes must avoid low overpasses; Transporting by truck requires 8-12 trailers for each turbine; Often, trucks have to take a long route to their destination when transporting turbines; Many wind farms are located within crop farmland. This means that these heavy parts travel on narrow, unpaved roads that are not designed to accommodate the heavy loads. Immediately after a wind farm is completed, maintenance workers must repair and level the roads; Highways and interstates can handle about 80,000 pounds. Many turbine loads weigh more than 100,000 pounds, so transporting turbines can cause damage to even these roads over time; When turbine components come from overseas, they are imported in several shipments; When Vestas imported 60 turbines into the Port of Longview in Washington, all the*

*components arrived in 5 shipments. The towers arrived in 3 separate shipments followed by 2 shipments of nacelles and blades; One advantage to transporting by ships and barges: they don't have to negotiate tight turns or avoid overpasses like trucks and trains. Analysis on grades and transportation requirements is totally inadequate in the DEIS. The Whistling Ridge proposal involves grades ranging from 5% to 70%. More expert survey data is needed for the DEIS. More analysis and data is needed on just how much the transport trucks and the wind infrastructure material actually weigh and how much damage they might do to our rural roads and byways. And, I think we all need to know just how SDS really proposes to get these huge, heavy, and unwieldy turbines up steep slopes that are prone to erosion and mass wasting! (Mass wasting and soils will be addressed in a separate memo.) The DEIS is totally inadequate on the transport issue. Thank you. [LTR 278, CMT 1]*

**Response**: Please see response to Comments LTR 179, CMT 87 above and LTR 286, CMT 54 below.

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**Comment**: *[In reference to Section 3.1.2.1, Proposed Action, Construction; PDF pg. 8], [h]ow many truckloads of haul material does all this excavation involve? What will be the impacts on roads and byways? Will public money have to be used to re-pave or reconstruct these roads after all this heavy traffic? Where will all the haul material go? [LTR 286, CMT 4]*

**Response**: Please see response to Comments LTR 64, CMT 1 and LTR 179, CMT 87 above.

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**Comment**: *Some local residents live close enough to the economic edge that many months of impaired transportation could spell financial disaster for them. The special transportation requirements of this project are so extreme that the EIS should be revised to include a detailed quantitative breakdown which allows the public to understand how intensively (and for how long) public use of the Cook-Underwood Road and the affected section of WA14 will be reduced: how many loads per day, how many loads (and days) total, how much closure time is needed for each load over each critical segment of the route. [LTR 315, CMT 24]*

**Response**: Please see response to Comment LTR 179, CMT 87 above.

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**Comment**: *How is the traffic from construction going to affect local residents and residential traffic? [LTR 317, CMT 78]*

**Response**: Please see response to Comment LTR 173, CMT 3 above.

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**Comment**: *The transportation plan is unclear about the road transportation component on Cook Underwood Road proper when the large loads are going up and down the hill. It is my*

*understanding these things are large and would require closure of the opposing traffic lane. If so there should be some indication to people what this will mean in terms of emergency services and bypasses and precautions to allow emergency situations to pass. [LTR 318, CMT 12]*

**Response**: All impacts to local and regional transportation systems were analyzed and discussed in Section 3.11 of the EIS. The transportation of wind turbine components would be stopped for emergency vehicle passage. Local law enforcement, fire, and ambulance providers would be contacted to ensure a notification protocol is established to facilitate their passage should that need arise during the movement of caravans.

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**Comment**: *ROADS: It is my belief that current roads may be inadequate due to actual road bed construction which was designed to accommodate residential vehicular traffic (need fortified road beds, wider surface areas, and gradual road curves to accommodate the over sized loads). The actual weight of each over sized truck load could be more than double the normal weight of a tractor trailer. [LTR 64, CMT 2]*

**Response**: As stated in Section 3.11.2.1 (DEIS page 3-226), "Improvements to County roads and private roads between SR 14 and the Project Area would be necessary to support the long and heavy loads that would be required for the delivery of the wind energy components." However, according to the County Engineer, Timothy Homann, for Skamania County, the dimensions and alignments of the existing roadway cross-sections of County Roads in the Scenic Area are adequate to accommodate the large specialized trucks that would haul turbine components to the Project Area, provided that oversize and overweight vehicles use the east intersection of SR 14 and Cook-Underwood Road and the east intersection of Cook-Underwood Road and Willard Road (Prefiled Testimony, Exhibit No. 12.00). Please also see Section 3.11.3, Mitigation Measures.

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**Comment**: *In addition, the roads and services necessary to build and service 50 turbines destroy the very rich, abundant and diverse plant and animal life we have here in the gorge. [LTR 104, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *[…] likely increased infrastructure costs associated with building and maintaining a windfarm (including road maintenance and additional fire protection). [LTR 135, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *The project uses existing county roads and infrastructure. The County will have little burden both initially and on and ongoing basis. [LTR 155, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section] 3.11, TRANSPORTATION, [Section] 3.11.2, Impacts: [t]his section should identify likely haul routes for concrete that will be used for the wind turbine foundations and discuss any associated environmental impacts. [LTR 177, CMT 65]*

**Response**: As described in Section 2.14.3 of the Application for Site Certification (Appendix A), the use of on-site batch plants are under consideration. However, if concrete needs to be transported to the site, concrete trucks would use the same haul routes used to transport the large turbine components. See Section 1.4.1.6 of the EIS for a description of the proposed haul route.

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**Comment**: *[In reference to] Section 3.4.1.1, [t]he project site contains a network of roads ranging in width from approximately 8 to 20 feet. The 20 ft rd was built specifically for hauling WRE equipment. Roads to support logging activities are 8-10 ft. [LTR 178, CMT 82]*

**Response**: The existing logging roads to be improved were originally built to allow large trucks and logging equipment to access the Project Area for ongoing commercial logging purposes. These roads are generally 8 to 12 feet wide, although some are currently as wide as 20 feet. Improvements to allow use by wind project construction vehicles generally would involve widening and providing a gravel all-weather surface. Most of the roads used to provide access to the site by construction vehicles would be widened to approximately 25 feet (width of finished road), with an additional 5 feet of shoulder on either side. See Section 2 (DEIS page 2-8).

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**Comment**: *The Application and DEIS are Inconsistent and Incomplete Regarding the Proposed Haul Route through the National Scenic Area. The Application and DEIS are internally inconsistent and incomplete regarding the proposed haul route through the National Scenic Area. The specialized trucks for hauling wind energy turbine components for this project are both massive and heavy; these trucks may have trouble navigating certain intersections and bridges. The application and DEIS do not clearly establish which route is proposed through the National Scenic Area, and whether that route would entail any road construction or ground-disturbing activities within the General Management Area of the National Scenic Area. The information that has been made available about the haul route is internally inconsistent and does not comply with EFSEC's rules for a complete application. EFSEC rules require, among other items, the application to include information about traffic and transportation impacts: (1) Transportation systems. The application shall identify all permanent transportation facilities impacted by the construction and operation of the energy facilities, the nature of the impacts and the methods to mitigate impacts. Such impact identification, description, and mitigation shall, at least, take into account: (b) Access routes for moving heavy loads, construction materials, or*

*equipment; (2) Vehicular traffic. The application shall describe existing roads, estimate volume, types, and routes of vehicular traffic which will arise from construction and operation of the facility. The applicant shall indicate the applicable standards to be utilized in improving existing roads and in constructing new permanent or temporary roads or access, and shall indicate the final disposition of new roads or access and identify who will maintain them. WAC 463-60-372. [LTR 179, CMT 42]*

**Response**: See Section 1.4.1.6 for a description of the proposed haul route. Please also see response to Comment LTR 64, CMT 2 above.

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**Comment**: *The original application proposed two alternative haul routes through the National Scenic Area, Routes 1 and 2. The amended application adds a third alternative haul route, Route 3. Amended Application at 2.19-3. The DEIS adopts Route 3 as the haul route for the project. DEIS at 1-12. At page 1-16, the DEIS states that both Routes 1 and 2 have been "eliminated as ... construction roadway access alternative[s]." However, at page 3-172, the DEIS states that Route 1 (the Ausplund Road Route) "would be used to access the [project site] for construction and maintenance." The agencies need to address this inconsistency, and clarify the extent to which Routes 1 or 2 would be used, if at all, for this project. [LTR 179, CMT 43]*

**Response**: Ausplund Road would not be used as an access route. Section 3.9.2.3 (DEIS page 3-172) has been revised under the heading, "Viewpoint 23: Ausplund Road End (Within Scenic Area)" to delete the phrase "...which would be used to access the area for construction and maintenance."

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**Comment**: *Moreover, a number of unanswered questions remain regarding Route 3, and specifically whether this route would involve any road construction or ground-disturbing activities within the General Management Area of the National Scenic Area. This route includes an aging bridge on Cook-Underwood Road across the Little White Salmon River and within the GMA. In the attached November 6, 2009 letter submitted to the Gorge Commission, WRE freely admits that "[t]he County has not yet determined whether any modifications or repair of [this] bridge would be required" to enable the bridge to be used for the haul route. Furthermore, there is no evidence in the application or in the record, such as engineering schematics or a discussion of the bridge's load-bearing capacity, to establish whether construction work on the bridge will be necessary for this project. [LTR 179, CMT 44]*

**Response**: Please see response to Comment LTR 64, CMT 2 above.

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**Comment**: *In addition, an intersection of particular concern is the eastern intersection of Cook- Underwood Road and SR-14. WRE's initial application states that road construction, including road widening, "would be required" at this intersection in order to provide a sufficient turning radius for oversized trucks hauling wind turbine components. Original Application at*

*4.3-13. WRE provided specific numbers for the necessary width of the inside turning radius. Id. According to WRE, "[w]widening would include removal of guardrail and an engineered fill section on the inside of the turn, and an engineered fill section and a possible embankment cut section." Id. In addition, "[t]he engineered fill and embankment cut sections . . . would require an all-weather driving surface." Id. Finally, "[r]light of way ownership and easement determination would be required." Id. Then, after Appellants filed an appeal with the Gorge Commission of the County's decision on the initial application, WRE abruptly made a 180-degree reversal on whether road construction is required at this intersection. Even though WRE still proposes to use this intersection as part of its preferred haul route, WRE in the amended application has deleted all language discussing the necessary road work and replaced it with language summarily concluding that no road construction will be necessary along the haul route. Amended Application at 4.3-14. When asked to explain the rationale behind these discrepancies, WRE merely stated in its November 6, 2009 letter that "[n]o roadway improvements have been identified as being needed at either the west or east intersection of SR-14 and Cook-Underwood Road." (emphasis added). This unhelpful statement completely ignores, and is in fact contradicted by, WRE's previous statements that road improvements at the east intersection "would be required." Original Application at 4.3-7 (emphasis added). [LTR 179, CMT 45]*

**Response**: Please see response to Comment LTR 64, CMT 2 above.

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**Comment**: *In addition to the specialized trucks, other large and oversized trucks would be needed to haul construction equipment, plus three pilot vehicles for each truck wider than 10 feet, and construction worker vehicles. Although WRE has not yet proposed a total number for all vehicular trips along the haul route, the total number would likely exceed 10,000 trips. The specialized trucks and their frequent, heavy loads are expected to damage the roads along the haul route. Thus, WRE proposes to repair road damage resulting from the industrial hauling. [LTR 179, CMT 88]*

**Response**: Estimated traffic volumes reported in Table 3.11-7 of the DEIS provided an estimate of all construction related trips, which includes workers and equipment delivery. Additionally, please see response to Comment LTR 286, CMT 54 below for details on the Skamania County Haul Route Agreement and right-of-way use permit.

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**Comment**: *This massive intrusion of industrial construction equipment would run through rural residential, agricultural, and recreational areas. Given the impact to the community, EFSEC and the BPA should study alternative routes that would preclude or minimize the use of Cook-Underwood Road as it runs through the National Scenic Area. [LTR 179, CMT 89]*

**Response**: Cook-Underwood Road is currently used by large logging trucks and any use of County roads along the proposed access road route would be subject to a County approved haul route agreement and right-of-way use permit.

**Comment**: *Despite this prohibition, SDS proposes to construct and use more than two miles of roads within the General Management Area for industrial purposes. [LTR 182, CMT 4]*

**Response**: Please see response to Comment LTR 64, CMT 2 above.

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**Comment**: *In both the National Scenic Area and in Skamania County generally, both the construction and uses of roads must be reviewed. Attached as Exhibit A is a 2002 letter from the Columbia River Gorge Commission discussing the requirement to review roads in the National Scenic Area for their intended uses. A recent federal court decision, Friends of the Columbia Gorge v. United States Forest Service, discusses the same requirements. A copy of that decision is attached as Exhibit B. [LTR 182, CMT 5]*

**Response**: Please see response to Comment LTR 64, CMT 2 above.

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**Comment**: *Similar to the Scenic Area requirement, Skamania County requires its private roads to be classified "based on their primary functions." The County road system has several different classification categories, ranging from private driveways to commercial development to recreational use. [LTR 182, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *Proposals to change roads from one category to another, such as residential to commercial use, trigger review [LTR 182, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *In the instant matter, the roads proposed within the Scenic Area are proposed specifically for industrial purposes. The applicant proposes to construct new roads and to widen and improve existing public and private roads, converting them to new uses. [LTR 182, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *These roads would be used to haul wind energy turbine components and construction materials-industrial loads that would exceed the WSDOT legal load limit of 52.75 tons. This is an industrial activity. In summary, the proposed road construction and use within the General Management Area are part of the proposed industrial project and are prohibited.*

*SDS must modify the proposal to remove all project components from the GMA. [LTR 182, CMT 9]*

**Response**: Please see response to Comment LTR 64, CMT 2 above.

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**Comment**: *[In reference to Section 3.3.2.1, Proposed Action, Surface Water; PDF pg. 40], "Additional roadway widening"? What does this mean? Doesn't SDS know now how much roads would have to be widened? And which roads would actually have to be widened? Determining this during "final design" does not work for me. I want to know now, before this project is approved or not whether and which roads would have to be widened or reinforced since hauling those heavy turbines up narrow roads would require widening and perhaps repaving. SDS should provide information on roads now, not later. [LTR 286, CMT 25]*

**Response**: Proposed roadway widening is described in Sections 1.4.1.6 and 2.1.3.7. Please also see response to Comment LTR 64, CMT 2 above.

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**Comment**: *[In reference to Section 3.6.3, Mitigation Measures; PDF pg. 122], [t]here are no designated haul routes for Whistling Ridge, as far as the public is aware. I have gone to our Skamania County Road Department and talked with our Larry Douglas, the department head and he stated that they were working on a draft but that it is not available for public disclosure. They are using Klickitat County's Haul Route Agreement as a go-by; this was for the Windy Ridge project in Klickitat. However, Mr. Douglas stated that Klickitat's engineer had expressed that if they had to do it again, they would put in more restrictions on road usage, in the Haul Route Agreement. Since Skamania County is not giving out the draft Haul Route Agreement that they would be implementing for Whistling Ridge, the public doesn't really know which roads are going to be widened, straightened, re-constructed, etc. The public doesn't really know anything specific about the stresses that will be put on the roads, if roads will have to be rebuilt. This is a serious inadequacy of the DEIS and should be addressed prior to any decision on the proposed project. [LTR 286, CMT 54]*

**Response**: Skamania County requires that private individuals and entities proposing to use oversize or overweight vehicles on County roads enter into a road haul agreement with the County. These arrangements are approved by the Skamania County Board of Commissioners and authorize the County Engineer to issue a county right-of-way use permit. Prior to the issuance of the right-of-way permit, the applicant must submit an acceptable traffic control plan, signing plan, and traffic management plan. Prior to the start of hauling, the roads to be used would are tested and inspected and a pre-haul report documenting the existing condition of the roads is prepared. During the hauling operation, the roads are inspected by the County to monitor the physical condition of the roads, signing, and traffic control. Once the hauling operation is complete, the roads are re-tested and inspected. The permittee is responsible for restoring the roadway to its pre-haul conditions at the permittee's expense.

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**Comment**: *[In reference to Section 3.9.1, Proposed Action; PDF pg. 172], [a]lthough the proposed project is located outside the Columbia River Gorge National Scenic Area (CRGNSA), the haul routes do impact the NSA. And, we really don't know what the tons and tons of materiel—cement trucks, semi-trucks carrying all the wind farm infrastructure materials, etc.—would do to our roads. There will be impacts to the roads but SDS appears to be minimizing any impacts in the NSA because they know that the regulatory requirements for the NSA are more stringent than outside NSA requirements. The DEIS should address the impacts to all the roads that will be used—and these roads need to be named beforehand. There should be no sleight of hand in road usage. SDS and BPA should commit on paper which haul routes they will be using, what the impacts will be to the roads, and what mitigations will take place if the roads are damaged. [LTR 286, CMT 58]*

**Response**: Please also see response to Comment LTR 64, CMT 2 and LTR 286, CMT 54 above.

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**Comment**: *[In reference to Section 3.11.2.1, Proposed Action, Construction; PDF pg. 219], [t]hese "specialized trucks" would be traveling in the National Scenic Area, on two lane roads that are used by a lot of tourists. Of course there would be impacts to local, tourist, and other truck traffic! What we don't know from this DEIS is how horrible these impacts would actually be. And, we don't know how they would degrade the roads and who would be responsible for fixing these roads. [LTR 286, CMT 64]*

**Response**: Please also see response to Comment LTR 64, CMT 2 and LTR 286, CMT 54 above. See also the discussion under "Impacts to Traffic Volumes and LOS" in Section 3.11.2.1 (DEIS page 3-227 to 3-229) for an explanation of impacts to local traffic.

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**Comment**: *[In reference to Section 3.11.2.1, Proposed Action, Construction; PDF pg. 227], [w]hat types of "specialized trucks" are we talking about here? How much do they weigh? What is this "staging location" and where is it located? Surely SDS knows where they can or cannot off-load any barged equipment! [LTR 286, CMT 65]*

**Response**: See Section 3.11.2.1 (DEIS page 3-223) for details on the specialized trucks and potential staging locations (second and third paragraphs).

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**Comment**: *The construction process would require the trucking of a very large number of very large loads to the wind-farm site, over narrow, winding Cook-Underwood Road, which the residents of Mill A, Willard, and Underwood use to get to work, school, shopping, and public services. The same route is used by outsiders to get to work at the Willard fisheries facility. It is quite likely that segments of the affected road would be closed (in both directions) to non-construction traffic as wind-tower components move over them. The traffic obstruction would extend beyond the Cook-Underwood Road. The trucks must get to the Cook-Underwood Road*

*from 184 (probably via Boardman) or from a Bingen staging area supplied by river barge or train. [LTR 286, CMT 65]*

**Response**: See the discussion under "Impacts to Traffic Volumes and LOS" in Section 3.11.2.1 (DEIS page 3-227 to 3-229) for an explanation of impacts to local traffic. Due to the size of the loads and the limited width of SR 14, Cook-Underwood Road and Willard Road, rolling traffic slowdowns and temporary single lane traffic stoppages will be required to maintain public safety during component transportation (Transportation Management Plan Whistling Ridge Wind Project - August 2010). Additionally, Section 3.11.3, Mitigation Measures, points out that restricting traffic flow for more than 20 minutes during the construction phase will be avoided.

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**Comment**: *The current version of Section 3.11 of the Draft EIS suggests that local road closures will not exceed 20 minutes at a time and that traffic disruption from component shipping will last no more than 3 months. However, no supporting data are provided for these estimates. A complete EIS also would need to make clear (a) what hours of the day would be used for component movement over roads [presumably nighttime transport would be ruled out by noise regulations in Underwood]; and (b) how large the backups in local traffic could be during component transit. The public also needs to know (a) whether (or where) traffic in both directions would have to be stopped as a tuck passed; and (b) whether empty trucks, themselves quite large, also would require the halting of oncoming traffic. [LTR 315, CMT 25]*

**Response**: Please also see response to Comment LTR 64, CMT 2 and LTR 315, CMT 23 above. Prior to the issuance of the right-of-way permit to use County roads to haul oversized loads, the applicant must submit an acceptable traffic control plan, signing plan, and traffic management plan.

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**Comment**: *The document is missing alternative roads, they provide one road - Oslund Road. This road doesn't exist. Why is Little Buck Creek Road not an option? We need additional alternatives and rationale. [LTR 317, CMT 35]*

**Response**: We believe this comment is referring to Asplund Road, which is a private road described on page 2-22 of the DEIS. The Applicant has considered alternative access routes and determined that the proposed access route from SR 14 to the site using Cook-Underwood Road and West Pit Road is the only feasible alternative.

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## G.3.12 PUBLIC SERVICES AND UTILITIES

No comments were received pertaining to this section.

## G.3.13 SOCIOECONOMICS

**Comment**: *We need clean energy and well-paying jobs in our area… [LTR 10, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I fully support the Whistling Ridge energy project in Skamania county. We need to have the economic boost to help fund our schools and road department. [LTR 18, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Not only does it give a alternative source of clean energy, but it also will provide new jobs and tax revenues to our county which has been devastated with so many land set asides and regulations that our children have to leave the area in order to find jobs. [LTR 21, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed site of these 400+ feet wind turbines is very close to the well populated communities of Underwood, Willard, and Mill A. We have read the concerns and complaints of the people of Bend, OR where a wind farm is already established. They are alarming and serious. People in this area have lived for generations with agriculture and forest production. Tourism and wineries have grown and flourished in the Gorge Scenic area in the past 25 years. The change of having a forest (even with logging) for a neighbor to having the zoning change to Industrial use will have a devastating effect on the whole community. [LTR 26, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *While the winds here can be strong, they are unpredictable and unreliable. We're sure that the temptation of federal dollars for "green energy" is tempting to the state and county - but the few dollars that will trickle down to Skamania County are small when compared to the problems that will most likely arise. The jobs produced will be temporary construction jobs - the maintenance jobs to follow will be few. No tax money will come to Skamania County schools. [LTR 26, CMT 2]*

**Response**: Comment acknowledged.

**Comment**: *Siting a wind farm in this area is an intelligent and appropriate compatible land use which will diversity the economic value of these timber lands and help to preserve these lands for timber production for decades to come. [LTR 28, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Some other reasons that I support this proposal are that it will provide a broader tax base for the community benefitting all property owners and even benefitting those who rent their residences. Additionally, by lowering property taxes for individuals it would make special levies for schools, park districts and libraries more palatable to residents who otherwise might feel overtaxed. Also, this project will provide jobs to many locals who have taken classes at Columbia Gorge Community College specific to the wind energy field in hopes that they could remain in the area and find a family wage job. [LTR 35, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Besides the jobs and revenue that it will generate… [LTR 37, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I appreciate what Broughton Lumber Company and its parent SDS Lumber Company have done for many of our communities here in Skamania County over many years, and I consider the Whistling Ridge Energy Project to be yet another way that SDS will be of great benefit to the citizens in our area -- furnishing much-needed jobs and boosting our local economy, and also beneficial to our entire country in their effort to help provide more electricity for all of us. [LTR 38, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The project would enhance the use of the land and result in direct and indirect positive impacts to our economy. [LTR 40, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *It will create much needed incremental tax revenue for the county and school districts. I support renewable energy, and the Whistling Ridge Energy Project. [LTR 45, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I have lived in the Gorge for about 10 years and am a big fan of wind power in general. In fact, I LIKE the new array of wind generators out near Maryhill (outside the National Scenic Area). But the reality of the Whistling Ridge project in a residential and nationally protected area will be the following: No change in electrical costs for average taxpayers. A paltry number of construction jobs, most of them temporary and many of those requiring imported specialized labor. [LTR 49, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *No economic benefits to the majority of local residents. Greed of already extremely wealthy land owners and (literal) power brokers. [LTR 49, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *This proposal is likely to have greater impact than any other wind energy facility proposed in the State of Washington to create jobs to a state with an above average unemployment rate. The project would provide industrial development and infrastructure into an area that needs jobs, development, and green energy. I support renewable energy and believe this project will be a short-term and long-term economic boost to this area. [LTR 58, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Jobs and financial support into the community are always good reasons for these projects to be justified, However as we have learned with the casino issues, not always the primary issues to consider. [LTR 59, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *It will also provide some much needed, high-paying stable employment opportunities for residents of the Columbia River Gorge. [LTR 70, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *We need the economic boost this project will provide for Samania Cnty. Jobs, schools, tourism. [LTR 71, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *This project will have a major role in securing the economic stability of Skamania County and of the SDS family of companies. [LTR 72, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *What guarantee do you give that local people will be hired for both construction and employment? This would not be the 1st company to come here and promise jobs-then not be able to build no permits are issued. Do you have permits? Next meeting people outside of the area should not be able to have an opinion or comment on what happens in our area! As Washougal over time limit, or Portland or Hood River! [LTR 75, CMT 1]*

**Response**: Please see Section 4: Environmental Consultation, Review, and Permitting Requirements. Section 4.10.1 discusses state and local plan and program consistency requirements as they relate to the proposed Project.

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**Comment**: *What went so terribly wrong? CGAS believes the cozy relationship between project proponents and EIS preparers is what went wrong. Getting a permit opens the spigots to fat state and federal subsidies, without which projects like Whistling Ridge would be unprofitable to develop. [LTR 77, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Implementation of the Whistling Ridge Energy Project has many benefits, some not yet known, for Skamania County. The initial economic benefits associated with the project construction, such as local procurements and the 100+ family wage jobs are just the boost that we need. [LTR 78, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The draft emphasizes anticipated monetary benefits derived from the project. It should also describe expected government expenses associated with the proposal. Too, the draft*

*should include expected short and long term monetary benefits from continued timber harvest (the No Action alternative) at Whistling Ridge. [LTR 79, CMT 12]*

**Response**: Section 3.13.2.1, County Expenditures, includes a discussion of potential financial impacts to Skamania County as a result of the proposed Project. The Applicant is responsible for government expenses that result from the permit application process, including the costs associated with the SEPA/NEPA process. Income derived from timber harvest is outside the scope of the EIS.

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**Comment**: *[The proposed Project] is good for our economy and for the future need for energy. [LTR 81, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *My husband and I are residents of Skamania County and are also employees of the county. For numerous years, our county has relied on Federal tax dollars to subsidize our county's existence in lieu of logging. Although I am a proponent of environmentally responsible logging, I realize those who live outside of our county continue to control our forests and logging will not sustain our economy. The Whistling Ridge Energy Project is, finally, a light at the end of a hopeless tunnel of poverty and welfare. [LTR 86, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The project is based on environmentally-safe practices and will improve our community as a whole. Many of the opponents of the project DO NOT live in our county. We are tired of those using our county as a "playground" making decisions for our economy and well-being. Friends of the Gorge and other non-profit groups based on "protecting" the Gorge have done nothing more than continue our economical downturn. My husband and I are very active within the county and enjoy fishing, hunting, kiteboarding, and backpacking. We want nothing more than to protect this incredibly beautiful and unique area. [LTR 86, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Wind Development, Generally: Addressing Both Economic Recovery and Environmental Objectives. Wind development has become increasingly important to both Washington's economy and achieving environmental objectives. Washington voters expressed this when they approved the Energy Independence Act, Ch. 19.285 RCW, in 2006. [A]ppropriately sited renewable energy facilities… will promote energy independence in the state and the Pacific Northwest region. Making the most of our plentiful local resources will*

*stabilize electricity prices for Washington residents, provide economic benefits for Washington counties and farmers, create high-quality jobs in Washington, provide opportunities for training apprentice workers in the renewable energy field, protect clean air and water, and position Washington state as a national leader in clean energy technologies. Securing our energy independence is critical not only to economic recovery, but also to our ability to compete in a global economy in which traditional energy supplies are increasingly difficult to obtain. And, it is Washington's rural counties which will play a critical role in generating that energy. [LTR 93, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Realizing its potential to drive future economic development, Washington legislatures charged the Clean Energy Leadership Council (CELC) "to create a clean energy leadership initiative that will set the path to leverage Washington's energy infrastructure and make Washington a hub for clean energy technology and a leader in the creation of green jobs and the development, deployment, and export of clean energy technologies and services." [LTR 95, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *This privately funded project would mean temporary and permanent local employment. No taxpayer government money will be used to support the construction or maintenance of the project. Economically this project is in a perfect area to help bring desperately needed work dollars into Skamania County. The prime example of this is the money now flowing into neighboring Klickitat County. The many positive aspects of the project far, far outweigh any temporary negatives. [LTR 96, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *Having just returned from the eastern Oregon/Washington area, and having seen first-hand the remarkable success being accomplished with harnessing wind power, it only makes good economic sense to take advantage of the site that SDS is proposing. I have had the pleasure of business relationships with SDS Lumber Company in the past and regard them as a very successful operation. They will install this project in a manner that will certainly benefit this area and the energy needs of the future. [LTR 99, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I've been a resident of Skamania County for 48 years. I watched the great environmental movement destroy our economy and the economy of our surrounding counties and states. [LTR 100, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This wind farm will give the Skamania County economy the boost it needs. We are too dependent on timber harvests and federal timber payments. Too many residents are stuck in low-income brackets while unemployment ranks far above the state average. Fortunately, Skamania has another natural resource to develop: wind. Bringing another industry here is exactly what our county needs. It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing? Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I hope the Council approves the SDS application and that the project advances quickly. [LTR 106, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This wind farm will give the Skamania County economy the boost it needs. We are too dependent on timber harvests and federal timber payments. Too many residents are stuck in low-income brackets while unemployment ranks far above the state average. Fortunately, Skamania has another natural resource to develop: wind. Bringing another industry here is exactly what our county needs. It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing? Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I hope the Council approves the SDS application and that the project advances quickly. [LTR 108, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *In addition to the clear benefits of clean renewable energy, the Draft EIS substantiates the economic benefits that drive our organization's strong support. The Draft EIS found that: There will be considerable economic benefits to the tri-county area of Skamania, Klickitat and Hood River counties. The construction workforce hired to build the wind farm would average 143 workers, with a peak of approximately 265 workers. There will be an estimated $1.3 million in local, non-labor purchases during construction. Annual property tax revenue to the County would increase by $731,500. The White Salmon School District will see an estimated $150,000 annually. 8-9 new permanent jobs will be created. Of the 1,070,080 acres in Skamania County, less than 3% can be developed to grow a tax base to create economic sustainability that provides financial resources to support necessary services to residents and visitors. Due to excessive federal and other public ownership of its land base, Skamania County must take advantage of each opportunity it has to grow its tax base. The Whistling Ridge Energy project is not only a sound economic development opportunity, but also a clean, safe, green,*

*renewable energy resource that will provide a better future for generations to come. [LTR 140, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *SDS is a very reputable company with strong ties to the community. This wind farm will give the Skamania & Klickitat County economy the boost it needs. We are too dependent on timber harvests and federal timber payments. Too many residents are stuck in low-income brackets while unemployment ranks far above the state average. Fortunately, Skamania has another natural resource to develop: wind. Bringing another industry here is exactly what our county needs. It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing? Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I hope the Council approves the SDS application and that the project advances quickly. [LTR 152, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Revenue. The Whistling Ridge Energy Project is located in Skamania County, which is very significant for the local and regional economy. Skamania County is largely owned by the Federal Government with over 80% of available lands managed by the USFS. In the decades where Federal timber harvests were high, Skamania County received considerable funding from harvest dollars. Harvest levels and associated receipts to the County have disappeared. The County has spent considerable time and energy trying to maintain and replace this vital source of revenue. The Whistling Ridge Energy Project will contribute significant dollars to the County during the construction phase in addition to providing a large, stable source of annual tax revenue to the County. For this revenue, the County has to provide very little service in return. [LTR 155, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *It has no negative effects that will harm the environment, but will provide much needed energy and revenue for our area. [LTR 157, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *GENERAL COMMENTS. Economic development and job creation As AWB has noted previously, approval of the DEIS and final approval of the application is extremely important for current and future economic development in Skamania County, southwestern Washington, and for the state as a whole. This is particularly important during this historic*

*economic recession and during the severe budget shortfalls for the state and local governments. Paragraph 3.13 of the DEIS (Socioeconomics) (summarized in Table 1-1 of Paragraph 1.0) concludes, generally, that "[s]ocioeconomic impacts are expected to be beneficial in the form of additional jobs, increased sales, and increased tax revenues." Specifically, during construction of the project, the DEIS concludes that about 330 full and part-time jobs would be created. Approximately 25-35 percent of the construction workforce would be residents of the area and 65-75 percent of the workforce would be hired from outside of the three-county area. Project construction would also result in 71 indirect and induced jobs. Moreover, indirect value added from the project is approximately $3.9 million. According to Table 1-1, "[f]iscal impacts are expected to be positive, with a total of $150 million in construction expenditures, of which approximately $13.2 million would be spent in the local area." In addition, the DEIS concludes most sales tax revenue would go to Skamania County. With respect to ongoing operation of the site, the DEIS concludes that "[e]conomic impacts would be positive due to increased tax revenues, employment and local expenditures. Sales, use and other indirect business taxes to state and local governments are estimated at approximately $50,000 per year." The estimated value of the project is $87.5 million, which would represent an increase of 6.5 percent in assessed value to the county. The corresponding increase in property tax revenue to the county would be $731,500. On an ongoing basis, the project will employ 8-9 employees, likely hired from the local area. Equally important to the positive economic attributes of the project are the negative consequences for the economy of southwestern Washington if the DEIS and application is ultimately not approved. [LTR 162, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Fifth, the DEIS repeatedly refers to the "economic feasibility" of the project when referring to the minimum output (70 MW) that is acceptable to the applicant. DEIS at 1-14. There is also reference to what utilities might require for the project at page 2-20 (project objectives "include providing a minimum level of generation to be attractive to utilities seeking to fulfill their RPS requirements, as well as providing a return on investment to the applicant."). However, most of this discussion is self-serving conclusions with no backup documentation. If the applicant seeks unilaterally to foreclose alternatives, then it must provide the economic and financial information to support these conclusions. The necessary data consists of costs of each of the various project elements, including labor and materials costs, costs for construction of roads, transmission lines and the substation, all leading to the overall cost and cost per kW or MW. On the other side of the equation, the applicant must produce estimations of sales prices for the energy from the project, as well as actual support for the proposition that there is a minimum output that utilities would require. [LTR 176, CMT 10]*

**Response**: Socioeconomic analysis is included in the EIS to describe impacts to that resource and is not intended to be used as justification for the economic viability for the Proposed Action. As described in Sections 1.2 and 1.4, the alternatives considered include the No Action alternative and the Proposed Action, and further cost justifications as requested in the comment are not required in the SEPA/NEPA process.

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**Comment**: *In addition, reports indicate that this year 68% of new wind turbine energy will be sold to California. The FEIS should identify whether power from the WR project will be sold and used in California or at any other location outside the state of Washington. Further, analysis should be made as to the capacity of transmission lines to accept the power from the WR project. Any contract or informal commitment between this applicant and public or private utilities should be identified in the FEIS and whether such parties are providing up front costs for this application and construction. If the power from this project is to be sold to out of state public or private consumers, then alternatives should be considered closer to where the power will be consumed. [LTR 176, CMT 17]*

**Response**: Through the large generation interconnection study process, BPA has determined that there is transmission service in the vicinity of the proposed Project. BPA and EFSEC are not involved in any power purchase agreements that the developer may be negotiating. BPA offers non-discriminatory access to its transmission system.

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**Comment**: *As a resident of Clark County and as one who has been involved in the decisions regarding the Columbia River Gorge since before and after the Columbia River Gorge National Scenic Areas was established, I have a deep appreciation for the Gorge and a deep awareness of what it takes to operate a successful business in the Scenic Area and in the Pacific Northwest. My family and I enjoy visiting the Gorge frequently from our Vancouver home, and we are not interested in seeing the character of the Gorge destroyed or significantly altered. Currently, I am president of the Association of Washington Business (AWB), but I am commenting on behalf of myself. AWB is Washington's state chamber of commerce and manufacturing and technology association. Our 7,000 members employ more than 650,000 workers in our state's private sector. Prior to joining AWB in 1986, I was Washington public affairs manager for Crown Zellerbach Corp. (CZ). At the time, CZ owned and operated the Camas pulp and paper operation just to the west of the Scenic Area boundary and owned thousands of acres of commercial timberlands inside and adjacent to the Scenic Area on both sides of the Columbia River. I was involved in the negotiations with the state of Washington to exchange our Gorge lands with the state of Washington for state timber sale contract relief in 1982, 1983 and 1984. In that process, I learned a great deal about the forest land potential, the forest practices and view corridor considerations and alterations, the productivity of the timberlands, and the people and companies inside and adjacent to the Scenic area who are dependent upon the industry and businesses. I also came to learn that some of our forested sites along the ridge lines had higher potential for other uses such as a wind farm, although generating electricity from the wind was in its development stages. While CZ believed that we could manage those lands and our Camas operations so as to protect the unique features of the Gorge inside and around the Scenic Area, we also worked with those who wrote the legislation establishing the Scenic Area to protect the commercial activities within and around the Gorge. We recognized this would be an ongoing challenge, but we also realized that many of our employees and their families lived in and around the Scenic Area, had jobs and livelihood which depended upon commercial activity. Therefore, it was important to maintain and preserve the commercial viability of private and public lands and the industries and businesses within and adjacent to the Scenic Area. [LTR 185, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We fully understand the concerns of those who provide private sector jobs and generate the tax revenues for local governments and schools with and around the Scenic Area should be paramount. [LTR 185, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Further, it seems to me that it makes sense for the State of Washington to lease the adjacent ridge line so as to extent the wind farm and allow our state, which is severely financially strapped, to earn income from the public lands for schools, colleges and universities and rural counties such as Skamania. [LTR 185, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *The point is when opportunities arise to enhance the economy in Skamania County, add much needed renewable electricity to the grid, and provide new family-wage jobs; we should not pass that opportunity up. We are also keenly aware that the last monthly adjusted unemployment figure released for the Portland-Vancouver metro area was 13.3%. Rural counties are also feeling the bite of high unemployment and the Whistling Ridge Energy Project not only brings construction jobs in these recessionary times but ongoing employment maintaining the turbines and transmission system. [LTR 185, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *The Stevenson family and SDS as a company are good people who work hard and provide jobs and tax revenues. They are the kind of citizens and employers that our state and region needs. They are doing the right thing with Whistling Ridge project putting the land to its highest and best use while provided needed power to our business, hospitals, schools, factories and families. [LTR 185, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *SOCIO-ECOMNOMIC VALUE OF UNDERWOOD AGRI-TOURISM. Facts: Agri-Tourism is a reality in Underwood as we sit here today. There are over 30 large scale agricultural operations within the community. Some of these enterprises were started generations ago, and others have broken ground within the last year. In many ways, the*

*Skamania County Agri-Tourism Association owes its new found status to the proposal before you. We have formally come together for the first time out of necessity. A necessity borne from the threat that this project poses to our very existence. Although our members have each made extraordinary commitments of time and capital to the common vision of making Underwood the premier agri-tourism destination in the Gorge, until recently, we were working in parallel, rather than in concert. The threat that this project poses to that vision, however, immediately galvanized farm, winery, and vineyard owners across the community. We now stand here with a consensus of opinion, not just on this project, but on future lobbying goals, marketing strategies, and product offerings. [LTR 186, CMT 13]*

**Response**: Comment acknowledged.

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**Comment**: *Mid-Columbia Economic Development (MCEDD) supports the utilization of our renewable energy assets to diversify our economy and stabilize our economic base. [LTR 186, CMT 13]*

**Response**: Comment acknowledged.

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**Comment**: *The economic benefits of renewable energy projects can provide a base for connecting all these components into a networked system that would generate family-wage employment in a rural, traditionally depressed economy. [LTR 192, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Over the last five years wind energy cargoes have contributed to the diversification of cargoes at the Port of Vancouver, expanding overall revenues and stabilizing income through the tough economic times. Two large mobile harbor cranes acquired during this time have greatly enhanced the port's ability to attract and support the growth of the wind energy logistics trade. In 2009 alone the port handled 2,700 pieces of wind energy business, generating 55,897 labor hours. Wind energy business means jobs and economic return for our community in southwest Washington. For this reason, the Port of Vancouver intends to continue its active role in the receipt and delivery of component parts for the wind energy business well into the future. [LTR 195, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Not only does it give an alternative source of clean energy, but it also will provide new jobs and tax revenues to our county which has been devastated with so many land set asides and regulations that our children have to leave the area in order to find jobs. [LTR 204, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Because the timber industry is on the downward spiral and so much of the local economy depends on its funds I believe wind power is a viable option. There are negative qualities to every solution and there will always be somebody against everything. I have watched Underwood Mountain be clear cut for years now and public outcry was minimal. [LTR 219, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *My main concern is that the power and the revenue generated by the wind farm stay local. I support turbines manufactured in the United States and I support local economies benefiting from the farm. It is very frustrating when the local people push green, green, green, but when it comes to their neighborhood they want it in their neighbor's backyard. I say stay local and keep up with the times because they are a changing'... I would have showed up at the public hearings but I did not receive any literature and was not at all aware of the hearing until my classmate received the pamphlet after the hearings. [LTR 219, CMT 3]*

**Response**: Comment acknowledged. Please note that BPA and EFSEC are not involved in any power purchase agreements that the developer may be negotiating. BPA offers non-discriminatory access to its transmission system.

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**Comment** *…real estate/property tax dollars will come to the area over the years than will be produced as income from this wind farm. [LTR 220, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *This project will provide much needed jobs for the area and help to increase the tax base for the county. [LTR 223, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This is a big picture issue that extends beyond the view from the backyard, but still creates local jobs. Let the wind turbines be a sign of progress in our area. [LTR 227, CMT 3]*

**Response**: Comment acknowledged.

**Comment**: *I wanted to take the time to comment about this project. I think that the people objecting to this project must be the few people that have steady, good paying, dependable jobs--or are retired and don't care whether anyone else is able to feed their family or not. This county has more than their share of poverty level or lower incomes. What this county needs is more decent jobs, the wind energy industry is the only industry I see wanting to build here. By building here they are providing much needed jobs for this depressed community. We as a community should be rolling out the red carpet to them! I would like to stay in this community, but unless more jobs become available, because I am not independently wealthy, will have to look elsewhere to live. The people opposing this industry, only have their own interest in mind, and as long as they have jobs, wealth or a rich Daddy, don't care that a large portion of their neighbors are going hungry. I am looking at early retirement because of these factors. I want my children and grandchildren to be able to stay living in their homes, if they want. If they do move away, let it be because of other factors, not because there is no way to make a living here. [LTR 229, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Wind farm derived tax revenues will not be the only economic consequence of a local wind farm. Probable negative consequences include decreased property values, reduced appeal to future tourists and prospective new residents because of diminished attractiveness of the area and likely increased infrastructure costs associated with building and maintaining a wind farm (including road maintenance and additional fire protection). [LTR 230, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *This project contributes to our country's energy independence and county's economy. I appreciate the fact that SDS Lumber is a local sponsor rather than an outfit that does not live or work in the Columbia River Gorge. [LTR 234, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I very much support the success of this project because our schools and Skamania county really need it. I live in Underwood as did my father and his father since 1903. I believe most of the people in the local area know this project will be good for our community. [LTR 235, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The analysis of economic impacts of the project is very weak and uninformative. The project will have substantial benefits. These are susceptible to quantification. The analysis does not do the project justice in this respect. [LTR 236, CMT 1]*

**Response**: The socioeconomic impacts are discussed in detail within Section 3.13.2 of the EIS. Additionally, the economic benefits of the proposed Project are discussed within Section 3.13.1.4 of the EIS. IMPLAN, a model used to analyze regional economics, was utilized for the socioeconomic analyses of this Project. IMPLAN is a computer-based regional economic analysis system. Unlike other economic analysis products, IMPLAN constructs a complete set of regional social accounts. The "Region" can be any combination of Counties that occur within the Project area. Additional information can be found at *http://implan.com/V4/Index.php*.

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**Comment**: *As a general comment, Bonneville is not above the law. It cannot continue to pretend that the Administrator has discretion to violate the law. The law requires that you assess the environmental and socio-economic impacts of Bonneville's activities. The Endangered Species Act and Magnuson-Stephens Act require such consultation. It is irresponsible for Bonneville to continue to develop resources and plan transmission upgrades without considering these factors. [LTR 236, CMT 3]*

**Response**: As required under NEPA, Section 3.13 discusses the affected environment and environmental consequences of the proposed action and no action alternatives as they relate to socioeconomics. Both BPA and EFSEC are committed to analyzing the impacts of the proposed Project as required of them which is outlined in Section 1.3.1 of the EIS.

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**Comment**: *Wind farm derived tax revenues will not be the only economic consequence of a local wind farm. Probable negative consequences include decreased property values, reduced appeal to future tourists and prospective new residents because of diminished attractiveness of the area and likely increased infrastructure costs associated with building and maintaining a wind farm (including road maintenance and additional fire protection). [LTR 241, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *How can wind power continue on as such a powerhouse if it is economically infeasible? The answer is that the suppliers and builders are taking their profits off of the front end. That is the only place in the process of wind power development that is economically viable. They receive the tax credits, they are protected by the warranties and they get paid while the projects are relatively new and in good shape. The builders realize that the front end is the only place to be on these projects. That is why they usually sell the project even as it is being built. They realize the dangers of long term commitment. This is why we doubt SDS's claim that they want to diversify their holdings. If SDS is as smart as we believe them to be, they will sell*

*and collect a handy monthly payment until the buyer pays off the loan and then SDS will continue receiving monthly payments for each machine on their property. [LTR 256, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *Decommissioning of this project is a huge environmental issue and will involve a huge expense, and yet the DEIS contains no meaningful discussion about how this will actually occur. No plan is offered for project decommissioning, no commitments are made, let alone secured. How can the environmental impacts of "back end" project decommissioning be considered without a meaningful discussion about who will do what, and when? In fact, no environmental impacts of decommissioning can be considered without this information. We believe decommissioning is ignored because the proponent does not want to pay their fair share of decommissioning fees. Typically proponents "flip" (sell) their projects as soon as they can, but they retain legal right to the project until the buyers make their last payment. The proponents like to put off consideration of decommissioning plans until the buyer becomes the responsible party. This may be good for the proponent, but it is poor planning because it shifts decommissioning responsibilities to the back end of the project, where the profit margin is decreasing and the expenses are rising. If this is allowed to continue, it is very likely that the public will get stuck with the decommissioning expenses of thousands of NW wind power machine. This should not be allowed to occur. Bonding should be secured that will be sufficient to cover all of the decommissioning expenses and the bulk of the payments should be paid in the first half of the machines life, when the profits are the highest, and the expenses are the lowest. [LTR 256, CMT 23]*

**Response**: Project decommissioning is discussed in Section 2.1.7. In addition, the Project would be subject to all EFSEC rules concerning decommissioning and site restoration as set forth in the Site Certification Agreement. The Initial Site Restoration Plan required by EFSEC, before construction could begin, must include financial assurances in the form of a performance bond, guaranty or a letter of credit sufficient for decommissioning costs. In addition, a Detailed Site Restoration Plan would need to be approved by EFSEC at least 90 days before decommissioning began.

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**Comment**: *The only good that would come out of this is more money for a few people who have more money than they know what to do with; the damages and the costs would be equally distributed among the rest of us. It is time - past time really - to say no to yet another wind power project, and to place a moratorium on further wind power development until the environmental impacts of so many projects and machines can be properly considered. [LTR 256, CMT 28]*

**Response**: Comment acknowledged.

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**Comment**: *The Port of Vancouver is an active participant in regional and national associations promoting alternative energy, particularly wind energy. We support alternative energy credit programs and state and national alternative energy standards. In addition, the port advocates for the expansion of the wind energy grid in the Pacific Northwest and nationwide. Over the last five years wind energy cargoes have contributed to the diversification of cargoes at the Port of Vancouver, expanding overall revenues and stabilizing income through the tough economic times. Two large mobile harbor cranes acquired during this time have greatly enhanced the port's ability to attract and support the growth of the wind energy logistics trade. In 2009 alone the port handled 2,700 pieces of wind energy business, generating 55,897 labor hours. [LTR 258, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Wind energy business means jobs and economic return for our community in southwest Washington. For this reason, the Port of Vancouver intends to continue its active role in the receipt and delivery of component pmts for the wind energy business well into the future. [LTR 258, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Mid-Columbia Economic Development (MCEDD) supports the utilization of our renewable energy assets to diversify our economy and stabilize our economic base. [LTR 259, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *In establishing the Columbia Gorge Bi-State Renewable Energy Zone, we took into consideration a variety of factors, all linked by the regional economy. These include the renewable energy resource itself (wind, solar, hydro, geothermal, biofuels, and biomass), financial investment in those resources by renewable energy industry, existing transportation networks (roads, rail, river and air), high-speed telecommunications networks, education and workforce training capacity, public utilities, resident workforce, transmission capacity, industrial lands base, and quality of life. [LTR 259, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The economic benefits of renewable energy projects can provide a base for connecting all these components into a networked system that would generate family wage employment in a rural, traditionally depressed economy. [LTR 259, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I wanted to submit the attached article and my comments, below, to the public comments for WRE DEIS. Not identified or discussed in the DEIS is the fact that the Columbia River Gorge, and by overflow, Skamania County, are hotbeds of entrepreneurs. Insitu, one of the largest employers in the central gorge was founded by three people who moved here for the quality of life, the natural beauty of the Gorge. Still, to this day, this spirit lives. This area attracts and retains those educated innovative people who, partly out of necessity, create a living for themselves and as a result for others to continue living in this fabulous area. Destroying the natural beauty which attracts well educated entrepreneurs is not going to help the Gorge or Skamania County in the long run. Not stated is that MOST of the construction workers, if not nearly all, will be by people from out of the area. Just travel through the trailer parks in eastern Washington and Oregon where the turbines are becoming more common than cows, and take a gander at the license plates. This project will not solve the chronic unemployment problem that Skamania County has. The DEIS FAILS to address EXACTLY what jobs are to be filled and how many FTE's will be performed for each job. Educational or skill status is not given, nor the pay scale they will be hired into. The 8-9 or so called longer term jobs are likely technical. The uneducated unemployed are NOT going to qualify for those jobs. Given the choice, I think the jobs produced by Insitu and other entrepreneurs are what the Gorge needs for its long term economic health, not jobs based on deforestation of our timber producing areas and scenic degradation of the Columbia Gorge National Scenic Area. Additionally, this project is being subsidized by a Sales Tax exemption to the tune of approximately 7%. This amounts to roughly 7-10 million dollars. Eight OJ nine longer term jobs for the State of Washington at a cost of 7-10 million dollars does not sound like a good deal for Washington or the public. A lot of economic development agencies consider a public investment cost of $5,000 dollars per full time employee a good deal. WRE would cost $1 M dollars per long term employee. This is approximately 200 times more expensive than traditional goals of economic development. Perhaps instead we should be putting those dollars toward a state in need rather than a corporation in want. [see PDF for newspaper article] [LTR 263, CMT 1]*

**Response**: Section 3.13.2.1 of the EIS describes where the construction work force is likely to be hired.

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**Comment**: *We fully understand the concerns of those who provide private sector jobs and generate the tax revenues for local governments and schools with and around the Scenic Area should be paramount. So, that is why I agree that SDS lumber, a long held family-owned business, should be allowed to move forward with its Whistling Ridge Energy Project. Further, it seems to me that it makes sense for the State of Washington to lease the adjacent ridgeline so as to extent the wind farm and allow our state, which is severely financially strapped, to earn income from the public lands for schools, colleges and universities and rural counties such as Skamania. [LTR 269, CMT 1]*

**Response**: Comment acknowledged.

**Comment**: *Those of us in Clark County are aware of the onerous requirements imposed by the Act. While much of Clark and Multnomah counties only have a peripheral stake in the Gorge, 6% of Skamania's land mass is privately held, and much of that falls within the Scenic Area. The point is when opportunities arise to enhance the economy in Skamania County, add much needed renewable electricity to the grid, and provide new family-wage jobs; we should not pass that opportunity up. We are also keenly aware that the last monthly adjusted unemployment figure released for the Portland-Vancouver metro area was 13.3%. Rural counties are also feeling the bite of high unemployment and the Whistling Ridge Energy Project not only brings construction jobs in these recessionary times but ongoing employment maintaining the turbines and transmission system. [LTR 269, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *SDS has an excellent reputation as a supporter of our community, citizens, our fire departments, schools, etc., and they go out of their way to allow public use of their lands and conduct their business with consideration of us as their neighbors. Surprise, industry working side-by-side private homes in the wilderness, it works! [LTR 282, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The concept that one developer's desire to achieve "economic diversity" at the expense of the impact of the project to Gorge wildlife, residents and tourists of both Washington and Oregon is selfish at best, arrogant at worst. The concept of this proposed project is fatally flawed and siting of this proposed industrial facility should be denied. [LTR 283, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *It is also common knowledge that a high percentage of the smaller wind energy facilities themselves are sold to out of state buyers, or are under contracts for sale to such buyers who frequently employ their own in-house employees, not resulting in local permanent jobs. [LTR 283, CMT 17]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section 3.3.2.1, Proposed Action, Decommissioning; PDF pg. 43], [t]hese plans should not be left for later. They should be in the DEIS now so that we can all comment on them. I think it is very important to know HOW a project will be decommissioned and who will be responsible for removal and costs. Is there some type of bond that the project*

*proponents have to put up so that we the taxpayers don't get stuck with having to decommission wind farms?? [LTR 286, CMT 28]*

**Response**: Please see response to Comment LTR 256, CMT 23 above.

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**Comment**: *SDS Lumber's wind farm will employ 5 people when all is said and done, and maybe contribute a miniscule amount of money to Skamania County's $50,000,000 yearly budget. [LTR 286, CMT 62]*

**Response**: Information concerning both project employment and projected property and sales tax revenues is provided in Section 3.13.2.1 of the EIS. As discussed in this section, during operation, the Project would create about 7 direct jobs and about 4 or 5 indirect or induced jobs. Project operation also would be expected to increase annual property tax revenues to the County by about $731,500. In addition, sales, use, and other indirect business taxes to state and local governments attributable to project operation are estimated at approximately $50,000 per year.

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**Comment**: *[In reference to Section 3.12.2, Impacts, Proposed Action; PDF pg. 237], [t]here is no real, data-based socio-economic analysis in the DEIS. SDS and BPA have failed to do any analysis on the socio-economic cumulative impacts to Skamania County as a result of this proposed project. During the public scoping period, SDS Lumber presented that a total of FIVE permanent jobs (some technical and others as watch personnel) would result from this project. As far as I can determine, pillaging 1000+ acres for five jobs is not a good return on our environmental investment!! [LTR 286, CMT 66]*

**Response**: See Section 3.14.3.14 of the EIS for a discussion of cumulative impacts to socioeconomic resources as a result of the proposed action alternative.

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**Comment**: *[In reference to Section 3.12.4, Unavoidable Adverse Impacts; PDF pg. 242-245], [w]hen SDS first proposed this project, Mr. Jason Spadaro, SDS's president held a couple of community meetings in the area. I attended one of these meetings and took notes. These are my notes from the Mill-A meeting held on Aug. 11th, 2007: My notes from the SDS August 11th, 2007 presentation on the Mill-A Wind Generation project called "Saddleback": Audience questions are italicized. Jason Spadaro, SDS president gave the presentation and he had a representative from Puget Sound Energy, Brian Lentz (sp?) their partner in this project. Jason/Skamania County has too much federal land base so it won't benefit from wind energy as much as other counties. [Why can't wind turbines be on Federal lands? There are cattle, sheep, miners, etc., using Federal lands! Why not wind turbines?] Some questions that came to my mind as he spoke: What about migration routes for animals? Danger from blades? (Wasco just this week, of 27 August, had a fatality from a broken blade.)? View shed? Visibility?? Water issues?? Transmission lines—how will the generated electricity get to market? Power stations? Jamie Tolfree, Skamania County Commission for District 3, said that the county will get less*

*timber dollars in the next 5 years; down by 30% by 2011. Jason/We want to keep the power local. But he makes no promises. Jason said that tax rates for Mill-A residents could be lower. Jobs would be produced? But, would tax rates actually go down for Mill-A residents only? Or would the tax rate decline (if there is one) be spread out over the whole county and its residents?? Costs to public?? Are there any EPA regs for wind turbine noise?? Are there tax credits given to start up wind energy companies? Jason spoke of "turbine flicker" where sunlight flickers as it the sun shines through the blades. [It can be very annoying as anyone who has ever had outside branches "flickering" in the afternoon sun, can attest to!]? FAA requirements?? Affect on bats, owls, night-flying animals? Jason has 4 years of data on sensitive, threatened, or endangered species for the project area. According to him, this is not an area where they would be in great numbers. [I think the Jason's survey may not be accurate!] The turbines are 80 meters tall (approx. 240 feet.) Jason stated that BPA's transmission lines go through the property and that they would hook up with those lines. There are two types of transmission lines up there, 115 KV and 230 KV. Clyde Leach, one of three Skamania County Public Utility District Commissioners, said that he would like to see SDS's project connect to the 115 KV line in order to improve PUD's service. [There are, apparently, transmission problems on the 115 KV line and there are power fluctuations.] Leach also said that the demand for turbines for wind energy production has created a backlog of in turbine production. Jason said that they are working on a 2010 timeline. Roads/Jason—will necessitate year-round roads. Some will have to be upgraded. County roads may require upgrades and "we've talked to the county about this." (Too bad the county hasn't talked to the rest of us!)? Who would pay for these upgrades? Environmental reviews? SEPA? Johanna asked about lightning strikes and possible fires. Jason/The towers are grounded and there is a 50 foot radius gravel area around each tower. [The fire issue is a very big concern for residents in Mill-A.] Mildred Boucher asked if the view shed from I-84 would be affected. Jason/The turbines could possibly be seen from Mosier. LeeLynn asked how much would the local schools get. What would be the benefit to the county? Jason/State schools would get $171,000. We want economic benefit for Willard and Mill-A, but there's no tax mechanism to benefit these schools directly. The project area is actually in the White Salmon school district? How are utilities taxed? What basis? One member of the public suggested that SDS subdivide their land around Mill-A and Underwood so people could build more houses. Lots of loud disagreement from the group!! Jason/We could help you form a fire district and then we could pay into your fire district. BUT everybody else would also have to pay into the fire district—which they don't do now. A fireman in the audience spoke up: Could expand Underwood fire district except that Underwood has hit their levy limit. Johanna/What kind of people are you going to need to upkeep the towers? Jason/This is specialized work. A concrete 50-60 jobs during construction and 5-10 people to keep things going once the project is done. In Dayton, there are 83 towers and it takes 15 people to upkeep them. The technicians have to have knowledge about hydraulics and not be afraid of heights, etc.? Can SDS provide scholarships for trainees? Apparently there is a college program in The Dalles specifically geared toward wind power work? What is the guarantee that those 50-60 jobs will be local?? How much of your project is being subsidized? Jason/We would get a production credit of 1.98 cents/kwh for ten years. [This is a pretty good subsidy considering we pay less than 5 cents/kwh!] Jason/The substation and a maintenance building would be within a fenced area and would not be visible. Neal/What type of permitting process do you have to do? Jason/We have a pre-application conference with the county at the end of this month and next month. This project may require an EIS. May have to have scoping meetings. We estimate that the talks with the county could last 2-3 months. We're looking at 6-8*

*months on the low end and at least two public meetings. There might already be a record of certain environmental studies and we might not need to do a SEPA or NEPA. Jason is delusional if he thinks that this project would not require a SEPA or an EIS! It is interesting that Jason has been talking to Skamania county but there has been no public record of any meetings and this subject has not been on the commissioners' agendas. Comment continued: There are no indications in this presentation that Skamania schools would get any benefits from this proposal. The $171,000 that Jason Spadaro talks about would go to the STATE school system to be distributed to all the school systems; the project area is actually in the White Salmon-Bingen, WA school district. There would not be, apparently, any benefits for the local fire district, either. Also, Jason did not speak to the amount of tax revenue that Skamania County would actually get from this proposal. The county's yearly budget is approximately $50,000,000, with less than $3,000,000 coming from property taxes. Since we don't have the data as to how much property tax this proposed wind farm would generate, there can really be no data-based cost-benefit analysis done on this proposal and any assumed benefits to Skamania County. [LTR 286, CMT 67]*

**Response**: Siting of this proposed Project is discussed in Section 1.2.3, Applicant-Identified Needs. Wildlife issues are discussed in Section 3.4, Biological Resources. View sheds and visual resources are addressed in Section 3.9, Visual Resources. Lastly, socioeconomics are discussed in Section 3.13, Socioeconomics.

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**Comment**: *[In reference to Section 3.13.1.1, Affected Environment, Demographics; PDF pg. 247], [t]his information on minority populations shows a need for a full Environmental Justice portion to this DEIS. BPA, as a Federal agency is certainly required to prepare a environmental justice analysis for this DEIS. Why hasn't it been done? Just talking about environmental justice is not doing the research to see how rural communities and residents are being impacted by the proliferation of wind farms in the West; it is not analyzing the cumulative impacts of transmission lines and other energy production facilities on the health and welfare of these rural communities. Environmental justice must also apply to the environment and the flora and fauna that occupy it. What are the environmental cumulative impacts to flora and fauna? This is another fatal flaw of this inadequate DEIS. I will address Environmental Justice in a separate comment memo. [LTR 286, CMT 68]*

**Response**: Environmental Justice is addressed in Section 3.13 of the EIS. The DEIS discussed Minority and Low-Income Populations under Section 3.13.1.3, Employment. However, the FEIS has been updated and this discussion has been moved under Section 3.13.1.1, Demographics.

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**Comment**: *[In reference to Section 3.13.1.3, Affected Environment, Employment; PDF pg. 252], [s]o, where is the Environmental Justice analysis for the region and the cumulative impacts to the region from the energy production activities of BPA and SDS Lumber and all the other energy producers in the region? Environmental Justice not only addresses impacts to populations but it addresses environmental impacts. Why are wind farms being located in low*

*population, rural areas when the energy they produce mainly benefits large, urban areas that are not even located in the region? Where is the environmental justice in using and abusing rural areas that produce food, clean water, and other resources for energy production for urban areas? There is no environmental justice in this! [LTR 286, CMT 69]*

**Response**: Please see response to Comment LTR 286, CMT 68 above.

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**Comment**: *[In reference to Section 3.13.1.4, Public Finance and Fiscal Conditions; PDF pg. 258], [s]o, Skamania County wouldn't really benefit. It's the metro areas that would get the lions share of benefit. What are these "other areas in the Northwest"? How would the nation benefit from wind turbines scattered along the NSA? SDS cannot make such a blanket statement about the nation benefiting, without a lot of supporting environmental and economic data— that is not included in the DEIS. [LTR 286, CMT 70]*

**Response**: Please see Section 3.13.2.1 for a discussion of anticipated socioeconomic impacts of the proposed action and no action alternatives.

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**Comment**: *[In reference to Section 3.13.1.4, Public Finance and Fiscal Conditions; PDF pg. 261], [i]t is not EFSEC's job to "provide another means of diversifying the holdings of SDS" by condoning or approving this proposed wind farm! Throughout this DEIS, SDS has inserted the economic benefits to itself and its business model. There is very short shrift given to the environmental impacts and cumulative impacts from this proposal and all the other energy production actions that are ongoing in the region. This does not make for an adequate DEIS! [LTR 286, CMT 71]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section 3.13.1.4, Public Finance and Fiscal Conditions; PDF pg. 265], [a]lthough a previous table purports to show 12 permanent jobs resulting from this proposed wind farm, in the statement above "the addition of five residents" would appear to support the number of permanent jobs as just FIVE, as stated by Mr. Spadaro, SDS's president and chief proponent for this project, in several meetings. Which number is correct? Why the discrepancy? [LTR 286, CMT 74]*

**Response**: As presented in the EIS, the estimated number of permanent jobs is 8 to 9 full or part time (see Section 3.13.2.1), and indirect induced employment is expected to total 11. There is an error in the narrative associated with the Table 3.13-9. The sentence that states "In addition to the direct employees, project operation would result in indirect and induced employment, for an estimated total of 12 permanent jobs resulting from the proposed Project (Table 3.13-9)." This sentence has been changed to read, "In addition to the direct employees,

project operation would result in indirect and induced employment, for an estimated total of 11 permanent jobs resulting from the proposed Project (Table 3.13-9)."

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**Comment**: *[In reference to Section 3.18, Adverse Impacts; PDF pg. 294], [w]ithout a socio-economic impacts analysis, the statement "Long-term socioeconomic impacts are considered to be beneficial" is baseless and not supported by any data or analysis. There is nothing in the DEIS to show just how much Skamania County would benefit, or not, from this proposed wind farm. What is clear, from previous statements, is that Klickitat County stands to reap most of the benefits for their school district. [LTR 286, CMT 85]*

**Response**: Skamania County economic impacts are discussed throughout Sections 3.13.1.4 and 3.13.2.1 of the EIS.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines. As a native and resident of the Gorge, I find the proposed construction crazy. The wind blows all over Eastern Washington and Oregon, so there is no shortage of alternative sites. Further, tourism in now the only real hope for towns like Hood River, White Salmon and The Dalles. To destroy the natural beauty that draws tourists is to doom the only real growth engine this region has. [LTR 294, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Hello Energy Facility Site Evaluation Council, I would like to voice my strong support for the Whistling Ridge Energy Project. This wind farm will give the Skamania County economy the boost it needs. We are too dependent on timber harvests and federal timber payments. Too many residents are stuck in low-income brackets while unemployment ranks far above the state average. Fortunately, Skamania has another natural resource to develop: wind. Bringing another industry here is exactly what our county needs. It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing? Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I hope the Council approves the SDS application and that the project advances quickly. [LTR 299, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. This wind farm will give the Skamania County economy the boost it needs… It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing?*

*Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I hope the Council approves the SDS application and that the project advances quickly. [LTR 303, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *An area which I thought got very short shrift and not enough in-depth analysis, in the DEIS, was the subject of Environmental Justice (EJ). [LTR 314, CMT 1]*

**Response**: Please see response to Comment LTR 286, CMT 68 above.

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**Comment**: *The "No Action" Alternative for the Whistling Ridge DEIS was also not adequately explored in the EJ section. [LTR 314, CMT 5]*

**Response**: Please see response to Comment LTR 286, CMT 68 above.

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**Comment**: *In conclusion, the environmental justice section of the Whistling Ridge DEIS, p. 3-250+, is not adequately address by BPA, a Federal agency. Nor is it adequately addressed by SDS, the co-proponent of this wind farm project. Rural areas are being disproportionately impacted by these Federally-subsidized wind farms, and thorough, data-rich, regional cumulative impacts analyses have not been done, to date, by BPA or SDS. [LTR 314, CMT 8]*

**Response**: Please see response to Comment LTR 286, CMT 68 above.

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**Comment**: *Environmental justice practices demand a complete analysis of cumulative impacts on human health and the environment. [LTR 314, CMT 9]*

**Response**: See Section 3.14 of the EIS for a discussion of cumulative impacts that will result from the proposed action. Please also see Section 3.6 of the EIS for discussions related to public health and safety.

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**Comment**: *Environmental Justice The section of the May 2010 Draft EIS on environmental justice is completely inadequate. [LTR 315, CMT 18]*

**Response**: Please see response to Comment LTR 286, CMT 68 above.

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**Comment**: *It ignores the low-income part of the criterion and dismiss the possibility of environmental injustice because no significant minority populations exist in the vicinity of the proposed project. [LTR 315, CMT 19]*

**Response**: Please see response to Comment LTR 286, CMT 68 above.

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**Comment**: *The separate Socioeconomic section treats the entire three-county area affected in any way by the project, ignoring the unevenness of income distribution (and project impact) across the area. However, it is clear that Willard and Mill A will feel any environmental impact of the Whistling Ridge Project much more than any other community or neighborhood, thanks to a combination of nearness to the turbines, exposure to the largest number of turbines, dependence on the road needed to supply the construction site, and population density. [LTR 315, CMT 20]*

**Response**: Please see response to Comment LTR 286, CMT 68 above.

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**Comment**: *The WEFSEC needs to conduct an economic survey of the entire Willard and Mill A populations. [LTR 315, CMT 21]*

**Response**: The socioeconomics of Skamania County are discussed throughout Section 3.13.

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**Comment**: *The Draft EIS concentrates on the effects of the completed project. Its treatment of the impact of the construction process on the surrounding communities, especially the economically disadvantaged communities of Mill A and Willard, is inadequate. [LTR 315, CMT 22]*

**Response**: Comment acknowledged.

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**Comment**: *There will be considerable economic benefits to the tri-county area of Skamania, Klickitat, and Hood River Counties. [LTR 317, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *This project will have a major role in securing the economy of Skamania County and the SDS family of companies. [LTR 317, CMT 6]*

**Response**: Comment acknowledged.

**Comment**: *We need an alternative source of revenue to support schools, law enforcement, courts, and everything else. We need to project to substitute the dwindling federal funds. [LTR 317, CMT 12]*

**Response**: Comment acknowledged.

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**Comment**: *The document falls short in assessing the value of visual amenities that Whistling Ridge currently provides to the Gorge area. It would be helpful if the Draft EIS estimated the financial value of the visual amenity that SDS currently provides. [LTR 317, CMT 40]*

**Response**: Section 3.9, Visual Resources, presents the visual impact assessment conducted for the proposed Project. The visual assessment used the Scenery Management System defined in Landscape Aesthetics, A Handbook for Scenery Management (USFS 1995) and the Visual Impact Assessment for Highway Projects (FHWA 1988). These two methods portrays the differing viewer groups and their sensitivity to visual change, defines distance zones portray (foreground, middle ground and unseen areas) and evaluates the contrast between pre- and post-Project conditions as seen from the different viewpoints, by different viewer groups, and from different distances. Neither method includes an estimate of the financial value of visual amenities.

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**Comment**: *This project will benefit the county and the revenue will directly benefit the citizens. The view shed is a downside, however the project would benefit citizens in so many ways - better schools, hospitals, and fire protection. [LTR 318, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *The EIS falls far short in the economics section. You need to look at the two-county area. They benefits are significant, but the can't be assumed. You have to do a serious analysis. It has to have detail… You need to look at the benefits, the tax revenues, and also recognize that there will be impacts on the community infrastructure, government services, and so on. [LTR 318, CMT 54]*

**Response**: The socioeconomics of Skamania County, WA, Klickitat County, WA, and Hood River County, OR, are discussed throughout Section 3.13.

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**Comment**: *Where is the special economic analysis and social impact analysis for this document? [LTR 318, CMT 60]*

**Response**: See Section 3.13, Socioeconomics, which includes discussion of the affected environment as well as the environmental consequences anticipated for the proposed action and no action alternatives.

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**Comment**: *Consider the trickle down effects that will continue at completion of the project - $731,000 in annual tax revenue, small business growth due to increased local spending, which in turn leads to business success, job growth and more. [LTR 78, CMT 3]*

**Response**: Comment acknowledged. Please see Section 3.13.2 for a discussion of potential tax and employment impacts as a result of the proposed action.

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**Comment**: *[The proposed Project] will benefit the residents of Skamania County through increased property tax revenue. [LTR 138, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The White Salmon Valley School District Board of Directors understands that wind energy farms are potentially divisive, particularly in the Underwood portion of the school district. However, the Whistling Ridge Wind Project would have the effect of broadening the tax base when paying for school levies and bonds. This project would add approximately $100-$150 million of new taxable value to the school district. It would lower the levy rate for everyone in the district considerably, thereby reducing everyone's taxes, possibly enabling the district to pass future levies more readily. Using 2010 levy rates, the amount of reduction per thousand dollars of assessed valuation would range from 16 cents to 23 cents. A homeowner with a home assessed at $250,000 would save between $38.00 and $55.00 per year. A homeowner with a home assessed at $500,000 would save between $76.00 and $111.00 per year. Due to unique characteristics of our school district, we have recently lost important statewide levy equalization funds. As a result of this, and the general reductions in statewide education funding, the approval of levies might be an increasingly important source of revenues to our district in the future. Economically this project has the potential to benefit the community and the school district by adding revenues, without creating additional demands for services or impacts on the school system. [LTR 174, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section 3.13.1.4, Public Finance and Fiscal Conditions; PDF pg. 264], Skamania County collects less than $3,000,000 per year in property tax. What does the $9.6 million in property tax, above, refer to? What is the turbine depreciation over time? How*

*much would the property tax revenue decrease over the 30 year predicted lifespan of the turbines and the project? [LTR 286, CMT 72]*

**Response**: The information provided within Section 3.3.13.2.1, Page 3-260 of the EIS, under "Property Tax Revenue" has been updated to reflect the information provided within Table 3.13-5, Skamania County Revenues and Expenditures. The revised portion of this paragraph should read, "This would represent an annual revenue increase of 2.9% compared to the $2.8 million in property tax collected in calendar year 2008." A discussion regarding the extent of property tax revenue depreciation with respect to turbine depreciation would be speculative and is outside the scope of this EIS.

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**Comment**: *[In reference to Section 3.13.1.4, Public Finance and Fiscal Conditions; PDF pg. 264], Skamania County's school districts are #2 and 303. Whose district are they talking about when they talk about School District 405? Is that White Salmon and Binger, in Klickitat? [LTR 286, CMT 73]*

**Response**: As discussed in Section 3.12.1.4 of the EIS, the Project occurs within Taxing District 109. School District 405, as referenced within Table 3.13-6, is the White Salmon School District.

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**Comment**: *What percentage of the tax dollars generated will actually go to our community and going to give us a little tax relief that we've been paying in our property taxes? [LTR 317, CMT 79]*

**Response**: The benefits that will be seen by the local communities are discussed within Section 3.13.2. Sales Tax Revenues and Property Tax Revenues were discussed on DEIS pages 3-259 and 3-260, respectively.

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**Comment**: *I also think that, with appropriate planning, a fully operational wind farm could serve as an educational tourist attraction as we move toward sustainable alternative energy sources. This particular project does not significantly impact the natural beauty or public enjoyment of this scenic wonderland as many other proposals have and offers Skamania County a long-overdue boost. [LTR 43, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I oppose the construction of an industrial installation of wind turbines on Underwood Mountain, whistling ridge. As a small business owner I am concerned with the negative impact on our tourism-based business, white salmon Boatworks, many people come to*

*our town for the natural beauty. The installation will be harmful to the visual ambiance of our region. This project is too large. [LTR 62, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Not the scenic view our multi-million $ tourist industry thrives on, [LTR 67, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *People come from all over the world to enjoy the majestic natural vistas the CRG has to offer not manmade ones. I don't think very many people would like to see wind turbines at Yosemite, Yellowstone or the Grand Canyon. Neither should they at this National Scenic Area, one of only 2 in the whole United States of America. [LTR 74, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *At this point, many people would like to believe that a growing tourism base will carry us through these dark economic times. Some would even say that tourism can sustain Skamania County. I argue this concept by noting the lack of developable commercial land available within Skamania County. I would further note that while tourism is important to our communities, we need development that provides jobs and increases tax revenues without relying on the ebb and flow of tourists. [LTR 78, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Right now, wind power seems to make sense only because of the tax credits. It is only profitable for the company building the wind farm. The long term economic effect here in the Gorge would be negative because tourism would be hurt! Scenery equals money. Ruined scenery doesn't equal money or tourists. [LTR 104, CMT 2]*

**Response**: Comment acknowledged.

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**Comment** *…reduced appeal to future tourists and prospective new residents because of diminished attractiveness of the area… [LTR 135, CMT 5]*

**Response**: Comment acknowledged.

**Comment**: *No evidence of negative impact on tourism. [LTR 140, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Another stated reason was the Gorge's "[g]reat potential for 'agritourism and geotourism.'" The Gorge has long been considered a special area. In 1915, the U.S. Forest Service ("USFS" or "Forest Service") established Eagle Creek as the first Forest Service Recreation Area in the nation. The following year, the Gorge was proposed as a National Park. Continuing development pressures led to the establishment of the National Scenic Area in 1986. [LTR 179, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS Fails to Adequately Analyze the Likely Impacts to Agricultural Tourism. The DEIS's analysis of potential impacts to agritourism is limited to a superficial comparison to wind energy development that has occurred in area between Walla Walla and Kennewick. [LTR 179, CMT 86]*

**Response**: Please see response to Comment LTR 177, CMT 54 above in the Land Use and Recreation Section of comment responses.

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**Comment**: *Tourism is the lifeblood of the Gorge. Facts: Skamania County is more dependent on tourism than any county in the State of Washington. (See Appendix 1). In 2007: 47% of all retail and lodging tax collections in the county came from visitors. The highest percentage in the state. Almost 11% of all spending in Skamania County was travel related. Over 58 million dollars. The highest percentage in the state. Where do these figures come from? In December of 2008, the State of Washington, through the Department of Community Trade and Economic Development, which also employs the staff of this Council, released these findings in a report on the importance of Travel Impacts to the economy of this state. The state concluded that the travel industry: Generates tax benefits for Washington residents. Generates job opportunities for Washington residents. And benefits all regions of the state. This study found in particular that rural counties, including Skamania County, have a greater number of travel-generated jobs in relation to total employment. And that we are more dependent on the travel industry. They determined that over 10% of Skamania County's jobs are generated by tourism. Maybe this is no great surprise since we live in one of the most beautiful places on earth. The State of Washington also released a report in 2002 titled "Travel Industry Employment." (See Appendix 1 to our DEIS Scoping Comments. All other references to appendices in these comments refer to the appendices attached to our Scoping Comments.). It was released by the Washington Department of Business & Tourism Development. They reached the same conclusions and found specifically that "[t]his is because some rural areas are recreation destinations and/or have little employment in manufacturing or other industries…."*

*Once again topping the list are counties in the Columbia River Gorge. Two key conclusions of this study: The travel industry develops and thrives "to the extent [it] has comparative advantages in the Northwest relative to other locations in the U.S. "[H]igh-quality, natural, and outdoor recreation resources" are an example of such an advantage. Why does this all matter in the DEIS? Because any development proposal that has the potential to cut off the life blood of our economy needs to be closely monitored, carefully studied, and mitigated in a manner that eliminates damaging impacts. [LTR 186, CMT 8]*

**Response**: As of July 2010, Council staff are employees of the Utilities and Transportation Commission.

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**Comment**: *Agri-tourism drives Hood River and Eastern Skamania County. Facts: Hood River is a tourist mecca just like Skamania County. The Hood River Valley is famous worldwide for the breathtaking beauty of its farms, orchards and vineyards. In fact, Hood River is a case study in the economic power and sustainability of agri-tourism. You need look no further that the front page of the Hood River County Chamber of Commerce website. (See Appendix 2). The image of Hood River IS agri-tourism. It is plastered everywhere: pictures, events, festivals and links to other sites dedicated to agri-tourism in its many forms. [LTR 186, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *Why is Hood River important to consider? Because Underwood, which is in Eastern Skamania County, and which is the site of this proposal, sits directly across the Columbia from Hood River and is inextricably tied to Hood River: topographically, economically, and evolutionarily. Although our county seat is 30 miles away in Stevenson, we have a uniquely different set of issues and opportunities. Issues and opportunities that county government has failed to understand. This is evident in light of the county's decision to publically endorse this project without consideration of the impacts to Underwood agri-tourism. Agri-tourism that holds the key to Underwood's economic future… if it is responsibly cared for. [LTR 186, CMT 11]*

**Response**: Comment acknowledged.

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**Comment**: *Underwood agri-tourism is growing quickly. Facts: The primary driver of agri-tourism in Underwood is its far reaching reputation as one of the premier wine producing regions in the world. (See Appendix 3). Amazing as it may sound, the new Columbia Gorge Wine Appellation was recently recognized as one the best emerging regions in the world along with Paso Robles, California and the Maule Valley in Chile. The same accolades were earned in Seattle Magazine. In fact the Washington wine industry is now ranked as the second largest premium wine producer in the U.S. Washington Winery of the Year in 2009 was Maryhill Winery, located here in the Gorge. Winery of the Year in 2007 was Cathedral Ridge Winery in*

*Hood River, also located directly across the river from Underwood, and often touting Underwood wines. (See Appendix 3). Even more to the point, Celilo Vineyards in Underwood, is consistently ranked as one of the Top 10 vineyards in Washington, which as mentioned, is ranked second nationally in the production of premium wines. The entire south slope of Underwood Mountain is considered the cream of the crop. If any question remains regarding the value of the wine industry in Underwood, we need look no further than the seal of approval of SDS Lumber who recently informed the community that it has purchased potential vineyard land in Underwood. The DEIS naively accepts the proponents claim that "Wine and Wind" projects are de facto compatible because the uses co-exist in Walla Walla. The problem with this claim is that it ignores the fact that the wind projects in Walla Walla (like State-Line) are many miles from the vineyard and winery sites. The proposed A Towers, on the other hand, directly border the heart of Skamania County agri-tourism. No one argues that they will not dominate the landscape from upper Underwood. Resiting or elimination of Towers A1-7 eliminates all such impacts. [LTR 186, CMT 12]*

**Response**: Comment acknowledged.

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**Comment**: *The Association has two primary marketing strategies: Promote the "Underwood Agri-Tourism Loop" in a manner similar to the Hood River Fruit Loop. The Hood River Fruit Loop is considered a national model for successful agri-tourism See Appendix 2 (Fruit Loop) and Appendix 4 (Underwood Agri-Tourism Loop). Establish the Underwood Vineyard Trek as a "can't be missed" one-of-a-kind opportunity to hike through 12 of the country's premier vineyards while sampling world class wines and views. Nowhere else in the U.S. have 12 contiguous vineyards collectively developed a private trek situated in the heart of a National Scenic Area. See Appendix 4 (Underwood Vineyard Trek) Underwood Agri-Tourism is not just about wine. Other members offer produce, free-range organic livestock, lavender viewing, and organic herbs. One of the original visionaries in Underwood is Hank Patton, who founded World Steward which is located in the Upper Underwood Agri-Tourism Loop, and is committed to environmental stewardship, sustainable farming, research and education. (See Appendix 4). In addition, three wineries are already in operation in Underwood. One of those wineries is now considered by many to be the premier commercial events site in the Columbia Gorge. A number of other vineyards located in the Upper Loop have future winery plans which have been put on hold as a result of the potential negative impacts of this proposal. As set forth in Appendix 4 to our comments, the economic and socioeconomic value of the existing Underwood Agri-Tourism industry is significant and quantifiable. It is diverse and sustainable and benefits citizens and governments throughout the region. The tremendous future potential is also quantifiable and dwarfs the tax benefits of the seven A Towers as projected by SDS Lumber. (See Appendix 1, 2, 3 & 4 - Economics of Wine in Underwood). [LTR 186, CMT 12]*

**Response**: Comment acknowledged.

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**Comment**: *AGRI-TOURISM & 40 STORY TURBINES DON'T MIX. Facts: SDS once told the Underwood community that wind turbines are "beautiful." We are all welcome to our*

*personal opinions, but in these proceedings facts should rule. And the fact is that tourists, and especially tourists in the Gorge, don't want to see industrial development. This fact is set forth clearly in studies conducted by the U.S. Government, and the State of Oregon which are attached to our comments as Appendix 5 and Appendix 6. These facts are undisputed and need no further discussion. As set forth above, the DEIS naively accepts the proponents claim that "Wine and Wind" projects are de facto compatible because the uses co-exist in Walla Walla. The problem with this claim is that it ignores the fact that the wind projects in Walla Walla (like State-Line) are many miles from the vineyard and winery sites. The proposed A Towers, on the other hand, directly border the heart of Skamania County agri-tourism. No one argues that they will not dominate the landscape from upper Underwood. Resiting or elimination of Towers A1-7 eliminates all such impacts. [LTR 186, CMT 15]*

**Response**: Comment acknowledged.

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**Comment**: *We are very thankful that the Council brings to this process a broad perspective of the benefits and impacts of wind development. A perspective that is understandably missing from a county government in financial crisis. We are also confident that this council will use its broad mitigation powers, its depth of experience and basic common sense to draw a line in the sand. A line that will make it clear to people throughout the country that in the Northwest, turbines don't have a right to dominate every ridgeline just because the wind blows. We feel fortunate. Fortunate that each of you has visited the Gorge, and fortunate that during your site visit, you were able to experience the extraordinary beauty of our agricultural community and understand why it is a priceless resource in and of itself…not just to those of us who live Underwood, but to people throughout the Gorge who benefit economically from its snowballing reputation as one of the premier wine producing destinations in the United States. [LTR 186, CMT 17]*

**Response**: Comment acknowledged.

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**Comment**: *To conclude that wind turbines will promote eco-tourism is wishful thinking at best. I request that you reject this DEIS and not allow the project to continue in its current form. The impact it will have on tourism and residents will far outweigh any benefits. A handful of jobs created in Skamania County will not offset the long-term losses to economic growth in The Gorge. [LTR 190, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Our economy on both sides of the Gorge is largely dependent on tourism due to the scenic beauty of the area. These turbines would negatively affect this industry in both Oregon and Washington. [LTR 206, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *However, this development strikes at the core of the Scenic Act and would negatively impact the key tourist and scenic value of several communities within the heart of the gorge. [LTR 210, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *More tourist dollars. [LTR 220, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I do not believe that the local tourism and local residents deserve this impact. [LTR 237, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Many people travel to the area to experience the Gorge. Introduction of the 'view' to the Gorge, where will it end? Tourists spend money in the area. [LTR 317, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *The tourist industry is important in the Columbia River Gorge. Conclusions from other projects show that these things are not a distraction to people coming to your area. People come to see the Bonneville dam. The same will be true for rain or wind energy projects like windmills. [LTR 317, CMT 13]*

**Response**: Comment acknowledged.

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**Comment**: *I disagree with the DEIS's position on the economic effect. The future is not at the expense of our environment, it is ecotourism. [LTR 317, CMT 64]*

**Response**: Comment acknowledged.

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**Comment**: *People in opposition are asking that you sacrifice the economic stability of Skamania for their view. I do not think that the turbines will be detrimental to tourism. Furthermore, I don't think we can survive on tourism alone. [LTR 318, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Land values in the surrounding area will decrease because of the visual pollution of 426 foot wind turbines and the noise, which studies have shown is a potential health hazard. We ask you to please reject this SDS project. [LTR 30, CMT 3]*

**Response**: Property Values are discussed within Section 3.13.2.1 (see page 3-258 of the DEIS). Five difference studies were analyzed and there was no statistical evidence found that wind development has a harmful effect on property values within the viewshed. Additionally, as stated in the EIS, property values are therefore not expected to be impacted as a result of the proposed Project.

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**Comment** … *and destroy property values in surrounding areas, but they would also harm the scenic beauty of our area and along with that tourism that we depend on for our livings. Please do not allow this company to destroy more of the gorge than it already has. [LTR 32, CMT 3]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *Because this project is in my backyard. I have been an Underwood, Washington resident for over 15 years. [LTR 45, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Regarding impacts to property values: it is inappropriate to merely list/itemize the results of studies, without considering the details. For example, if these studies did not have any homes as close to the projects as this will be, those studies are not applicable. If the studies did not have homes and property of comparable value (i.e. shacks verses million dollar homes), then the studies are not applicable. If these areas did not have property of comparable value, then the studies are not applicable. If the areas under study do not have comparable "visual" appeal (i.e. in the scenic area), then the studies are not applicable. I expect, due to the locations of the referenced studies, that they are generally not comparable to this situation. Your DEIS needs to be updated with property value studies that represent this project and this neighborhood, for undeveloped land, developed land, and land with homes. [LTR 60, CMT 10]*

**Response**: Please see response to Comment LTR 30, CMT 3 above. Please also see page 3-259 of the DEIS for a summary of the Renewable Energy Policy Project's *The Effect of Wind Development on Local Properties*, which analyzed how property values changed over time in the viewshed and in the comparable community and found no statistical evidence to claims that wind development impacts property values.

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**Comment**: *The Draft EIS offers a thorough and commendable discussion of visual impacts. One area where the document falls short is in assessing the value of the visual amenities that Whistling Ridge currently provides to the Gorge area. The project opponents assert that SDS, by building a windfarm on its property will spoil the value of their property. This concern should can only be fully analyzed if both sides of the coin are examined. It would be helpful to this discussion if the Draft EIS estimated the financial value of the visual amenity that SDS currently provides - a value, that members of SOSA and the Agri-Tourism Association now enjoy for free. We can only imagine how the authors of the EIS would calculate the value of this free amenity that is so dear to SDS' neighbors. Would any of them pay to keep things as they are? And, since when does a neighbors' property rights extend to everything he or she can see from their boundaries? Since when was the Scenic Act written to control what can be seen from within the boundaries of the Scenic Area? [LTR 61, CMT 2]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *White Salmon and Hood River are known for the famed double mt. views. All of our property values will drop when the area becomes known for its multi-turbine views. [LTR 102, CMT 2]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *Economics. While proponents of the Project have correctly emphasized that it could bring some welcome jobs and tax revenues to the area, our Members are quite concerned that if the Project adversely affects our homes, our property values will also be adversely affected. The EIS should evaluate all financial effects of the Project, including specific estimates of diminished property values (region wide) due to reasonably foreseeable adverse effects of the Project. [LTR 119, CMT 8]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *Eliminating the A1-A7 turbines will virtually eliminate impacts to property values since no turbines are close to residences. [LTR 124, CMT 9]*

**Response**: Please see Section 1.4.3.1, Alternatives Project Locations, and Section 1.4.3.2, Larger or Smaller Generation Facility Size, for a discussion of alternatives that were eliminated from further consideration.

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**Comment**: *Wind farm derived tax revenues will not be the only economic consequence of a local wind farm. Probable negative consequences include decreased property values… [LTR 135, CMT 4]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *Further, actual land costs, by way of leases or property purchase, should be compared with other sites. Given the representations of the applicant, and the investment to date in the permitting, this "pro forma" type financial material should be readily available. [LTR 176, CMT 11]*

**Response**: Financial disclosures related to the Project Applicant are outside the scope of this EIS.

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**Comment**: *The DEIS also fails to mention the impact on property values in the area. I own a home in Underwood. I would not consider buying there again if large wind turbines are nearby. [LTR 190, CMT 4]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *Calling in opposition of the Whistling Ridge power project. He believes it will degrade the values of the property and the ecology of the gorge. [LTR 216, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Another impact may be on property values, which would result in a decrease of income from this source, to the county. [LTR 237, CMT 6]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *Wind power proponents dismiss the notion that wind power projects might decrease the value of people's properties. In fact, they claim that studies show that the value of your land does not decrease when wind power moves into your neighborhood. Perhaps if you are a large land owner and it is likely that you will be approached about having a wind farm on your property, the value of your land might not decrease. But if you own a smaller property that is or could become residential property, the value of your property is likely to diminish, especially if your property is view property, as most of the residential property within sight of this proposal is. [LTR 256, CMT 18]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *In a discussion with a Klickitat County assessor we learned that they are having a difficult time estimating land values in areas where new wind power development has occurred because there have been no new sales in those areas. We have been told that at least one man let the county take his land - not because he could not pay the taxes - but because he could not sell his land and was tired of paying taxes on land that he could not sell. If you cannot sell your property for any price, how much is it worth? Can you really believe the notion that wind towers would not negatively impact residential properties within sight of wind power towers? We just do not believe that a reasonable person could come to that conclusion, unless you were paid to do so. [LTR 256, CMT 19]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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**Comment**: *Property values were old studies and were not comparable to the situation here. They were all talking about more rural situations in land and property values that are much lower than exist here. Please look at those studies and try to do some comparison so we can understand the impact to our type of neighborhood. [LTR 317, CMT 30]*

**Response**: Comment acknowledged.

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**Comment**: *Also, regarding economic impact. I doubt other areas of the nation have the housing prices tied to the view surrounding them the way we do. [LTR 318, CMT 56]*

**Response**: Please see response to Comment LTR 30, CMT 3 above.

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## G.3.14 MITIGATION MEASURES

**Comment**: *Almost all the mitigation measure introductory statements end with the phrase "...to the extent feasible." It is not always specifically stated who ultimately determines what is "the extent feasible." The appropriate responsible agency, entity or statute should be provided in the text, in the relevant paragraph, so that it can be more easily evaluated. This lack of clarity regarding responsible parties is also seen in Section 3.4.3 "Mitigation Measures"; it also resorts to "the extent feasible" phrase apparently with no one in mind. [LTR 76, CMT 4]*

**Response**: BPA and EFSEC provide a list of mitigation measures that are expected to be followed as best they can. However, due to the nature of any construction-related project, delays and mishaps do occur. Nevertheless, a mitigation action plan is included with the Record of Decision which serves as a guidance matrix and allows for flexibility of any delays to the construction-related work.

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**Comment**: *WDFW is in agreement with the following excerpt from Section 3.0, Affected Environment: "For permanent impacts to vegetation and habitat, the Section 8.2 of the Wind Power Guidelines (WDFW 2009) recommend mitigation be tailored to specific classifications. The project is located within the classification for "Forestry," which are those commercial forested areas defined and regulated under the Forest Practices Act. Minimization of conversion of forested areas is suggested, and consultation with WDFW is the only recommended mitigation. No form of acquisition, restoration or conservation of lands is suggested by the guidelines." However, we would like to further discuss the proposal as it relates to the table in Section 8.2 of the 2009 WDFW Wind Power Guidelines mitigation for both temporary and permanent impacts. [LTR 94, CMT 2]*

**Response**: The Applicant is currently working with WDFW to identify an acceptable mitigation parcel consistent with the WDFW Wind Power Guidelines. The intent of the proposed mitigation is to provide for conservation and protection of habitats and species affected by the proposed Project development.

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**Comment**: *More importantly, the potential negative impacts to a resident's health and well-being are not adequately mitigated. [LTR 139, CMT 4]*

**Response**: Mitigation measures related to public health and safety are outlined in Section 3.6.3.

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**Comment**: *[In reference to Page] 3-11. The potential for landslides is described with building of the wind towers. On 3-12, it is stated that there will be no impact to drainages and on 3-12 and 3-13 are mitigation measures. Request: Acknowledge that unstable slopes with potential to deliver to public resources would require appropriate protection under forest*

*practices rules to minimize impacts to any unstable areas and associated public resources and/or public safety. This mitigation requirement is not noted. [LTR 172, CMT 15]*

**Response**: As discussed in Section 2.1.2, final siting of the wind turbines and associated facilities would be done following completion of the EFSEC Site Certificate. Prior to this final siting process, as a condition of the Site Certificate and as discussed in Section 3.1.3, a detailed geotechnical investigation of the specific locations of all wind project elements would be conducted. If this investigation indicates the potential for slope instability at turbine sites or other project facilities such as access roads (including improvements to West Pit Road), these facilities will be redesigned or relocated to avoid this risk. The mitigation measures described in Section 3.1.3 adequately address the commenter's concerns regarding the potential for landslides and unstable slopes.

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**Comment**: *Discussion of mitigation measures should be included which describe alternatives of reduction or relocation of turbines as well as alternative site locations. [LTR 175, CMT 4]*

**Response**: Alternatives related to turbine siting are discussed in Chapter 2, specifically in Section 2.3 - Alternatives Considered but Eliminated from Further Study. Mitigation measures for alternatives that are not being considered in the EIS are not included for further analysis.

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**Comment**: *[In reference to Section] 3.1.2.2, Mitigation Measures, [t]his section should describe containment and remediation measures that will be taken in the event contaminated soils are found during construction. The scope of the mitigation measures should be expanded to address geologic hazards associated with the access road and address how the project will be accessed if the proposed access road is damaged or destroyed by a catastrophic geologic event. The project is located in the vicinity of several volcanoes and the access road traverses land designated as a Class II landslide hazard. This section should describe and discuss mitigation measures designed to protect the environment and human health and safety in the event of a catastrophic geologic event. [LTR 177, CMT 28]*

**Response**: In the event that contaminated soils are encountered during construction, the Applicant will notify EFSEC and Ecology as soon as possible. The Applicant will manage, handle, and dispose of contaminated soils in accordance with applicable local, state, and federal requirements. The Applicant will be required to prepare an Operations Emergency Plan to provide for employee safety in the event of emergencies, including catastrophic geological events.

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**Comment**: *Construction Monitoring: Mitigation measures during construction should include retaining an independent environmental monitor to ensure that all Best Management Practices and other mitigation measures are fully observed during the course of construction. [LTR 177, CMT 45]*

**Response**: The use of environmental monitors will be specified in the mitigation action plan that is released with the Record of Decision.

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**Comment**: *Mitigation for Lost Habitat: Arrangement should be made to mitigate for the permanent and temporary habitat losses caused by the project. Mitigation for permanent loss of habitat should be made on a one to one basis as provided for under the WDFW Wind Power Guidelines and should be developed in conjunction with WDFW and EFSEC. [LTR 177, CMT 46]*

**Response**: Please see response to Comment LTR 94, CMT 2 above.

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**Comment**: *[Regarding Section] 3.6.3, Mitigation, [e]quipping the turbines with fire suppression equipment should be considered as a possible mitigation measure. [LTR 177, CMT 49]*

**Response**: A Fire Protection and Prevention Plan is outlined in the Mitigation Measures found in Section 3.6.3.

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**Comment**: *[Regarding Section] 3.7.3, Mitigation, [i]f warranted, mitigation measures should include removal or reconfiguration of turbines to minimize impacts on residential receptors. If warranted, mitigation measures should include maintenance of vegetative buffers between the project and residential receptors to minimize sound impacts. [LTR 177, CMT 52]*

**Response**: Please see response to Comment LTR 175, CMT 4 above.

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**Comment**: *[Regarding Section] 3.8.4, Mitigation Measures, [t]his section should discuss reconfiguration or removal of turbines to minimize visual impact on scenic area as a mitigation measure. [LTR 177, CMT 57]*

**Response**: Please see response to Comment LTR 175, CMT 4 above.

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**Comment**: *[In reference to Section] 1.6, Table 1-1, [c]onvene a Technical Advisory Committee to evaluate the mitigation and monitoring program…. If created, this Committee should be much more than just Advisory. If just advisory, then it must answer to some entity other than the Applicant, that can rule and enforce mitigation actions. The composition of such a Committee and Authority should be composed of the Applicant, government agencies, and identified stake-holders in the interest of the environment. As such, organizations like the state*

*and regional Audubon societies, The Friends of the Columbia Gorge, and others should be ongoing participants in the review and development of appropriate mitigation measures. Furthermore, a Committee or Authority without juristictional authority to limit operating hours is useless, and does not further the dynamic balance between human and envirornmental needs which will occur over the life of this Project (and beyond..). Remedy - The EIS should include fine details, outlining the structure and authority of a Committee that is not just advisory, but one that could implement any level of mitigation and operation restrictions if deemed appropriate. EFSEC Decision-makers should have a clear idea of the likely protections which could be applied during Project Operations, in the event actual impacts and deaths exceed estimated impacts and deaths. [LTR 178, CMT 51]*

**Response**: The purpose of the TAC is to ensure that monitoring data is reviewed in a forum in which independent and informed parties can collaborate with a project operator. The TAC may include representatives from various federal, state and local government agencies. EFSEC, at its discretion, may add additional representatives from local interest groups. The TAC makes recommendations to the EFSEC Council if it deems additional studies or mitigation are needed. The ultimate authority to implement additional mitigation measures, including any recommended by the TAC shall reside with EFSEC. The TAC is described in Section 3.4.3.

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**Comment**: *[In reference to Section] 3.1.3, [the] entire section no mitigation measures can be identified because of the above deficiency. [LTR 178, CMT 80]*

**Response**: The lead agencies believe that the commenter is referring to Project Decommissioning, which was described in detail in Section 2.1.7.

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**Comment**: *MITIGATION MEASURES. The DEIS listed several wind turbine design features as mitigation measures, including: Use of tubular tower to minimize perching; Minimize use of turbines lighting to minimize the chance of disorienting birds and bats; and, Install newer generation up-wind turbines. However, all three of these design features are pursued for economic reasons having nothing to do with mitigating wildlife impacts, and there is no empirical evidence that any of these features have anything to do with bird and bat fatalities. These design features do not in any way mitigate for the impacts of bird and bat collisions. Conducting a raptor nest survey prior to construction would unlikely mitigate project impacts. How could it, other than influencing the timing of installation to minimize disturbance caused by construction activities? [LTR 181, CMT 39]*

**Response**: Extensive avian surveys were conducted for this Project and the results of these surveys are outlined in Chapter 3, Section 3.4 - Biological Resources. Additionally, the methodology and data collected from these studies can be seen in Appendix C. Mitigation measures outlined in Chapter 1 (Table 1-1) and in Chapter 3.4 (Section 3.4.3) are sufficient and meet the minimum requirements needed with respect to disturbance on any raptors within the Project Area.

**Comment**: *I agree that a Technical Advisory Committee (TAC) should be established, but EFSEC and BPA should impose minimum standards for TAC membership, including scientific credentials and experience with issues relevant to avian and bat impacts caused by wind projects. The TAC should be clearly authorized to select the fatality monitor, to require additional mitigation, and to change the monitoring. However, this measure should refrain from giving the impression that additional mitigation measures are readily available. [LTR 181, CMT 41]*

**Response**: The TAC is an EFSEC requirement only. Members of the TAC typically include representatives from various federal, state and local agencies with expertise in avian and bat impacts. Please also see response to Comment LTR 178, CMT 51 above.

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**Comment**: *Unless the TAC is formed long before project construction, I do not believe mention should be made of adaptive management. To be true adaptive management, the measures would need to be formulated ahead of time, along with thresholds of success and alternative prescriptions. The TAC should work together with stakeholder groups to formulate an adaptive management plan, and the plan should be informed by adequate, directed pre-construction surveys. The currently available surveys are not adequate for informing adaptive management. [LTR 181, CMT 43]*

**Response**: Adaptive management as implemented by the TAC is commonly used and allows for the consideration of knowledge regarding activities and impacts and the option to make changes and adjustments based on that knowledge. This includes the option of adjusting the implementation of mitigation measures. The TAC is described in Section 3.4.3.

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**Comment**: *The DEIS listed several design features of the proposed wind turbines as preventive mitigation measures, but these features have not affected fatality rates and so are misleading. [LTR 181, CMT 58]*

**Response**: New studies (see E.B. Arnett et al., 2010) have shown that changes in operational controls for wind turbines can prove to be effective in reducing bat mortalities. This research states that "Currently, most wind turbines in the U.S. are programmed to begin rotating and producing power once wind speed has reached approximately 8 to 9 miles per hour (mph) -- the wind speed at which turbines begin generating electricity to the power grid is known as the cut-in speed. Wind turbines with a low cut-in speed run more frequently than those set at higher cut-in speeds since they begin rotating at lower wind speeds. The researchers found that, by raising the cut-in speed to roughly 11 mph, bat fatalities were reduced by at least 44 percent, and by as much as 93 percent, with an annual power loss of less than one percent. That is, programming the turbines to rotate only when the wind reached approximately 11 mph or higher caused the turbines to rotate less frequently and, therefore, killed significantly fewer bats. Because this was performed during months with seasonably low wind speeds already, the overall energy loss was marginal when the researchers calculated the annual power output."

**Comment**: *Minimum standards are needed for Technical Advisory Committee membership, and the TAC should be given authority to select the monitor, make changes to the monitoring program, and to require additional mitigation measures. [LTR 181, CMT 60]*

**Response**: Please see response to Comments LTR 181, CMT 41 and LTR 181, CMT 43 above.

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**Comment**: *In closing, WDFW would like to acknowledge that the applicant has submitted a preliminary mitigation plan that we are currently reviewing. The preliminary mitigation plan encompasses approximately 100 acres in Klickitat County 12 miles due east of the project site. The mitigation site is forested with Oregon White Oak with some Douglas fir and Ponderosa pine and shares a portion of its northern boundary with 40 acres of WDNR land and. This mitigation site provides habitat for several PHS entries including Western gray squirrels. Additionally, the site includes the fish-bearing Silva Creek, a tributary to the Klickitat River. [LTR 183, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *The DRAFT states on page 1.24 – Mitigation Measures – Biological Resources; "Use of tubular turbine towers, avoiding the lattice type towers which creates areas where birds may congregate and perch thus decreasing the potential for turbine collisions. Use of un-guyed meteorological towers, reducing the potential for bird collision with wires". [LTR 193, CMT 1]*

**Response**: We believe that the commenter is assuming that there might be some avian issues associated with lattice met towers as there were associated with lattice turbines towers in the past. This is not the case. First, the permanent lattice met towers are smaller in diameter than the lattice towers that historically were used for wind turbines. Second, these permanent lattice met towers in the vicinity of the Project would provide no greater perching potential for birds than existing trees in the vicinity of the Project. Industry standard practice is to use lattice met towers because they do not require multiple guy wires for support. Tubular towers are available for use, but they would require nine or more guy wires to support them from blowing down and require frequent tightening and maintenance. In the case of the forested Whistling Ridge site, if tubular towers were used with guy wires it will increase the amount of cleared area that would be required for the Project because trees cannot be allowed to grow in a large radius around the met tower. The cleared area is necessary to prevent tree interference with the guy wires. Lastly, permanent lattice met towers would be located in the Project vicinity but not immediately adjacent to the wind turbines or in a location where they can cause interference or cause an elevated risk of avian strikes.

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**Comment**: *Mitigation. The project would entail approximately 384 acres of forest land being developed for wind turbine foundations, connecting roadways, overhead and underground*

*transmission lines, operation and maintenance yard, and substation. (DEIS p. 1-9, 2-4) This includes the permanent loss of 60.7 acres of habitat, as well as the temporary loss of another 53.6 acres of habitat. (DEIS p. 3-73) In addition, there would be significant additional acres impacted by a corridor of up to 500 feet from the base of the turbines that would have a height restriction on trees. (DEIS p. 2-4, 2-15) Despite this noted loss or degradation of habitat, the DEIS does not include any mitigation measures related to these habitat impacts. (DEIS p. 3-82) The Wind Power Guidelines recommend mitigation for permanent habitat impacts by either acquisition of replacement habitat or "By Fee" option, or a combination of both. (WDFW, p. 9, 12) The Guidelines also recommend mitigation for temporary impacts to habitat, including a WDFW approved restoration plan and some acquisition of suitable replacement habitat. (WDFW, p.11-12) The FEIS should include an explicit evaluation of the impacted habitat (both temporary and permanent) and identify the specific level of mitigation that will be required of the applicant. SEPA provides the authority to impose reasonable conditions to mitigate impacts from a proposed action. While the project lands are not pristine wildlife habitat, they do provide valuable habitat for numerous bird and other species as well as ecosystem services that would be adversely impacted by the project. This habitat provides foraging and breeding opportunities for different species as well as vegetative cover for wildlife. The project proponent, SDS Company, LLC, touts the importance of its forest lands for wildlife and biodiversity, stating that its timberlands "provide habitat for various species of plants and wildlife, they protect watersheds, they emit oxygen into the atmosphere and consume carbon dioxide, and they provide beautiful spaces for recreation." (see http://www.stevensonlandcompany.com/) Permanently converting 60.7 acres of this habitat, as well as temporarily impacting an additional 53.6 acres of habitat, requires acquisition of replacement habitat. Seattle Audubon recommends a ratio of at least 1:1 for replacing permanently impacted habitat and of 0.1:1 for temporarily impacted habitat, as the project lands appear to fit the Wind Power Guidelines' description of Class III habitat – lands with lesser numbers of associated Species of Greatest Conservation Need but that are not currently cultivated, developed or disturbed by an active road or other corridor that eliminates natural habitat. (WDFW p. 9) SDS manages numerous land parcels in the general vicinity of the projects that are like-kind and/or of equal or higher habitat value than the areas which would be impacted by the project. There are numerous SDS-owned sites in the Columbia River Gorge National Scenic Area and the White Salmon River Wild and Scenic River corridor that meet the criteria identified in the Wind Power Guidelines as being at risk of development or habitat degradation; these or other lands in the areas could serve as appropriate replacement habitat by donation to a land trust or given permanent legal protection through a conservation easement or other enforceable means. (WDFW, p. 9-10) A detailed mitigation package should be developed prior to project approval, not left to be determined after the fact. In addition to inclusion of mitigation for impacts to habitat, the FEIS should also explicitly include mitigation for any direct impacts to at-risk species. As noted above in our comments above regarding NSO, olive-sided flycatcher and Vaux's swift, the FEIS should include details of the specific actions that will be required of the applicant to avoid, minimize and mitigate for any mortality of ESA-listed and other sensitive species. [LTR 196, CMT 9]*

**Response**: Please see response to Comment LTR 94, CMT 2 above.

**Comment**: *Adaptive Management. We appreciate the requirement for a Technical Advisory Committee (TAC) to evaluate and coordinate the mitigation and monitoring program, including potential adaptive management activities. (DEIS p. 3-82) Unfortunately the DEIS contains no information detailing the authority of and resources available to the TAC to carry out those responsibilities. As the Wind Power Guidelines point out, the range of potential adjustments the TAC could make to potential mitigation and monitoring requirements should be clearly stated in the project permit. (WDFW p. 6) In addition, the proposed composition of the TAC does not include any stakeholders from environmental groups, landowners or Native American tribes. (WDFW p. 6) The FEIS should identify an expanded TAC that includes representatives from these other stakeholder groups, as well as clearly identify TAC funding and authority. As noted multiple times above, Whistling Ridge would be one of the first wind power projects to be considered for a forested landscape in Washington state. In light of this, there are several important environmental issues for which there is limited or no applicable comparative data for use in evaluating wind power projects in forested landscapes. In recognition of this type of challenge, the Wind Power Guidelines specifically call for research oriented studies that look at issues such as species displacement or cumulative impacts that could provide important information for understanding wind energy / wildlife interactions. (WDFW p. 7) The FEIS should identify specific research oriented studies that would directly relate to the proposed Whistling Ridge project, as well as the role of the TAC in determining the need for further studies. Potential studies include: a) A robust analysis of pre- and post-construction avian use study data at the project to better understand direct and indirect impacts to specific avian species, including changes to density and nesting success of targeted species. b) As noted in our cumulative impact comments above, an analysis focused on the Pacific Northwest region, including forested landscapes, of the potential cumulative impacts of a "full build-out" of wind power on avian species. c) As noted in our climate change comments above, a Pacific Northwest-specific study comparing the annual bird fatalities caused by wind farms versus those caused by fossil fueled power stations, similar to the 2009 Sovacool study. (DEIS p. 3-276) d) As noted in our monitoring comments above, the use of canine detection of carcasses in the post-construction avian mortality study. While funding for these and/or other research oriented studies should be solicited from multiple sources (WDFW p. 7), the FEIS should explicitly identify the level of funding to be provided by the project proponent. [LTR 196, CMT 11]*

**Response**: Please see response to Comments LTR 181, CMT 41 and LTR 181, CMT 43 above. Additionally, the Post Construction Avian Monitoring Plan along with other monitoring data is reviewed by the TAC to better understand the effectiveness of the monitoring data and to recommend additional mitigation measures if warranted. Funding for TAC activities is provided by the certificate holder, but it is outside the scope of this EIS. Furthermore, the TAC is described in Section 3.4.3.

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**Comment**: *My biggest concern is that there be a guaranteed set aside fund to remove the turbines once they have reached the end of their useful life and stopped generating power. There should absolutely be a provision to restore the area once they stop generating power. It is inevitable that at some point a newer technology will replace wind and when it does please make sure that we don't have to look at something that we are not deriving benefit from. [LTR 214, CMT 3]*

**Response**: Before Project construction begins the certificate holder must provide to EFSEC documentation showing that adequate financial resources are available to provide for Project decommissioning and site restoration. Project decommissioning is described in Section 2.1.7.

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**Comment**: *Also, we have noticed that mitigation measures are often worded in a manner that allows the proponent the choice of whether or not the mitigation measure will actually be implemented. And, we have noticed that proponents often ask that mitigation measures be quietly withdrawn once the permit is in hand, and very often that is exactly what happens. [LTR 256, CMT 22]*

**Response**: BPA and EFSEC provide a list of mitigation measures that are expected to be followed as best they can. However, due to the nature of any construction-related project, delays and mishaps do occur. Nevertheless, a mitigation action plan is included with the Record of Decision which serves as a guidance matrix and allows for flexibility of any delays to the construction-related work.

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**Comment**: *[In reference to Section 3.1.2.1, Proposed Action, Construction; PDF pg. 9], [a]s far as I could find, the DEIS does not list what these Best Management Practices (BMPS) are. They should be listed, so we could evaluate if they are adequate for this project which proposes to move a lot of earth and has a high potential for erosion and land movement. [LTR 286, CMT 6]*

**Response**: BPA and EFSEC do not list BMPs in their environmental documents. However, mitigation measures are outlined to serve as guidance to contractors (please see Table 1-1) and the contractors are required to meet certain specifications as outlined in a mitigation action plan that is released with the Record of Decision.

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**Comment**: *[In reference to Section 3.1.3, Mitigation Measures; PDF pg. 12], [a]ll of the above should be part of the DEIS now, not later. There are all valid questions that should be answered PRIOR to the start of any construction or earth movement. Once a proposal is approved, then the proponent can almost do anything to make sure that it gets done. We should use the PRECAUTIONARY PRINCIPLE and know all the details and facts that it is possible to know PRIOR to any construction and excavation. The detailed geotechnical investigational ensuring that design of these facilities includes proper engineering; [possible] relocation of the facilities; the Stormwater Pollution Prevention Plan (SWPPP), Erosion and Sedimentation Control Plan and Environmental Protection Control Plan; and, the seismic design provisions should all be part and parcel of the DEIS, not done after the fact when the public has no recourse for further input and comment. [LTR 286, CMT 9]*

**Response**: Prior to any construction or excavation, EFSEC requires an Applicant to submit construction plans, specifications, drawings and design documents that demonstrate the Project

design will be in compliance with the conditions of the Site Certification Agreement which will incorporate mitigation measures identified in the FEIS. The plans will include overall Project Area plans, foundation drawings, equipment and material specifications, and vendor guarantees for equipment performance as appropriate. The Applicant cannot begin construction prior to obtaining EFSEC approval of the construction plans and specifications. Prior to construction, EFSEC also requires an Applicant to submit a Construction Stormwater Pollution Prevention Plan (Construction SWPPP) that meets the requirements of the Ecology stormwater pollution prevention program (WAC 173-230) and the National Pollutant Discharge Elimination System and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activities issued by the Department of Ecology on November 16, 2005 or as revised. An Applicant cannot begin Site Preparation prior to obtaining EFSEC approval of the Construction SWPPP. EFSEC also requires an Applicant to submit a Temporary Erosion and Sediment Control (TESC) Plan for EFSEC approval prior to the beginning of Site Preparation. An Applicant cannot begin Site Preparation without prior approval of the TESC Plan by EFSEC. As an alternative to submitting a separate TESC Plan, an Applicant may include measures for TESC in the Construction SWPPP. An Applicant must also submit an Operations Stormwater Pollution Prevention Plan prepared in accordance with the guidance provided in the applicable Ecology Stormwater Management Manual prior to beginning commercial operation. An Applicant must periodically review the Operations SWPPP against the guidance provided in the applicable Ecology Stormwater Management Manual, and make modifications as necessary to the Operations SWPPP to comply with current requirements for BMPs.

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**Comment**: *[In reference to Section 3.3.2.1, Proposed Action; PDF pg. 40], [w]hat are these "standard construction BMPs" and where are they located in the DEIS? [LTR 286, CMT 26]*

**Response**: Typical BMP's were listed in the 2nd, 5th and 6th bullets on DEIS Page 3-13 and the 1st bullet on DEIS Page 3-14.

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## G.3.15 CUMULATIVE IMPACT ANALYSIS

**Comment**: *The evaluation of cumulative impacts is inadequate. Under SEPA, EFSEC is required to consider whether multiple incremental impacts when considered together may cumulatively result in a significant adverse impact. WAC 197-11-792(2)( c)(iii). Unfortunately, the cumulative impacts analysis done for the Whistling Ridge DEIS only considered the impacts of 10 existing wind projects and three proposed wind projects. In fact, there are at least a dozen major wind projects constructed or proposed in Klickitat County alone, and more than 40 major wind projects constructed or proposed along the Columbia River east of Whistling Ridge. The pace and scale of wind turbine construction in this region has been unprecedented. Only five years ago, an EIS prepared by Klickitat County (which lies immediately to the north and east of the Whistling Ridge site) predicted the construction of four major wind projects, with a total*

*installed capacity of 1,000 megawatts, over a 20-year period. In actuality, 10 major wind projects with a total installed capacity of more than 1,100 megawatts have already been constructed in Klickitat County, and permits are pending for another 500 megawatts. In other words, Klickitat County has seen twice as much wind development in five years as was predicted for 20 years. Besides the many projects in Klickitat County, the BPA's interconnection queue shows approximately 35 additional projects in other nearby counties that are either permitted or awaiting permits. Other projects are proposed but not yet shown in the BPA queue. From Whistling Ridge to Walla Walla, wind developers are erecting (or proposing to erect) strings of turbines that stretch for more than 100 miles along the ridges on both sides of the Columbia River. [See PDF for footnotes] In Klickitat County, almost every inch of ridge-top land above the Columbia from Dallesport eastward is already under lease to wind developers. [See PDF for footnotes] Additional projects are proposed but not yet shown on this map because permit applications have not been filed. The environmental impacts analysis for Whistling Ridge must consider the regional impacts of more than 40 major projects within the Columbia Plateau ecoregion. The scale and sprawl of this wind development has significant cumulative impacts on wildlife, habitat, scenic values and other natural resources. [LTR 36, CMT 3]*

**Response**: EFSEC believes that the cumulative impact analysis provided in Section 3.14 of the EIS fully complies with SEPA requirements by cataloguing cumulative projects in the region, considering the aggregate effects of relevant past projects in the region along with the potential effects from relevant present and reasonably foreseeable future projects, and identifying the incremental impact of the proposed Project when added to these cumulative projects. However, in order to address the commenter's concerns related to the number of projects evaluated and the proximity to the Project Area, the lead agencies have updated the following: Sections 1.8.1.1 and 1.8.1.2 as well as Sections 3.14.1 and 3.14.2. These changes remove the Middle Mountain project from further consideration in this EIS as well as include new wind projects that have come online since the DEIS. Additionally, Figure 3.14-1 has been updated to show these changes.

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**Comment**: *The notion that projects in eastern Klickitat County are "too far away ... to result in cumulative impacts" is mistaken. Many birds and bats travel long distances during migration, foraging, and other components of their life cycle. Also, genetic exchanges between individuals of any given species are essential for maintaining population viability. More important, the notion that projects are too far away to have cumulative impacts is mistaken because significant adverse impacts typically occur at the population level, rather than at the level of individual animals affected by a particular wind project. While different wind projects may affect different individuals, the cumulative effect of combined mortalities at many contiguous sites can be population-level impacts-and perhaps even local extinctions over time. [LTR 36, CMT 3]*

**Response**: The sentence on cumulative impacts and distance between projects in which the commenter is referencing was taken out of context. This sentence actually is referring to other elements of the environment, such as visual, water quality, noise and earth, and is not in reference to birds and bat species. As described in Section 3.14.3.5 of the DEIS, the cumulative impact analysis for birds and bat species considered the added impacts of the Whistling Ridge Energy Project to the overall cumulative biological impacts of all wind energy projects in the

region. It relied heavily on data from 11 wind-energy facilities in the Columbia Plateau Ecoregion (CPE) where facility monitoring has occurred. The cumulative impacts analysis for Klickitat County was updated in 2010 and is included as an appendix to the FEIS (Appendix C-11).

Additionally, based on the avian point count data, bird use in the Project Area is considered too low to identify the site as a flyway or concentrated migration route. Birds are migrating through the Project Area, but not using it as a primary route. Additionally, bat mortality at wind developments is categorically correlated with pre-construction bat pass density, and because the fall monitoring (period of highest mortality of bats) was low relative to other wind developments, it is possible that the proposed wind development also will have low mortality during this period. During summer, higher bat pass density was documented, but as noted in the DEIS (page 3-80), many sites have higher summer bat populations but low summer bat mortality. The elevated Anabat units deployed in 2009 would have picked up migratory bats, and although an in-depth migratory study was not conducted, these elevated units recorded low call density so migration is likely light in the area of the proposed Project.

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**Comment**: *The DEIS erred in relying on a cumulative impacts analysis published in 2007 for the Mid-Atlantic Highlands. Not only is the Mid-Atlantic region completely different from the Whistling Ridge site in habitat and species composition, but the 2007 study was published before the pace of wind development began to rapidly accelerate. It is inappropriate to base any cumulative impacts analysis for Whistling Ridge on a study done under very different circumstances and in a very different place. [LTR 36, CMT 3]*

**Response**: The Mid-Atlantic Highlands (NRC 2007) study was mentioned in the DEIS because at the time of writing it was widely considered the most thorough, objective and "best available science" regarding fatality estimates for birds and bats over a large geographic area. The DEIS relied more on the findings of a similar cumulative impact study on avian and bats conducted for the Klickitat County Planning Department (WEST, Inc. 2010). The WEST study summarized results of fatality monitoring studies at operational wind-energy facilities within the Columbia Plateau Ecoregion, and then used those results to estimate impacts for all constructed and proposed wind-energy facilities within the same ecoregion. In comparison to the Columbia Plateau Ecoregion, the site proposed for the Project is in a different ecoregion, the Eastern Cascades ecoregion, which to date has not experienced any wind energy development that could provide similar monitoring results. Section 3.14.3.5 of the EIS has been revised to include additional discussion of the potential for cumulative impacts to birds and bats associated with wind energy development in the Eastern Cascades.

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**Comment**: *It is also inappropriate to dismiss the cumulative impacts of wind turbines on wildlife because of other man-made effects such as mortalities from buildings and cats. These mortalities don't necessarily affect the same species as wind turbines do: For example, cats do not kill golden eagles, and skyscrapers do not kill species that make their homes in remote rural areas. More important, these man-made impacts do not justify placing additional pressures on*

*sensitive bird and bat populations from new man-made structures in more remote areas where wind projects may be the leading source of avian and bat fatalities. They merely illustrate the importance of minimizing any additional mortalities caused by wind projects. Two wrongs do not make a right. [LTR 36, CMT 3]*

**Response**: The reference to other potential causes of mortality for bird and bat populations in a given region, including collisions with buildings, transmission lines and vehicles, habitat loss, and predation by domestic cats was mentioned to provide a context within which to view the potential threat posed to these populations by wind generation facilities. The study referenced in the DEIS, Erickson et. al. (2005), reported that recent research estimated that mortality threats to these species from these sources were many times larger than those from wind energy generation (Erickson et al. 2005; 2008).

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**Comment**: *The WEST report prepared for the Klickitat County Planning Department is not applicable to the proposed Whistling Ridge Energy Project, and cannot be relied on to evaluate cumulative impacts. The report prepared by Western EcoSystems Technology, Inc. (WEST) purports to be a cumulative impacts analysis for Klickitat County. [LTR 36, CMT 4]*

**Response**: EFSEC and BPA recognize that the WEST report was developed for the more arid shrub-steppe lands, rather than the coniferous forests found within the proposed Project Area. The conclusion from their report remains pertinent for the proposed Project, because avian mortality from wind developments is far less significant than the effect from traditional energy development or climate change. There are no other projects in coniferous forests in the Eastern Cascades for comparison, so the Klickitat study was used. In fact, with the exception of the Grayland project in Pacific County (a very small 4-turbine wind energy facility) there are no other existing wind energy facilities in forested habitats of western Washington or Oregon. To date, only three other projects have been proposed in this entire area, including the Middle Mountain Project in Hood River County, Oregon, the Coyote Crest project in Pacific and Lewis Counties, Washington, and the Radar Ridge project in Pacific County, Washington. The only other project proposed in the Eastern Cascades, Middle Mountain, is no longer being pursued by Hood River County, as the County Commission decided to cease efforts to pursue this community scale project of around 10 MW at its meeting on May 17, 2010. An updated version of the study prepared by WEST has been included as Appendix C-11 in the FEIS and the cumulative impacts analysis for bird and bat species in Section 3.14.3.5 has been revised to include additional information on the potential for cumulative impacts on these species associated with wind energy development in the Eastern Cascades.

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**Comment**: *Unfortunately, this report sheds little light on the cumulative impacts of wind power development on wildlife in Klickitat County, and it is even less relevant to a project proposed for Skamania County. As the WEST report's title suggests, the Columbia Plateau Ecoregion is located in eastern Washington and Oregon, which have completely dfferent plant and animal communities than the western Washington site proposed for the Whistling Ridge wind project. All of the projects evaluated in the WEST report are located in arid and un-*

*forested lands, whereas Whistling Ridge is located in a coniferous forest that receives much more precipitation and has a much different plant and animal population. Impacts of wind projects on birds and bats are extremely site-specific, and because of that the WEST study has little applicability to the Whistling Ridge proposal. It is no more applicable than studies from the Altamont Pass Wind Resources Area in California, where significant population-level impacts on birds have been documented; or from the forested Mountaineer wind project in Appalachia, where significant population-level impacts on bats have been documented. The WEST report contains fatality monitoring data from 12 projects around the Columbia Plateau Ecoregion. Only one of those projects, Big Horn, is actually located in Klickitat County-and the results from Big Horn show much higher raptor fatality rates than anywhere else in the Pacific Northwest. In other words, the WEST report underestimates the impacts of wind projects in Klickitat County by merging the Big Horn data with results from less lethal projects elsewhere in the region. The WEST report also looked at 24 projects in the Pacific Northwest for which preconstruction estimates of avian use are available. Here too, the results from Klickitat County show a much higher likelihood of avian impacts than elsewhere in the region. Of the 24 projects evaluated in the report, the seven projects located in Klickitat County had much higher estimated use by both raptors and by birds of all types. For example, the highest raptor use estimated anywhere in our region is at the Linden Ranch in Klickitat County. Raptor use there is estimated to be 2.5 times the average for the Columbia Plateau ecoregion. In other words, the WEST report does not give an accurate picture of cumulative impacts from expanding wind power here in Klickitat County, much less any indications of cumulative impacts to be expected in Skamania County. To the contrary, the WEST report uses data from projects in other parts of Oregon and eastern Washington to underestimate how many birds-especially raptors-are likely to be killed here. The WEST report has another fundamental flaw. To arrive at a prediction of cumulative fatalities, the report's authors averaged existing fatalities in the region and then compared those averages with estimates of regional population size based on breeding bird surveys provided by the Partners in Flight North American Landbird Conservation Plan. However, the Partners in Flight estimates include relatively large standard errors, and are not accurate enough to serve as reliable population indicators. The estimates used in the WEST report were designed for detecting long-term population trends but not for estimating population size. As Dr. K. Shawn Smallwood, an ecologist who is one of the nation's leading experts on the interactions between wildlife and wind turbines, points out in a review of the WEST report, the estimates from Partners in Flight are "unsuitable for the use that Johnson and Erickson made of them." Other researchers have pointed out this flaw but WEST continues to rely on these unsuitable estimates. Smallwood further writes: "No studies or monitoring programs have been designed or implemented in the US to document wind energy-related population declines of any bird species. Most fatality monitoring programs have been much too brief to document declines, lasting one or two years. All monitoring programs have been too crude to document declines, and the majority of post-construction studies have not been designed to estimate population size of any bird species. Therefore, Johnson and Erickson's statement about wind energy impacts was misleading." [LTR 36, CMT 5]*

**Response**: The Wildlife Society, in a landmark publication on wind energy and wildlife, concluded that fatalities of passerines from wind turbine strikes generally are not significant at the population level (Arnett et al. 2007). Also, the National Academy of Sciences (NAS 2008) recently reviewed wind energy impacts on birds, and came to the following conclusion: "At the current level of wind-energy development (approximately 11,600 MW of installed capacity in

the United States at the end of 2006, including the older California turbines), the committee sees no evidence that fatalities caused by wind turbines result in measurable demographic changes to bird populations in the United States, with the possible exception of raptor fatalities in the Altamont Pass area." The available information suggests that the project would be unlikely to have population impacts on birds.

Additionally, regarding the WEST report used in the DEIS, EFSEC and BPA recognize that the WEST report was developed for the more arid shrub-steppe lands, rather than the coniferous forests found within the proposed Project Area. The conclusion from their report remains pertinent for the proposed Project, because avian mortality from wind developments is far less significant than the effect from traditional energy development or climate change. There are no other projects in coniferous forests in the west for comparison, so the Klickitat study was used. In fact, with the exception of the Grayland project in Pacific County (a very small 4-turbine wind energy facility) there are no other existing wind energy facilities in forested habitats of western Washington or Oregon. To date, only three other projects have been proposed in this entire area, including the Middle Mountain Project in Hood River County, Oregon, the Coyote Crest project in Pacific and Lewis Counties, Washington, and the Radar Ridge project in Pacific County, Washington. The only other project proposed in the Eastern Cascades, Middle Mountain, is no longer being pursued by Hood River County, as the County Commission decided to cease efforts to pursue this community scale project of around 10 MW at its meeting on May 17, 2010.

An updated version of the study prepared by WEST has been included as Appendix C-11 in the FEIS and the cumulative impacts analysis for bird and bat species in Section 3.14.3.5 has been revised to include additional information on the potential for cumulative impacts on these species associated with wind energy development in the Eastern Cascades.

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**Comment**: *The DEIS fails to estimate the direct and cumulative impacts of this project on the Northwest power grid. The breathtaking pace of wind development along the Columbia River has created serious challenges for BPA and the regional energy grid. There are limits to the amount of wind power that can be integrated into the grid, and we are already at or near these limits. BPA has expressed concerns about how it can integrate more than 6,000 megawatts of wind power into the grid, yet the DEIS fails to analyze these constraints and how they will be affected by the construction of yet another wind project. Adding more wind power capacity to the grid requires not only new transmission lines but also new storage capability, because wind is an intermittent power source. Typically wind projects operate at only about 30 percent of their total generating capacity, which means that 70 percent of the time a backup power source must be available. The DEIS has failed to analyze the environmental impacts of the proposed backup power source for Whistling Ridge. For example, if hydropower will be the backup, the DEIS must consider the indirect impacts of this project on fish, irrigation, navigation and other drawdown impacts. If backup power will be provided by a natural-gas-fired power plant, the impacts of that power plant should be considered along with the impacts of the wind project. Williams is proposing a new gas line for the Whistling Ridge area, and the substation and transmission inter-tie lines proposed for the Whistling Ridge area could signal the advent of additional power plants in the area. These must be evaluated along with impacts of the infrastructure currently being proposed. A recent study in Colorado found that wind power's*

*supposed carbon emissions benefits are not being realized, because of the requirement for conventionally-generated backup power. [LTR 36, CMT 10]*

**Response**: BPA's transmission studies for the proposed Project have shown there to be sufficient transmission capability available on BPA's existing transmission system to provide transmission service for the proposed Project. No upgrades of the existing BPA transmission system (other than the proposed interconnection substation already considered in the EIS) would be required, and there would be no detrimental effect on this system for this particular interconnection. BPA does not build nor own any power generation facilities whatsoever. However, BPA is committed to finding innovative solutions to meet the renewable resource objectives of the Pacific Northwest by reliably and cost-effectively extending the integration capability of the BPA Balancing Authority while honoring our statutory obligations to our preference customers and the operational limitations on the Federal hydroelectric system. Currently, BPA uses the hydro-system to balance wind generation and cannot speculate whether increased wind generation will require the construction of other facilities in the reasonably foreseeable future. See *http://www.bpa.gov/corporate/WindPower/* for more information on balancing loads in the region. Lastly, the potential for wind projects to result in cumulative impacts to Columbia River fish species due to the interplay of the hydrosystem operations used for balancing during certain conditions are discussed further in Section 3.14.3.5 of the EIS and in other responses within this section.

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**Comment**: *Considering these and related concerns, the Washington Department of Fish and Wildlife's recommendation for a comprehensive cumulative effects analysis should be required for this or any wind turbine application, especially when proposed in a forest setting. [LTR 79, CMT 18]*

**Response**: The level of effort conducted for pre-construction exceeds the industry standard level of effort for a proposed Project of this scale, and accommodates the unique forested habitat not currently present at other Washington wind developments. Statistically defensible use estimates were calculated for birds, to estimate the relative mortality that could be expected following construction. Bat pre-construction surveys were conducted, and the level of presence was compared with the levels observed at other wind developments. The cumulative effects section includes analysis of known proposed wind developments in the region.

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**Comment**: *These are my preliminary comments and questions. I will be making further comments during the public comment period. Let me be blunt: in reading the Cumulative Impact Analysis section in the DEIS, 3.14, p. 3-264, I was perturbed to find that there have not been any cumulative impact analyses done. There are statements made about cumulative impacts but no analyses. The basic refrain appears to be that, in the past, bad environmental things happened in the project area, bad things will happen in the present because of the project, and this will lead to more bad things happening in the future! This is not cumulative impact analysis. The NEPA process must use critical analyses for Federal projects and this one qualifies because of BPA's interest. [LTR 82, CMT 1]*

**Response**: The lead agencies believe that the EIS provides a reasonably thorough discussion of potential cumulative impacts associated with the proposed Project. Based on the past, present and reasonably foreseeable future actions identified in Sections 3.14.1 and 3.14.2 of the EIS, the overall cumulative impact from these actions and the additional incremental impact of the proposed Project are analyzed by resource in Section 3.14.3 of the EIS. For each resource, relevant cumulative actions and projects with potential or actual impacts on that resource are identified, and the cumulative effect of the proposed Project coupled with these relevant cumulative actions and projects is discussed. As indicated in other responses to comments, the cumulative impact analysis in Section 3.14 of the EIS has been updated to include a more current cataloguing and analysis of relevant cumulative projects.

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**Comment**: *The Council on Environmental Quality's Considering Cumulative Effects: Under the National Environmental Policy Act Handbook gives pretty clear methods on analyzing cumulative effects. Table 5.3, p. 56, Primary and special methods for analyzing cumulative effects, gives seven primary methods and four special methods for analyzing cumulative effects. (I submit the Handbook into the record.) For example, what I did not see in the DEIS was a Trends Analysis, which is #6, in Table 5.3 of the CEQ Handbook – Trends analysis assesses the status of a resource, ecosystem, and human community over time and usually results in a graphical projection of past or future conditions. Changes in the occurrence or intensity of stressors over the same period can also be determined. Trends can help the analyst identify cumulative effects problems, establish appropriate environmental baselines, or project future cumulative effects. I saw no environmental baselines data in the DEIS. Where is it? Without baseline data, cumulative impacts/effects are very hard to quantify. Another example, #5, Modeling, under Primary Methods, states "Modeling is a powerful technique for quantifying the cause-and-effect relationships leading to cumulative effects, can take the form of mathematical equations describing cumulative processes such as soil erosion, or may constitute an expert system that computes the effect of various project scenarios base on a program of logical decisions." The strengths of this method are: it "can give unequivocal results; addresses cause-effect relationships; quantification; can integrate time and space." Weaknesses are: "need a lot of data, can be expensive, intractable with many interactions." [LTR 82, CMT 1]*

**Response**: BPA believes that the cumulative impact analysis provided in Section 3.14 of the EIS fully complies with NEPA requirements by cataloguing cumulative projects in the region, considering the aggregate effects of relevant past projects in the region along with the potential effects from relevant present and reasonably foreseeable future projects, and identifying the incremental impact of the proposed Project when added to these cumulative projects. The CEQ handbook cited by the commenter, while a potentially useful reference document in certain circumstances, is neither formal CEQ guidance nor legally binding on federal agencies preparing EISs under NEPA.

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**Comment**: *Just two examples, and there are many more, from the DEIS, I believe, show its inadequacy, especially in cumulative impacts analysis: In 3.14.3.4, Vegetation and Wetlands, p. 3-272, the proponent states: "Past and present land development, timber harvest, and*

*agricultural uses have resulted in a cumulatively significant change in the composition of vegetation and habitat types in the project vicinity. In general, land development and agricultural uses have resulted in conversion of forested areas to non-forested areas, and timber harvests have resulted in a mosaic of forest ages, with average stand age declining over time from relatively short stand rotations. Changes in stand structure and complexity, patch size, and species distribution also have occurred. Few large, old-growth conifers or late-successional stands exist [my questions: how many, where are they located, is there a map, etc?] in the general project vicinity. Accordingly, past and present uses have resulted in cumulative habitat conversion and an ongoing pattern of habitat fragmentation. [my questions: how much fragmentation, what kind of fragmentation, affecting which species, etc.] Reasonably foreseeable future actions, such as ongoing land development and timber harvests, would continue this trend." [my emphasis] And, it goes on to say: "Project construction would take place in the context of the existing use of the project vicinity generally for commercial forestry, which includes regular cycles of clear cutting and reforestation. Nonetheless, by removing trees and other vegetation in the wind project area for the life of the project, development of the Proposed Action would contribute incrementally, though in a relatively minor way, to these cumulative impacts." This is not a cumulative impact analysis, wherein all the past, present, and future habitat fragmentation would have to be quantified, and then a cumulative impact analysis done on the project area. And then this project would also have to look at habitat fragmentation in the geographical areas surrounding the project in order to get a total picture of all the habitat fragmentation. Cumulative impacts are not done on a project by project basis with no additive analyses. Regional cumulative impacts matter. [LTR 82, CMT 1]*

**Response**: The depiction of past, present, and future conversion of forested areas to non-forested areas is considered adequate for the purposes of this cumulative effects analysis. Section 3.14.3.5 in the DEIS acknowledged that "The proposed Project would impact terrestrial wildlife habitat through the permanent improvement of approximately 56 acres now in grass/forb, field/shrub, managed coniferous or mixed deciduous-coniferous forest from within the wind Project Area."

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**Comment**: *In the same section, p.3-273, Wetlands, the DEIS states: "Incremental losses and degradation of wetlands over time have cumulatively depleted [my questions: how much, maps, species affected, etc.] wetland resources in the United States. In the project vicinity, wetlands likely were previously impacted by construction of a variety of activities, including development of roads and railroads, agricultural activities, and past timber harvests. [my questions: what are the cumulative impacts on the wetlands from all this past and present activity? How will your project affect these cumulative impacts?] Reasonably foreseeable future actions may also affect wetlands in the project vicinity, but it is expected that these future projects would be required to avoid, minimize, and compensate for any potential impacts to wetlands from filling or other activities as part of project Section 404 permitting requirements. Regardless, because construction and operation of the proposed wind project would not impact wetlands, implementation of the Proposed Action would not contribute to cumulative impacts to wetlands." [my emphasis] I'm sorry, we're supposed to take their word for it that their project would not impact wetlands??? Where is the cumulative impact analysis of the wetlands in the area? This*

*is not cumulative impacts analysis. It is wishful thinking. And wishful thinking doesn't get the project okayed. [LTR 82, CMT 1]*

**Response**: As discussed in Section 3.4 of the EIS, there are no wetlands or wetland buffers located within areas that would be affected by the proposed Project. The proposed Project therefore would not be expected to affect any wetlands. Accordingly, the Project would not be expected to contribute to any cumulative impacts to wetlands in the Project vicinity from other cumulative actions or projects. Given this lack of project impact to this resource, BPA and EFSEC believe that the discussion of cumulative wetland impacts provided in Section 3.14.3.4 of the EIS is sufficient.

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**Comment**: *I will be submitting further comments on the cumulative impacts at a later date. We have not even touched upon Carrying Capacity Analysis, which should be applied to a wide range of resources to address cumulative effects. From the CEQ Cumulative Effects handbook: "Cumulative effects are a more complex problem for whole ecosystems, because ecosystems are subject to the widest possible range of direct and indirect effects. Analyzing the cumulative effects on ecosystems requires a better understanding of the inter-workings of ecological systems and a more holistic perspective. Specifically, ecosystem analysis entails new indicators of ecological conditions including landscape-scale measures. In addition to these two special methods, analyzing cumulative effects on human communities requires specific economic impact analysis and social impact analysis methods." Where are the special economic impact analyses and social impact analyses for this project? Cumulative economic impacts don't just mean the impacts to the local area. Cumulative economic impacts are and should be regional in nature and it is prudent to ask what the cumulative impacts of this wind farm will be on our region. Will the impacts be harmful or beneficial? No one can answer that because there is no in-depth analysis in the DEIS. [LTR 82, CMT 1]*

**Response**: Environmental resources, such as soils, air quality, water resources, biological resources, and other aspects that help define ecosystems are addressed in Chapter 3 of the DEIS. Additionally, cumulative effects related to these resources are discussed in more detail within Section 3.14, Cumulative Impacts Analysis. Additionally, socioeconomic impacts of the proposed Project are discussed and analyzed in Section 3.13 of the EIS. This analysis covers the potential regional socioeconomic effects of the proposed Project, as we as more localized effects. Section 3.14.3.14 of the EIS also provides a cumulative analysis of potential socioeconomic effects related to the proposed Project.

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**Comment**: *The DEIS erred in relying on a cumulative impacts analysis published in 2007 for the Mid-Atlantic Highlands. Not only is the Mid-Atlantic region completely different from the Whistling Ridge site in habitat and species composition, but the 2007 study was published before the pace of wind development began to rapidly accelerate. It is inappropriate to base any cumulative impacts analysis for Whistling Ridge on a study done under very different circumstances and in a very different place. [LTR 161, CMT 3]*

**Response**: As discussed in the DEIS, the reference to the Mid-Atlantic Highlands (NRC 2007) was addressed in the Cumulative Impacts Analysis section for the Whistling Ridge Energy Project because the National Academy of Sciences National Research Council estimated the Mid-Atlantic Project to depict the best and worse case fatality estimates for birds and bats based on a regional "full-build" scenario in 2020. This study is considered the most thorough, objective and "best available science" on the topic of cumulative impacts from wind energy projects, and made use of a real world example (although from a different region of the country from Whistling Ridge). This study concluded that it is unlikely that the predicted level of fatalities would result in measurable impacts to migratory populations of most species, although for rare and local populations, the cumulative impacts when combined with all other man-made sources of mortality could affect population viability. Please refer to Section 3.14.3.5, page 3-274 of the DEIS for further discussion of the National Research Council's study. Additionally, the FEIS has been updated with more information regarding the cumulative impacts to "Bird and Bat Species" within Section 3.14.3.5.

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**Comment**: *It is also inappropriate to dismiss the cumulative impacts of wind turbines on wildlife because of other man-made effects such as mortalities from buildings and cats. These mortalities don't necessarily affect the same species as wind turbines do: For example, cats do not kill golden eagles, and skyscrapers do not kill species that make their homes in remote rural areas. More important, these man-made impacts do not justify placing additional pressures on sensitive bird and bat populations from new man-made structures in more remote areas where wind projects may be the leading source of avian and bat fatalities. They merely illustrate the importance of minimizing any additional mortalities caused by wind projects. Two wrongs do not make a right. [LTR 161, CMT 3]*

**Response**: Comment acknowledged. The lead agencies believe that the commenter has taken the National Resource Council's reference to other man-made sources of mortality out of context. Nevertheless, as mentioned in the previous comment response, the FEIS has been updated with more information regarding the cumulative impacts to "Bird and Bat Species" within Section 3.14.3.5

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**Comment**: *The DEIS provides no evidence to substantiate the applicant's assertion that the proposed Whistling Ridge wind project will not cause mortality to birds and bats in sufficient quantities to affect population viability. The analysis does not include any reasonable estimates of current population levels of sensitive species, nor of the threshold population levels required to maintain viability. [LTR 161, CMT 3]*

**Response**: The Wildlife Society, in a landmark publication on wind energy and wildlife, concluded that fatalities of passerines from wind turbine strikes generally are not significant at the population level (Arnett et al. 2007). Also, the National Academy of Sciences (NAS 2008) recently reviewed wind energy impacts on birds, and came to the following conclusion: "At the current level of wind-energy development (approximately 11,600 MW of installed capacity in the United States at the end of 2006, including the older California turbines), the committee sees

no evidence that fatalities caused by wind turbines result in measurable demographic changes to bird populations in the United States, with the possible exception of raptor fatalities in the Altamont Pass area." The available information suggests that the Project would be unlikely to have population impacts on birds. Additionally, the revised report, "Analysis of Cumulative Impacts on Avian, Bat and Habitat Associated with Wind Energy Development in the Columbia Plateau Ecoregion of Eastern Washington and Oregon" (WEST 2010) prepared for Klickitat County, does not suggest the possibility of cumulative population impacts on birds.

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**Comment**: *The DEIS fails to estimate the direct and cumulative impacts of this project on the Northwest power grid. The breathtaking pace of wind development along the Columbia River has created serious challenges for BPA and the regional energy grid. There are limits to the amount of wind power that can be integrated into the grid, and we are already at or near these limits. BPA has expressed concerns about how it can integrate more than 6,000 megawatts of wind power into the grid, yet the DEIS fails to analyze these constraints and how they will be affected by the construction of yet another wind project. Adding more wind power capacity to the grid requires not only new transmission lines but also new storage capability, because wind is an intermittent power source. Typically wind projects operate at only about 30 percent of their total generating capacity, which means that 70 percent of the time a backup power source must be available. The DEIS has failed to analyze the environmental impacts of the proposed backup power source for Whistling Ridge. For example, if hydropower will be the backup, the DEIS must consider the indirect impacts of this project on fish, irrigation, navigation and other drawdown impacts. The applicant has hinted at possible plans to construct a natural-gas-fired power plant, perhaps as a backup power source for when the wind is not blowing at Whistling Ridge. The applicant should be required to disclose those plans now, so that the impacts of a natural-gas-fired power plant can be considered along with the impacts of the wind project. Also, Williams is proposing a new gas line for the Whistling Ridge area, and the substation and transmission inter-tie lines proposed for the Whistling Ridge area could signal the advent of additional power plants in the area. These must be evaluated along with impacts of the infrastructure currently being proposed. A recent study in Colorado found that wind power's supposed carbon emissions benefits are not being realized, because of the requirement for conventionally-generated backup power. (How Less Became More... Wind, Power and Unintended Consequences in the Colorado Energy Market, Prepared by Bentek Energy LLC for the Independent Petroleum Association of Mountain States, April 16, 2010.) Because all coal-fired power plants and some natural-gas-fired power plants produce greater emissions when they act as backup systems for wind power, thanks to inefficiencies associated with cycling on and off, the benefits of wind power in reducing carbon emissions are reduced. Contrary to what the DEIS states, there is no evidence that the Whistling Ridge project will have a beneficial impact on air quality in the Columbia Gorge vicinity. No fossil fuel-fired projects will be taken offline as a result. In fact, backup power from fossil-fuel fired projects may be required for those times when the wind is not blowing. [LTR 161, CMT 11]*

**Response**: Please see response to Comment LTR 36, CMT 10 above.

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**Comment**: *[In reference to Section] 3.14.3, CUMULATIVE IMPACT ANALYSIS, [Section] 3.14.3.5, Habitat and Wildlife Bird and Bat Species, p. 3-274: This section provides: "Erickson et. al. (2005) concluded that these sources of mortality [i.e., other anthropogenic sources] are likely much larger than the potential impacts of wind power development." This statement of relativism is misleading and is not consistent with the intent of a cumulative impacts analysis. While on its face the statement is likely true, the question is whether wind energy, by adding incrementally to mortality, would be enough to negatively impact bird or bat species. [LTR 177, CMT 66]*

**Response**: The reference to other potential causes of mortality for bird and bat populations in a given region, including collisions with buildings, transmission lines and vehicles, habitat loss, and predation by domestic cats was mentioned to provide a context within which to view the potential threat posed to these populations by wind generation facilities. The study referenced in the DEIS, Erickson et. al. (2005), reported that recent research estimated that mortality threats to these species from these sources were many times larger than those from wind energy generation (Erickson et al. 2005; 2008).

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**Comment**: *The West report does disclose that this species could be at risk from wind energy facilities, and suggests that exclusion zones around core habitats might be warranted. In light of the current plight of this species, the "no impact" conclusion needs to be re-evaluated. Another problem with the West report is that it focuses solely on impacts from the full build out of all anticipated wind development projects in the Columbia Plateau Ecoregion. While informative, this analysis misses the point of a cumulative impacts analysis, which is to evaluate the impact of the current project (in the West report, all anticipated wind energy development) in conjunction with all other reasonably foreseeable stresses on the resource - the analysis should have been wider ranging and not restricted to wind energy development. Cumulative effects result from spatial (geographic) and temporal (time) crowding of environmental perturbations. The effects of human activities will accumulate when a second perturbation occurs at a site before the ecosystem can fully rebound from the effect of the first perturbation. [LTR 177, CMT 68]*

**Response**: The lead agencies believe that the EIS provides a reasonably thorough discussion of potential cumulative impacts associated with the proposed Project. Based on the past, present and reasonably foreseeable future actions identified in Sections 3.14.1 and 3.14.2 of the EIS, the overall cumulative impact from these actions and the additional incremental impact of the proposed Project are analyzed by resource in Section 3.14.3 of the EIS. For each resource, relevant cumulative actions and projects with potential or actual impacts on that resource are identified, and the cumulative effect of the proposed Project coupled with these relevant cumulative actions and projects is discussed. As indicated in other responses to comments, the cumulative impact analysis in Section 3.14 of the EIS has been updated to include a more current cataloguing and analysis of relevant cumulative projects. Also, Section 3.14.3.5 has been revised to include new information on the potential for cumulative impacts to birds and bats associated with wind energy development in the Eastern Cascades and other coniferous forested portions of western Washington and Oregon.

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**Comment**: *Fragmentation and habitat degradation are two of the major problems in the shrub-steppe. Development, land conversion, fire, incompatible grazing practices, and weed invasion are all driving mechanisms. The question of whether wind energy development in the Columbia Plateau Ecoregion could add synergistically to these sources of stress is not addressed in the West report. The DEIS mentions that climate change is not evaluated as a source of stress. Climate change projections for Washington and the Pacific Northwest suggest dramatic changes in East-slope forests (as well as shrub-steppe), and these changes should be discussed in the context of cumulative impacts. [LTR 177, CMT 69]*

**Response**: EFSEC and BPA recognize that the WEST report was developed for the more arid shrub-steppe lands, rather than the coniferous forests found within the proposed Project Area. The conclusion from their report remains pertinent for the proposed Project, because avian mortality from wind developments is far less significant than the effect from traditional energy development or climate change. There are no other projects in coniferous forests in the west for comparison, so the Klickitat study was used for comparison purposes. Additionally, the WEST report has been updated and added to Appendix C-11. Also, Section 3.14.3.2 has been updated with new information from the U.S. Global Change Research Program with specific issues related to the Pacific Northwest.

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**Comment**: *General Comment on DEIS - Speculation here, but such efforts could be explained by the future "relative" ease of proposing a Natural Gas Energy Plant on adjoining lands, given a number of factors, the least of which is the NG pipeline running thru the currently proposed Wind project. Remedy - If any knowledge of plans for additional development at or near the proposed site of WRE, the impacts from such must be addressed at this time. [LTR 178, CMT 142]*

**Response**: The Applicant has no plans for additional development at or near the Project Area.

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**Comment**: *The Environmental Impact Analysis in the DEIS is Seriously Deficient. A. The DEIS Fails to Give Adequate Consideration to Cumulative Effects. The consideration of cumulative effects in the DEIS is inadequate. A cumulative impact is the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7. NEPA requires that an EIS assess cumulative impacts in sufficient detail to be "useful to a decision maker in deciding whether, or how, to alter the program to lessen cumulative impacts." City of Carmel-By-The-Sea v. U.S. Dep't. of Transp., 123 F.3d 1142, 1160 (9th Cir. 1997). The cumulative impacts analysis for a proposed project must examine past, present, and proposed/reasonably foreseeable actions in the same area. 40 C.F.R. §§ 1508.7, 1508.25, 1508.27(b)(7); Tomac v. Norton, 433 F.3d 852, 864 (D.C. Cir. 2006). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508.7. "To consider cumulative effects, some quantified or detailed information is required. Without*

*such information, neither the courts nor the public, in reviewing [an action agency's] decisions, can be assured that the [agency] provided the hard look that it is required to provide." Neighbors of Cuddy Mountain v. U.S. Forest Service, 137 F.3d 1372, 1379 (9th Cir. 1998). The cumulative effects of the proposed action, combined with the cumulative effects of other proposed actions, must be described in detail. Muckleshoot Indian Tribe v. U.S. Forest Service, 177 F.3d 800, 810 (9th Cir. 1999). Broad and general statements "devoid of specific, reasoned conclusions" are not sufficient; neither are one-sided cumulative impact statements. Id. at 811. [LTR 179, CMT 47]*

**Response**: The lead agencies believe that the EIS provides a reasonably thorough discussion of potential cumulative impacts associated with the proposed Project. Based on the past, present and reasonably foreseeable future actions identified in Sections 3.14.1 and 3.14.2 of the EIS, the overall cumulative impact from these actions and the additional incremental impact of the proposed Project are analyzed by resource in Section 3.14.3 of the EIS. For each resource, relevant cumulative actions and projects with potential or actual impacts on that resource are identified, and the cumulative effect of the proposed Project coupled with these relevant cumulative actions and projects is discussed. As indicated in other responses to comments, the cumulative impact analysis in Section 3.14 of the EIS has been updated to include a more current cataloguing and analysis of relevant cumulative projects.

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**Comment**: *As an initial matter, the geographic scope used in the DEIS to examine cumulative impacts is internally inconsistent and arbitrary and capricious. On the very same page (1-36), the DEIS contains two different geographic standards for measuring cumulative impacts. First, under Existing Development, the DEIS properly sets the geographic scope for wind power development as extending from Cascade Locks to the intersection of I-84 and I-82. Then, on the very same page, under Reasonably Foreseeable Future Development, the DEIS arbitrarily limits itself to projects within 20 miles from the Whistling Ridge project site. This internal inconsistency is arbitrary. Many of the existing wind projects more than 20 miles away contribute to adverse cumulative effects in conjunction with the proposed Whistling Ridge project. For instance, these existing wind projects can be seen in same viewshed as the Whistling Ridge site, as viewed from locations within the Gifford Pinchot National Forest such as Little Huckleberry Mountain. The arbitrary limit of 20 miles also means that certain pending projects such as Windy Flats West, which may have similar impacts on the National Scenic Area to those of Whistling Ridge, but which is 26 miles away, are being improperly excluded from the impacts analysis. [LTR 179, CMT 48]*

**Response**: Please see response to Comments LTR 36, CMT 3 and LTR 177, CMT 16 above.

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**Comment**: *The attempt in the DEIS at identifying and evaluating the cumulative impacts is sorely lacking. The DEIS fails to consider adequately the past, present, and reasonably foreseeable future impacts of other projects in the area. First, the DEIS does not adequately catalogue or discuss the impacts of past projects on the area, as it is required to do under NEPA.*

*City of Carmel, 123 F.3d at 1160. Rather, it arbitrarily limits itself to considering only other wind projects, and even then relies on a rough and incomplete list of existing wind projects that discusses generalities, without providing the information necessary to complete the reasoned analysis that NEPA requires. [LTR 179, CMT 49]*

**Response**: The impacts of past projects in the area, in addition to wind projects, are discussed and considered extensively throughout the cumulative impact analysis in Section 3.14 of the EIS. For example, the cumulative impact from various past activities such as land conversion and logging activities on terrestrial wildlife species is discussed in Section 3.14.3.5 of the EIS. The EIS thus includes the current aggregate effects of past actions without extensively delving into the details of each individual past action. This aggregate approach is consistent with CEQ's Guidance on the Consideration of Past Actions on Cumulative Effects Analysis, which provides that federal agencies "are not required to list or analyze the effects of individual past actions unless such information is necessary to describe the cumulative effect of all past actions combined."

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**Comment**: *Second, the DEIS fails to catalogue or analyze the impact of numerous planned or ongoing development projects, including wind projects and other types of projects. For example, the DEIS fails to consider the cumulative impacts of the proposal in relation to the following planned and ongoing projects: The DEIS, at pages 1-36 and 3-265–266, relies only on a wind power map and list found at http://www.nwcouncil.org/maps/power/Default.asp. The map relied on by the DEIS is severely incomplete, missing multiple wind energy projects within the project study area, including but not limited to Windy Flats West, Windy Flats, Windy Point II, Miller Ranch, Hoctor Ridge, Imrie, Linden Ranch, Miller North, Windtricity, Harvest Wind, School Section, Golden Hills, Golden Hills Addition, Golden Hills 2, Golden Hills 3, Biglow Canyon 2, Biglow Canyon 3, Nook Wind, Star Point, Shepherds Flat, Shepherds Flats 2, Shepherds Flat 3, Shepherds Flat 4, Shepherds Flat 5, Pebble Springs, Willow Creek, Montague I, Montague II, Condon Wind, Summit Ridge, Baseline, Saddle Butte, Echo Wind, and PaTu. The DEIS fails to consult multiple other maps and lists of wind projects in the region, let alone the documents pertaining to those projects such as environmental impact statements. As a result, the cumulative impacts of this project in conjunction with other wind projects in the region is grossly underestimated. Maps and lists of other wind projects can be found at http://www.klickitatcounty.org/planning/FilesHtml/windprojects.pdf, http://www.oregon.gov/ENERGY/SITING/review.shtml, and http://www.transmission.bpa.gov/PlanProj/Wind/documents/BPA_wind_map_2010.pdf and are being filed as Exhibits herewith. [LTR 179, CMT 50]*

**Response**: Figure 3.14-1, which depicts Existing and Proposed Development from Troutdale to Arlington, Oregon, along I-84, has been updated. This new figure is believed to capture all existing and proposed projects along this corridor.

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**Comment**: *The Broughton Lumber Company has proposed a 250-unit housing development and recreation resort at the site of its defunct lumber mill in Skamania County, Washington. The*

*site is in the same viewshed as the proposed Whistling Ridge Project. A casino is proposed in Cascade Locks, Oregon. If built, it would induce unprecedented amounts of traffic through the National Scenic Area. The cumulative impacts of this project, including the high volumes of casino traffic in conjunction with the heavy and oversized load truck traffic potentially travelling along I-84 for the Whistling Ridge project, was not considered. [LTR 179, CMT 52]*

**Response**: In reference to the commenter's statement that the Broughton Lumber Company plans to develop a 250-unit housing development and recreation resort at the site of its former lumber mill, the statement is not accurate. The Columbia River Gorge Commission amended its Commercial Recreation zoning designation to encourage a recreation resort on former industrial property such as the Broughton Mill site. While the zoning was amended to encourage the re-use of this site, there currently is no proposal or application by Broughton Lumber Company, or any other applicant, to proceed with the re-development. Any response related the scope, timing or potential for redevelopment of the former Broughton Lumber Mill would be entirely speculative. The casino is proposed to be located in Cascade Locks, off of I-84 on the south side of the Columbia River. Cumulative traffic impacts with the proposed casino would be short term (two to three months) during the Whistling Ridge Project construction, and limited to only a portion of the transports (those primarily using I-84).

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**Comment**: *Every year, multiple residential dwellings are approved in the same viewshed as the proposed Whistling Ridge Energy Project. This cumulative scenic impact is not even mentioned, let alone estimated, by the DEIS. [LTR 179, CMT 53]*

**Response**: Existing residential development is characterized in Section 3.14.1 of the EIS. Additional text has been added to Section 3.14.3.10 of the EIS address the potential cumulative visual effects of future residential development. This additional text describes how any new residential development would be required by the CRGNSA Management Plan to either be not visually evident or visually subordinate. The combination of the Project with future residential development, therefore, would not be significant.

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**Comment**: *The DEIS acknowledges that the footprint of the project is within working timber lands, but fails to discuss the cumulative impacts of clearcutting forest in conjunction with permanently converting forest land for industrial use. Washington DNR Forest Practice applications in the vicinity of the project include FPA 2702000, FPA 2702622, FPA 2702784, FPA 2702862, FPA 2703252, and FPA 2704427. The DEIS does not address the cumulative impacts of the massive clearcutting that has occurred or the impacts of those forest practices in conjunction with converting forest land to non-forest use. In addition to the forest practices in the immediate vicinity of the project, the DEIS must include evaluation of impacts of the project in conjunction with forest practices in the region. [LTR 179, CMT 53]*

**Response**: The text in Section 3.14.3.4 correctly points out that construction and operation of the Whistling Ridge Energy Project would take place in the context of the existing use of the Project vicinity generally for commercial forestry, which includes regular cycles of clear-cutting

and reforestation. It should be noted that the Project would permanently affect only approximately 56 acres of the 1,152-acre proposed Project Area.

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**Comment**: *The Blue Bridge Pipeline has been proposed to be constructed in the vicinity of the project. This proposal is currently under review by the Federal Energy Regulatory Commission under Docket No. PF09-10-000. The project could involve permanent linear clear cuts in the vicinity of the project. [LTR 179, CMT 55]*

**Response**: The Blue Bridge Pipeline Project is no longer an active Project. Williams Northwest Pipeline asked federal regulators to terminate the regulatory process for the Blue Bridge Pipeline Project in August 2010.

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**Comment**: *Three towns in the Columbia River Gorge National Scenic Area have proposed expansions of their urban area boundaries into Scenic Area lands. These are Hood River, The Dalles, and Lyle. If approved, these urban expansions would result in population growth, more traffic, loss of farm land, forest land, open spaces, and likely adverse effects to scenic, natural, cultural and recreation resources. These projects and others not analyzed in the DEIS will have cumulative impacts on environmental and socioeconomic factors. In order to adequately evaluate the impacts of the proposed project, the DEIS must consider these current projects. Failure to do so means that the DEIS lacks sufficient detail to allow a decision maker to meaningfully evaluate the full impacts of the proposed project or to decide how to alter the proposal to lessen cumulative effects. [LTR 179, CMT 56]*

**Response**: A search was made in the fall of 2009 of the web sites of the surrounding counties, the Columbia River Gorge Commission, and state and ports to identify reasonable and foreseeable potential projects. The expansion of urban area boundaries was not listed on any of the sites. A similar search was made on April 11, 2011, including on the Columbia River Gorge Commission website (*http://www.gorgecommission.org/default.cfm*), and no information was found on proposed expansions of the mentioned urban area boundaries. Cumulative impact analysis typically considered the physical impacts of known or reasonably forseeable projects in context with each other. A boundary expansion may result in future projects, however until those projects are known, it would be speculative to identify potential cumulative impacts with the Whistling Ridge Project.

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**Comment**: *Also, as explained in the attached expert analysis by Dr. Shawn Smallwood, the cumulative impacts analysis in section 3.14.3.5 of the DEIS is methodologically flawed and the conclusions are misleading. [LTR 179, CMT 57]*

**Response**: The baseline avian use study was conducted in compliance with the Washington Department of Fish and Wildlife (WDFW) Wind Energy Guidelines (WDFW 2009); and, the WDFW has stated that the baseline studies were done in compliance with their guidelines.

However, many of these fatality estimates were made several years ago, when there was little available fatality data to inform predictions. For example, the baseline study for the Klondike project was conducted in 2001 and early 2002. No estimates were made for raptor fatalities at Klondike, except the baseline report stated that they would be "nonexistent to low" based on the raptor use data. Raptor fatalities at Klondike I and III were actually 0 as predicted. We're not sure how the raptor fatality estimate of 0.11 for Klondike II was considered 11 times higher than "low." In addition, the inflated estimates of raptor mortality calculated by Smallwood are flawed and he used these estimates to compare to predictions. The fatality rate independently estimated by Smallwood for Whistling Ridge was 33 raptors/year, or 0.44 raptors/MW/year. Raptor fatality rates at 13 facilities in the Pacific Northwest have ranged from 0 to 0.29 and averaged 0.09/MW/year. The raptor use data collected at the Whistling Ridge site do not suggest raptor mortality would be higher at Whistling Ridge than other projects with similar raptor use estimates, and not as high as what Smallwood predicted. Smallwood states that bird and bat fatality rates are underestimated due to a bias in the estimator used by the Applicant's consultant (WEST), which is known as the Shoenfeld estimator (Shoenfeld 2004). Also, one of the projects Smallwood selected to show how fatality rates were underestimated was the Bighorn project. That project was analyzed by another consultant (Northwest Wildlife Consultants) who used a different estimator, known as the Huso estimator (Huso 2010). Huso (2010) has demonstrated that that estimator is generally unbiased. Hugo also has shown that the Hugo estimator and the Shoenfeld estimator give similar results when the search intervals are large (e.g. 14 - 28 days), which is the case for most of the studies in the Pacific Northwest. Smallwood did not elaborate on what estimator was used or what the bias was, but it is assumed Smallwood used a "novel" approach as outlined in Smallwood et al. (2010). One likely assumption in the use of the estimator that Smallwood presumably used assumes that a carcass, if missed by a searcher during the first search, no longer has any chance of being found during subsequent searches. It has been demonstrated in studies that fatalities that are missed the first time have a good chance of being picked up in subsequent searches (Arnett et al. 2009). Not accounting for this probability of finding carcasses during multiple searches leads to an overestimate of fatality rates in Smallwood's estimator.

There is a growing body of data available to compare pre-construction avian use estimates with post-construction mortality, and the pre-construction use estimates show a positive correlation with avian mortality. The methods used to show a disparity between pre-construction estimates and elevated post-construction mortality are being contested as not accurate. The proposed Whistling Ridge Project is located in Skamania Co., rather than Klickitat Co., so estimates of wind development for Klickitat Co. were not considered. The American Wind Energy Association reviewed human-caused sources of bird mortality in 2001, and determined that only 0.01 to 0.02 percent of the mortality was from wind developments.

Finally, regardless of what the actual versus predicted mortality was, all of these projects used for comparisons had low raptor mortality compared to many projects in California noted for having high raptor fatality levels, and the baseline studies all predicted that raptor mortality would be relatively low based on raptor use, as was the case.

**Comment**: *Similarly, the cumulative impacts analysis of visual resources in section 3.14.3.10 of the DEIS is methodologically flawed and the conclusions are in error. Landscape architect and expert in visual resource assessment methodologies Dean Apostol has analyzed the DEIS and found the visual analysis woefully lacking and not up to professional standards. For example, the scenic resources cumulative impacts analysis evaluates only impacts to travelers on Interstate 84. While it underestimated the impacts to these views, it completely ignores the impacts to travelers on the Historic Columbia River Highway, the Columbia River, and other recreational resources in the vicinity. The cumulative impacts portions of the EIS are woefully inadequate and do not meet NEPA's or SEPA's requirements to conduct a rigorous and thorough analysis of cumulative impacts. [LTR 179, CMT 57]*

**Response**: The lead agencies believe that the EIS provides a reasonably thorough and sufficient analysis of the potential visual effects of the proposed Project, as well as potential cumulative visual impacts. For potential cumulative visual impacts, Section 3.14.3.10 of the EIS assesses these impacts from a variety of viewpoints, and considering a wide variety of past, present and reasonably foreseeable future development that could contribute to cumulative visual impacts. This section has been revised to clarify this assessment.

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**Comment**: *The DEIS fails to consider the direct and cumulative impacts of the proposed development on the energy grid and its infrastructure, and resulting impacts to natural resources. Under SEPA, the elements of the environment include the built environment, which in turn includes public services and utilities. WAC 197-11-444(2)(d). The energy grid is part of the built environment and impacts to the grid must be considered during the SEPA process. The DEIS failed to adequately analyze impacts to the grid. The DEIS discusses the need for the project to interconnect to the BPA transmission system, but fails to analyze the indirect and cumulative effects of new wind energy development on the grid and the need for new transmission facilities. DEIS at 3-87-92, 3-278. The DEIS states that the "proposed project would not be expected to affect the operation of the BPA's transmission system." DEIS at 3-92. The cumulative impacts section of the DEIS makes no mention of the grid or how the project would affect demand for new transmission facilities. Wind energy production in the region will ultimately be limited by the capacity of the Bonneville Power Administration to integrate new wind energy resources into the BPA electricity grid. Recently, BPA expressed concern about how it will reliably integrate over 6,000 MW of wind energy by 2013. Northwest Power and Conservation Council, Sixth Power Plan, at 12-11 (available at http://www.nwcouncil.org/energy/powerplan/6/default.htm). By adding more energy to the grid, the project increases the need for more capacity and more transmission lines and other infrastructure. [LTR 179, CMT 58]*

**Response**: Please see response to Comment LTR 36, CMT 10 above.

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**Comment**: *These significant changes warrant preparation of a comprehensive cumulative impacts analysis. The DEIS must be substantially revised to reflect the project's contributions to the regional impacts of wind energy development. [LTR 179, CMT 63]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment:** *On page 3-83, the DEIS stated, "The proposed project would cause mortality to birds and bats through turbine collisions. However, the level of mortality is not anticipated to be sufficient to negatively affect the population viability of any single species." This conclusion was offered in the absence of any population viability analyses (PVAs) or any other defensible risk assessments. There is no scientific basis for this conclusion. [LTR 181, CMT 24]*

**Response**: Please see response to Comment LTR 179, CMT 57 above.

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**Comment**: *ADDITIONAL COMMENTS ON THE DEIS. Cumulative impacts analysis in App. C-12 (page 1) identified dryland agriculture, CRP, and rangeland to be more suitable for wind power development on the Columbia Plateau than the surrounding mountainous areas that are more forested. I agree with this assessment. While developing a screening tool for siting wind energy facilities in California, I discovered that forested sites pose greater hazards to more bird species, including special-status species. [LTR 181, CMT 37]*

**Response**: EFSEC and BPA recognize that the WEST report was developed for the more arid shrub-steppe lands, rather than the coniferous forests found within the proposed Project Area. The conclusion from their report remains pertinent for the proposed Project, because avian mortality from wind developments is far less significant than the effect from traditional energy development or climate change. There are no other projects in coniferous forests in the west for comparison, so the Klickitat study was used. Only one other wind development is currently proposed, suggesting cumulative effects in this habitat type will remain very limited compared with other habitats. However, a revised report "Analysis of Cumulative Impacts on Avian, Bat and Habitat Associated with Wind Energy Development in the Columbia Plateau Ecoregion of Eastern Washington and Oregon" (WEST 2010) prepared for Klickitat County has been included as an appendix in the FEIS. A revised cumulative impacts analysis that takes into consideration wind energy development within forested habitats of western WA has been added to Section 3.14.3.5 of the FEIS.

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**Comment**: *A new cumulative impacts analysis is needed for this project, and it needs to include the potentially unique impacts of siting wind turbines in the forested environment of Skamania County. [LTR 181, CMT 57]*

**Response**: A revised cumulative impacts analysis, which takes into consideration proposed wind energy development in forests of western Washington and Oregon, has been added to Section 3.14.3.5, under the subheading of Bird and Bat Species.

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**Comment**: *Cumulative Impacts. The DEIS' evaluation of cumulative impacts makes only passing reference of the most significant incremental impacts this project would likely contribute to – wind power development in a forested landscape. There is no mention of either the proposed Radar Ridge or Coyote Crest wind projects, both in forested landscapes within the range of NSO. The DEIS lacks any analysis of either the impacts to bird habitat or avian collision mortalities that could reasonably be expected from significant "build out" of wind power on Northwest forested lands. There is no discussion of how additional wind projects within the range of NSO could impact that ESA-listed species, nor any analysis of how multiple wind power projects could impact the regional electrical transmission system. The FEIS should include a much more robust evaluation of the potential cumulative impacts from the growing wave of wind power projects on forested lands. It should analyze the potential cumulative impacts of a "full build-out" of wind power in the region on avian species, similar to the 2007 National Research Council assessment done for the Mid-Atlantic Highlands or the 2008 West Inc. study done for the Columbia Plateau Eco-region. (DEIS p. 3-274, 3-275) Such an analysis should include an up-to-date projection for potential wind power development in the region as well as incorporate accurate monitoring data on avian mortality and displacement. [LTR 196, CMT 8]*

**Response**: Please see response to Comment LTR 181, CMT 37, above.

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**Comment**: *I am a resident of Oregon and live in Portland but my wife and I own a second home in Mill A, Washington. It is my feeling that the assessment of direct or indirect and cumulative visual impacts caused by the project are inadequate. The methodology used was to evaluate the potential visual impacts from specific view points and that method does not account for the potential to the most common viewer of the Columbia River Gorge National Scenic Area, those that pass through and view the area as a whole, not the sum of its parts. [LTR 249, CMT 1]*

**Response**: The lead agencies believe that the EIS provides a reasonably thorough and sufficient analysis of the potential visual effects of the proposed Project, as well as potential cumulative visual impacts. For potential cumulative visual impacts, Section 3.14.3.10 of the EIS assesses these impacts from a variety of viewpoints, and considering a wide variety of past, present and reasonably foreseeable future development that could contribute to cumulative visual impacts. This section has been revised to clarify this assessment.

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**Comment**: *I feel that this cumulative impacts analysis should include the following future projects: Cascade Locks Tribal Casino Broughton Mill Redevelopment. Both of these projects have been evaluated and have had more than enough analysis to include in the cumulative analysis. I feel this is particularly important because SDA Lumber is responsible for both the Broughton Mill development and the Whistling Ridge Energy project. While the CGNSA plan includes the allowances for economic development in addition to the preservation of the unique scenic beauty of the Gorge, it is crucial that such projects as whistling Ridge include a thorough analysis of cumulative affects when such significant development projects threaten the scenic elements of the Gorge that warranted the creation of the NSA. [LTR 249, CMT 1]*

**Response**: Please see response to Comment LTR 179, CMT 52, above.

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**Comment**: *The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 266, CMT 3]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 270, CMT 3]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 274, CMT 3]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 274, CMT 3]*

**Response**: The lead agencies believe that the visual simulations included in the EIS provide a reasonable accurate representation of potential views of the proposed Project. Methods used to develop these simulations are discussed in Section 3.9.1.3 of the EIS. A total of 13 visual simulations from various representative vantage points throughout the Project vicinity were included in the EIS. More specifically, the EIS includes a visual simulation at a viewpoint along the Columbia River Highway, as suggested by the commenter (see Figure 3.9-14 in the EIS). Even for locations where visual simulations were not prepared, the potential visibility of Project facilities from locations throughout the Project vicinity are shown in Figures 3.9-1 and 3.9-2 of the EIS, and regional visual impacts from the proposed Project are discussed in Section 3.9.3.1 of the EIS.

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**Comment**: *What are the cumulative regional impacts of the existing transmission lines? What would be the future cumulative impacts of new transmission lines? Where would these new transmission lines be located? How big would they be? [LTR 279, CMT 5]*

**Response**: Consistent with NEPA and SEPA, the cumulative impact analysis in the EIS focuses on the incremental impact of the proposed Project when added to other past, present, and reasonably foreseeable future actions in the vicinity of the proposed Project. Section 3.14 of the EIS also considers existing BPA transmission lines in the Project vicinity, to the extent that they contribute to cumulative impacts for a particular resource. However, BPA does not have a region-wide program or plan concerning improvements or additions to its transmission system. These actions are proposed on a project-specific basis, when needed, to address various transmission reliability and service issues on certain portions of BPA's transmission system. Other BPA transmission infrastructure projects throughout the Pacific Northwest are therefore outside of the scope of this EIS.

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**Comment**: *The proposed location is flawed for reasons of cumulative impact. Existing industrial wind facilities and the rate of development of additional industrial wind facilities in the surrounding areas to the east have created an unacceptable cumulative impact on the wildlife populations of the area, as well as for many of the residents. [LTR 283, CMT 9]*

**Response**: The lead agencies believe that the cumulative impact analysis provided in Section 3.14 of the EIS fully complies with both NEPA and SEPA requirements by cataloguing cumulative projects in the region, considering the aggregate effects of relevant past projects in the region along with potential effects from relevant present and reasonably foreseeable future projects, and identifying the incremental impact of the proposed Project when added to these cumulative projects.

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**Comment**: *The proposed project location is ill conceived from another cumulative impact circumstance. Recent legal and government decisions related to the Broughton Mill resort and the Cascade Locks Casino make it possible that those facilities could become a reality. If so, the cumulative impact of these establishments, coupled with the construction of an industrial wind facility (and the precedent for other industrial developments) in a relative proximity to each other, could cumulatively negatively impact the Gorge in ways that we cannot now fully conceive. [LTR 283, CMT 11]*

**Response**: Please see response to Comment LTR 179, CMT 52, above.

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**Comment**: *As I have stated before, cumulative impacts, both direct and indirect, are not done on a project by project basis, but, according to NEPA regulations, must be done on a reference geographical and/or regional basis. This was not done by either SDS or BPA, the two proponents for this wind farm project. [LTR 284, CMT 3]*

**Response**: To clarify, consistent with SEPA and NEPA, the primary purpose of the EIS is to provide an analysis of the potential environmental impacts, both direct and indirect, associated with the proposed Project itself. Sections 3.1 through 3.13 of the EIS provide this analysis. The cumulative impact analysis provided in Section 3.14 of the EIS has not been prepared on a project-by-project basis, but instead considers the overall cumulative impact from the identified cumulative projects in the region. This analysis discusses the incremental impact of the proposed Project when added to these cumulative projects consistent with NEPA implementing regulations (see 40 CFR 1508.7). However, this analysis should not be confused with a programmatic EIS which would attempt to provide a comprehensive cumulative analysis of all potential wind projects in the region.

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**Comment**: *Briefly, some of my concerns: Cumulative effects and impacts on species viability are not adequately addressed in the DEIS - there is no supporting data to show if avian species birth rates, replacement rates, genetic diversity, etc., would or would not be affected by regional wind farms. This must be addressed. [LTR 284, CMT 4]*

**Response**: The Wildlife Society, in a landmark publication on wind energy and wildlife, concluded that fatalities of passerines from wind turbine strikes generally are not significant at the population level (Arnett et al. 2007). Also, the National Academy of Sciences (NAS 2008) recently reviewed wind energy impacts on birds, and came to the following conclusion: "At the current level of wind-energy development (approximately 11,600 MW of installed capacity in the United States at the end of 2006, including the older California turbines), the committee sees no evidence that fatalities caused by wind turbines result in measurable demographic changes to bird populations in the United States, with the possible exception of raptor fatalities in the Altamont Pass area." The available information suggests that the Project would be unlikely have to have population impacts on birds. Additionally, the revised report "Analysis of Cumulative Impacts on Avian, Bat and Habitat Associated with Wind Energy Development in the Columbia Plateau Ecoregion of Eastern Washington and Oregon," (WEST 2010) prepared for Klickitat County, does not suggest the possibility of cumulative population impacts on birds.

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**Comment**: *None of this was addressed in the Whistling Ridge DEIS in terms of cumulative impacts and effects on our region from the proposals to build more and more transmission lines. Why not? This is a real and vital deficiency of information, an information gap, in the DEIS, and these concerns about the effects of wind power on our power grid must be addressed. They have not been adequately addressed in the DEIS. This is a fatal flaw in the DEIS. [LTR 285, CMT 5]*

**Response**: Please see response to Comment LTR 279, CMT 5 above.

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**Comment**: *[In reference to Section 3.2.2, Impacts; PDF pg. 33], [c]umulative Impact Analyses are NOT done on a project by project basis. They are done on a regional, inclusive*

*basis. Therefore, any and all fossil fuel-powered plants and other types of backup energy production that is used to back up BPA's hydro power generation have to be accounted for in the DEIS. They are not. Just because Whistling Ridge doesn't have a gas power plant onsite does not mean that a gas power plant will not be used to balance its wind energy production on the grid. [LTR 286, CMT 18]*

**Response**: Please see response to Comment LTR 36, CMT 10 and LTR 284, CMT 3 above.

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**Comment**: *The statement "Using wind power also likely would have a beneficial effect on visibility" is patently inaccurate. If visibility in the Gorge and along the Columbia River has been deteriorating for 20 or more years when there wasn't any wind power to speak of, then it is pretty specious to make the correlation that using wind power today would have "beneficial" effects on visibility! The two things are not mutually inclusive. [LTR 286, CMT 18]*

**Response**: The commenter is referencing a discussion of avoided emissions in the Air Quality section of the EIS. This discussion is intended to provide a reasonable assessment of potentially avoided fossil fuel emissions related to the proposed Project, based on the Project's expected annual electricity production as compared to equivalent electricity production and associated emissions from a fossil fuel-based power plant. Based on this assessment, it is reasonable to assume that the proposed Project would not make visibility in the area any worse, and in fact may incrementally help improve visibility. To the extent that the commenter is correct that visibility has deteriorated over the past 20 or more years without wind power development, this actually helps prove the point that a shift to wind power - and away from burning of fossil fuels - may be beneficial to visibility in the area.

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**Comment**: *[In reference to Section 3.4.1.1, Regional Environment; PDF pg. 50], SO, where are the cumulative impact analyses for this apparently industrialized area? If all of this man-made infrastructure exists in this area, surely there are cumulative impacts and they must be considered in the broader context of cumulative regional impacts and effects of further industrialization - and a wind farm is an industry. [LTR 286, CMT 36]*

**Response**: Cumulative impacts to biological resources are addressed in Section 3.14.3 of the EIS.

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**Comment**: *[In reference to Section 3.5.1, Affected Envrionment; PDF pg. 98], [i]f BPA owns and operates 15,000 miles of power lines, and BPA is concurrently proposing building bigger power lines throughout the NW, where is the cumulative impacts analysis on the environmental effects of 15,000 miles of power lines? Where is the human health cumulative analysis? Where is the cumulative impact analysis on wildlife—habitat fragmentation, habitat destruction, herbicide effects, etc.? From the DEIS we learn that BPA provides energy to a "service area includes Oregon, Washington, Idaho, Western Montana, and small portions of Wyoming,*

*Nevada, Utah, California, and Eastern Montana" but this regional area is not included in any cumulative impacts analysis in this DEIS. Why not? BPA's energy production has cumulative effects on the environment, on ecosystems throughout their service area but there is no cumulative impact analysis reporting in this DEIS. This is another fatal flaw in this DEIS. [LTR 286, CMT 45]*

**Response**: Please see response to Comment LTR 279, CMT 5 above.

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**Comment**: *[In reference to Section 3.5.2.1, Proposed Action; PDF pg. 101], [i]f Klickitat County evaluated projected energy demand, then where is their cumulative impacts analysis for environmental impacts? Klickitat is in BPA's service area and any cumulative impacts from their energy production should be part of this DEIS. Cumulative impacts are just not calculated for past and present actions - they must also be calculated for FUTURE actions, such as the "seven 250MW or five 350MW natural gas thermal projects, and the two 50MW biomass projects, and the four wind power projects, and the solar projects" mentioned above. Where are the FUTURE cumulative impacts analyses for these FUTURE actions? [LTR 286, CMT 46]*

**Response**: The referenced Klickitat County Energy Overlay Zone Final EIS was mentioned in Section 3.5.2.1 to point out that the Whistling Ridge Energy Project was generally consistent with the types of energy technologies expected to be developed in the area over the next 25 years. Because the projects referred to in the comment are speculative at this time, they would not qualify as "reasonably foreseeable future development" for the purposes of the Whistling Ridge cumulative effects analysis.

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**Comment**: *[In reference to Section 3.14, Cumulative Impact Analysis; PDF pg. 268-269], [c]umulative impacts analyses are not done on a project by project basis. They are done on a regional basis, especially when there are regional impacts from these types of proposals! BPA is a regional provider of energy and therefore must do a regional cumulative impacts report detailing the cumulative environmental impacts of all its activities! [LTR 286, CMT 75]*

**Response**: Please see response to Comment LTR 279, CMT 5 and LTR 284, CMT 3 above.

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**Comment**: *Certainly SDS Lumber is also obliged to do a cumulative impacts and effects analysis of ALL its regional activities, too. SDS has a quarry in White Bingen that recently had some environmental issues. SDS is proposing a huge condo development on the shores of the Columbia River, in the National Scenic Area, that would result, if it comes to pass, in a large increase in population and a commensurate increase in local resources depletion. SDS has stated that it wants to also build a resort in Cascade Locks, OR, in the heart of the NSA. Another impact on local resources such as water and air quality, the Columbia River, quality of life, transportation, etc. [LTR 286, CMT 75]*

**Response**: The Applicant is a private corporation with no obligation to prepare cumulative effects analysis covering all of its regional activities. See other responses in this section regarding consideration of other Applicant projects or proposals that could result in cumulatively additive effects with its proposed Whistling Ridge Wind Project.

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**Comment**: *SDS and BPA have failed to follow the CEQ's Considering Cumulative Effects: Under the National Environmental Policy Act Handbook in analyzing cumulative regional impacts and this is a very disastrous fatal flaw in this increasingly inadequate DEIS. [LTR 286, CMT 75]*

**Response**: BPA believes that the cumulative impact analysis provided in Section 3.14 of the EIS fully complies with NEPA requirements by cataloguing cumulative projects in the region, considering the aggregate effects of relevant past projects in the region along with the potential effects from relevant present and reasonably foreseeable future projects, and identifying the incremental impact of the proposed Project when added to these cumulative projects. The CEQ handbook cited by the commenter, while a potentially useful reference document in certain circumstances, is neither formal CEQ guidance nor legally binding on federal agencies preparing EISs under NEPA. Additionally, since the Applicant is not a federal agency, it is not obligated to prepare cumulative effects analysis covering all of its regional activities.

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**Comment**: *[In reference to Section 3.14.3 Cumulative Impacts; PDF pg. 272-273], [t]his is not cumulative impacts analysis, folks. Table 5-3, Primary and special methods for analyzing cumulative impacts, in the CEQ NEPA Considering Cumulative Impacts Handbook (and I have provided EFSEC with a copy of this handbook in my previous testimony), lists these primary methods as follows: Questionnaires, interviews, and panels; checklists; matrices; networks and system diagrams; modeling; trends analysis [my comment: this is a very important part of any cumulative impacts analysis]; overlay mapping and GIS; carrying capacity analysis [my comment: this is a crucial and extremely important analysis and SDS and BPA have failed to do this analysis and it is a FATAL FLAW of the DEIS]; ecosystem analysis [my comment: VERY IMPORTANT and has not been done in this DEIS]; economic impact analysis [my comment: this has not been done. It involves establishing the region of influence, modeling the economic effects, and determining the significance of the effects.]; social impact analysis [my comment: Social impact analysis addresses cumulative effects related to the sustainability of human communities by (1) focusing on key social variables such as population characteristics, community and institutional structures, political and social resources, individual and family changes, and community resources, and (2) projecting future effects using social analysis techniques such as linear trend projections, population multiplier methods, scenarios, expert testimony, and simulation modeling. SDS and BPA have not done these analyses for this proposal and this is yet another instance of a fatal flaw in this DEIS. BPA at least should know better than to try to avoid these types of analyses! [LTR 286, CMT 76]*

**Response**: BPA believes that the cumulative impact analysis provided in Section 3.14 of the EIS fully complies with NEPA requirements by cataloguing cumulative projects in the region,

considering the aggregate effects of relevant past projects in the region along with the potential effects from relevant present and reasonably foreseeable future projects, and identifying the incremental impact of the proposed Project when added to these cumulative projects. The CEQ handbook cited by the commenter, while a potentially useful reference document in certain circumstances, is neither formal CEQ guidance nor legally binding on federal agencies preparing EISs under NEPA. Additionally, since the Applicant is not a federal agency, it is not obligated to prepare cumulative effects analysis covering all of its regional activities.

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**Comment**: *[In reference to Section 3.14.3, Cumulative Impacts; PDF pg. 275], [t]he U.S. Forest Service's Pacific NW Experimental Station, located in our own Skamania County, at the old Wind River Nursery site (the oldest nursery in the Pacific NW, dating back to 1909), has put together a CD set on global climate change and its effects on the Pacific NW. One of their conclusions is that we will get more rain and less snow pack, something which will definitely affect BPA's energy production and local quality of life. There will be impacts on fish and other wildlife. One of the things that their research did not address was any changes in wind patterns resulting from global climate change. This is the FUTURE part of cumulative impacts analysis and should be done for this DEIS! [LTR 286, CMT 77]*

**Response**: Analysis of cumulative effects related to climate change is included on DEIS page 3-270 to 3-271 of the EIS. As discussed in this section, while there generally is scientific consensus about the global environmental impacts of climate change, there is great uncertainty regarding the specific, localized effects of projected global warming. In addition, much of the scientific work done for estimating potential global warming effects has focused on macro-level analyses of likely future temperature and precipitation patterns, with the corresponding potential impact on ocean levels, and very little is known concerning how localized wind patterns might be affected. Finally, as discussed in the EIS, given the high variability of weather conditions in the Pacific Northwest and particularly in the Columbia River Gorge area, it is possible that any changes in wind patterns that may be experienced as part of future global warming would largely fall within historic variations. Accordingly, it is not possible, with any degree of relative certainty, to predict changes in local wind patterns caused by climate change, and regardless, it is expected that these changes would not represent a substantial deviation from historical variations such that the proposed Project would be affected.

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**Comment**: *[In reference to Section 3.14.3, Cumulative Impacts; PDF pg. 277], I feel like I'm banging my head against a brick wall… One more time: Cumulative impacts are not analyzed on a project by project basis, especially when cumulative impacts are regional. And, just because "threatened or endangered and other special-status species have been cumulatively impacted by past and present development" does not mean that we should continue practices that will impact them in the FUTURE! Cumulative impacts analyses measure past, present, and future direct and indirect impacts and their CUMULATIVE IMPACTS. [LTR 286, CMT 79]*

**Response**: Please see response to Comment LTR 284, CMT 3 above.

**Comment**: *[In reference to Section 3.14.3, Cumulative Impacts; PDF pg. 278], [w]hat does "permanent improvement" mean, exactly?!? What is the factual basis for this statement? [LTR 286, CMT 80]*

**Response**: "Permanent improvement" means the area that would be occupied permanently (i.e., for the life of the project) by proposed Project facilities, as shown in detail in Table 2-1 of the EIS.

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**Comment**: *[In reference to Section 3.14.3, Cumulative Impacts; PDF pg. 278], [w]here is the cumulative impact analysis supporting the statement that "The proposed actions thus would contribute INCREMENTALLY, THOUGH IN A RELATIVELY MINOR WAY, to the cumulative impact on terrestrial wildlife species and their habitat"?!? Again, cumulative analysis is NOT done on a project by project basis when there are regional impacts to be considered. It is these types of statements that litter this very inadequate DEIS throughout its many pages. There is no cumulative data or cumulative impacts effects analyses that have been done to support these flagrantly unfounded statements yet they are included in this data-deficient, weak, meager DEIS as if they are factual statements. FATAL FLAW. [LTR 286, CMT 80]*

**Response**: Please see response to Comment LTR 284, CMT 3 above.

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**Comment**: *[In reference to Section 3.14.3, Cumulative Impacts; PDF pg. 279], [t]here comes a point when the carrying capacity of a region is met and the cumulative impacts threshold is met. When that time comes, and it should be determined through thorough cumulative impacts and effects analyses, then it is time to say "NO" to further cumulative impacts on the region. When all the cumulative impacts are taken into account there might come a point when no further development can take place because the cumulative impact threshold has been reached and further development would detrimentally and permanently affect the environment. [LTR 286, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section 3.14.3, Cumulative Impacts; PDF pg. 281], Ok. So, cumulatively, all of these activities actually kill how many birds in total? What is the cumulative impact of all this killing on bird populations? Many birds are pollinators. Eighty percent of our agriculture (FOOD!) is dependent on pollinators, birds and bees, etc. What effects do wind farms have on pollinator mortality? How does any killing of pollinators by wind farms affect agriculture and our food supply? The cumulative effects of any pollinator mortalities are not addressed in the DEIS and should be. [LTR 286, CMT 82]*

**Response**: The lead agencies believe that the cumulative impact analysis provided in Section 3.14 of the EIS fully complies with both NEPA and SEPA requirements by cataloguing

cumulative projects in the region, considering the aggregate effects of relevant past projects in the region along with potential effects from relevant present and reasonably foreseeable future projects, and identifying the incremental impact of the proposed Project when added to these cumulative projects.

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**Comment**: *[In reference to Section 3.14.3, Cumulative Impacts; PDF pg. 282], [t]his statement "wind energy projects in the region in general, and the proposed project in particular, would not contribute to direct cumulative impacts to fish species" is an unsupported over-generalization with no science or common sense applied. The DEIS has no collective science data to support this assertion. However, there are most probably direct cumulative impacts [BPA's own fish projects show this] to fish species caused by BPA's energy production activities and the wind farm projects along the Columbia River, since they do contribute to BPA's energy production activities, must also contribute to the direct cumulative adverse impacts on fish species. Where is the cumulative impacts analysis on direct and indirect cumulative impacts to fish species in the region? [LTR 286, CMT 83]*

**Response**: Support for the conclusion that the proposed Project would not directly affect fish species or their habitat is provided in Section 3.4 of the EIS. As discussed in this section, no fish have been documented within the Project Area, no perennial streams are located in areas where the Project would be constructed, and any work in ephemeral drainages would occur when these drainages are dry. Nonetheless, Section 3.14.3.5 of the EIS does acknowledge and discuss the potential for the combined operations of wind projects such as the proposed Project to result in cumulative impacts to fish species in the Columbia River due to the interplay of these operations with hydrosystem operations during certain conditions. This section also discusses steps BPA currently is taking, such as DSO 216 and an interim Environmental Redispatch policy, to avoid these combined effects to help ensure that cumulative wind projects do not adversely affect fish species. Since these steps are designed to avoid wind generation from interfering with BPA's hydrosystem operations for fish, compliance of the proposed Project with these protocols would indeed ensure that there is no contribution from the proposed Project to cumulative impacts to fish species.

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**Comment**: *[In reference to Section 3.14.3, Cumulative Impacts; PDF pg. 283-284], [t]here is no way that the proponent can know that since the proposed wind farm would be subject to DSO 216 and that this authority would "avoid any contribution from the proposed project to indirect cumulative impacts to fish species"!! [LTR 286, CMT 84]*

**Response**: Please see response to Comment LTR 286, CMT 83 above.

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**Comment**: *In the NEPA booklet, Considering Cumulative Impacts, p. 8, Table 1.2, Principles of cumulative effects analysis, the #2 statement states "Cumulative effects are the total effect, including both direct and indirect effects [my underline emphasis], on a given resource,*

*ecosystem, and human community of all actions taken [my underline emphasis], no matter who (federal, nonfederal, or private) has taken the actions. Individual effects from disparate activities [my underline emphasis] may add up or interact to cause additional effects not apparent when looking at the individual effects one at a time [my underline emphasis]. The additional effects contributed by actions unrelated to the proposed action must be included in analysis of cumulative effects." Not only do all the current and future wind farms have to be included in the cumulative impacts analysis, but also to be included are any other development proposals in the affected region. For example, the proposed Cascade Locks, OR off-reservation casino that would contribute cumulative impacts on the Columbia River and the human and wildlife habitats. For example, the proposed SDS Lumber Broughton (WA) condominium development that would potentially introduce 1000-1500 new inhabitants on the shores of the Columbia River, inhabitants who would most certainly impact the Columbia River, for as we all know all treated sewage [this is not drinking water, folks!] goes into the Columbia River, as does everything that comes from our septic fields. For example, SDS has proposed a resort in Cascade Locks, OR, contributing more sewage water and resource depletion into the Columbia River waters, a river that is already considered one of the most toxic and needs to be cleaned up, not dirtied up some more. For example, SDS has a 50 lot subdivision proposal in Carson, WA, a unincorporated area which has no sewage treatment plant, and has approximately 2600 residents who all use septic fields. Everything flows downhill, as we all know, and it all ends up in the poor Columbia River. So, I would say that the wind farm proponent has failed, miserably, to do any cumulative impacts analyses that take into account direct and indirect impacts from a variety of activities that MUST be considered for this DEIS. Certainly, and I consider a fatal flaw of the DEIS, neither BPA or SDS Lumber have defined a BASELINE CONDITION for the resources, ecosystems, and human communities that would be impacted by the proposed project and all other projects that contribute to cumulative impacts. [LTR 286, CMT 84]*

**Response**: Please see response to Comment LTR 179, CMT 52, above.

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**Comment**: *[In reference to Section 3.18, Adverse Impacts; PDF pg. 295], [t]he proponent for this project is being very truthful here. There are "many…potential impacts of the Proposed Action…" that would "not occur" if this wind farm proposal was denied by EFSEC!! This would be a good thing for the environment and for our community. [LTR 286, CMT 86]*

**Response**: Comment acknowledged.

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**Comment**: *BPA has failed to do a cumulative impact analysis of the existing transmission lines for the DEIS and this is a fatal flaw. BPA has also failed to do a cumulative impact analysis of their FUTURE actions in regard to these existing transmission lines and BPA's proposals to put in NEW, and BIGGER transmission lines. [I will address this in another document.] This is just one very important reason why this Whistling Ridge wind farm proposal should be denied. BPA is a federal agency and is subject to NEPA and its cumulative impacts analyses. BPA has, fatally for the DEIS, not done its job. This DEIS should be sent back to BPA*

*and SDS for further analysis and data-gathering. CUMULATIVE IMPACT ANALYSES MATTER! [LTR 286, CMT 86]*

**Response**: Please see response to Comment LTR 279, CMT 5 above.

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**Comment**: *The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 287, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 287, CMT 4]*

**Response**: The lead agencies believe that the visual simulations included in the EIS provide a reasonable accurate representation of potential views of the proposed Project. Methods used to develop these simulations are discussed in Section 3.9.1.3 of the EIS. A total of 13 visual simulations from various representative vantage points throughout the Project vicinity were included in the EIS. More specifically, the EIS includes a visual simulation at a viewpoint along the Columbia River Highway, as suggested by the commenter (see Figure 3.9-14 in the EIS). Even for locations where visual simulations were not prepared, the potential visibility of Project facilities from locations throughout the Project vicinity are shown in Figures 3.9-1 and 3.9-2 of the EIS, and regional visual impacts from the proposed Project are discussed in Section 3.9.3.1 of the EIS.

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**Comment**: *In addition, the DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 288, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 289, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 290, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 291, CMT 5]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 292, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 293, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out of scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. [LTR 293, CMT 4]*

**Response**: The lead agencies believe that the visual simulations included in the EIS provide a reasonable accurate representation of potential views of the proposed Project. Methods used to develop these simulations are discussed in Section 3.9.1.3 of the EIS. A total of 13 visual simulations from various representative vantage points throughout the Project vicinity were

included in the EIS. More specifically, the EIS includes a visual simulation at a viewpoint along the Columbia River Highway, as suggested by the commenter (see Figure 3.9-14 in the EIS). Even for locations where visual simulations were not prepared, the potential visibility of Project facilities from locations throughout the Project vicinity are shown in Figures 3.9-1 and 3.9-2 of the EIS, and regional visual impacts from the proposed Project are discussed in Section 3.9.3.1 of the EIS.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. [LTR 294, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS proposal fails to present adequate and credible analysis of the impacts of this project over time and fails to consider an overall plan which recognizes other existing and potential future wind energy projects. [LTR 297, CMT 5]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy. projects and other development projects in the region. [LTR 307, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy. projects and other development projects in the region. [LTR 308, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy. projects and other development projects in the region. [LTR 309, CMT 4]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

**Comment**: *Whistling Ridge DEIS didn't have any of the information, as far as I was able to (not) find, about the existing transmission lines that would be used by the wind farm project and whether new ones would be proposed at some future date, the substation that is being proposed and what effects it would have on the environment, etc. [LTR 311, CMT 4]*

**Response**: Please see response to Comment LTR 279, CMT 5 above.

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**Comment**: *Why aren't the BPA transmission lines that Whistling Ridge would use not evaluated in the Whistling Ridge DEIS? [LTR 311, CMT 5]*

**Response**: Please see response to Comment LTR 279, CMT 5 above.

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**Comment**: *Cumulative impacts have to be done on a regional basis, not on a project basis. Why hasn't BPA done cumulative impacts analyses for their transmission lines and substations? For their towers and conductors? For their access roads? For their staging areas? Gates? Substation facilities? [LTR 311, CMT 8]*

**Response**: Please see response to Comment LTR 279, CMT 5 above.

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**Comment**: *There are cumulative impacts to wildlife and humans from BPA's energy generation. Where are the cumulative impacts and effects analyses in the DEIS? [LTR 314, CMT 3]*

**Response**: Cumulative impacts related to the proposed Project are analyzed in Section 3.14 of the EIS. Although BPA does not own any energy generation facilities, Section 3.14 of the EIS does consider the cumulative impacts of hydropower generation in the vicinity on resources such as fish species, as well as the cumulative impact of other wind projects in the vicinity on resources such as avian species and visual quality.

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**Comment**: *The DEIS does not look at cumulative impacts appropriate to the project. There are at least 15 wind projects in Klickitat County and 46 altogether (Oregon and Washington). [LTR 317, CMT 71]*

**Response**: The lead agencies believe that the cumulative impact analysis provided in Section 3.14 of the EIS fully complies with both NEPA and SEPA requirements by cataloguing cumulative projects in the region, considering the aggregate effects of relevant past projects in the region along with potential effects from relevant present and reasonably foreseeable future projects, and identifying the incremental impact of the proposed Project when added to these cumulative projects. However, in order to address the commenter's concerns related to the

number of projects evaluated and the proximity to the Project Area, the lead agencies have updated the following: Sections 1.8.1.1 and 1.8.1.2 as well as Sections 3.14.1 and 3.14.2. These changes remove the Middle Mountain project from further consideration in this EIS as well as include new wind projects that have come online since the DEIS. Additionally, Figure 3.14-1 has been updated to reflect these changes.

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**Comment:** *There seems to be a lot of talk about cumulative impacts but no analysis. You should include a graphical project of past and future conditions. Also there is no modeling which would address cause and effect relationships. Why are we not seeing the analysis with quantifying data? Where is the baseline data? [LTR 318, CMT 59]*

**Response**: Please see response to Comment LTR 179, CMT 47 above.

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**Comment**: *Considering Cumulative Effects Under the National Environmental Policy Act [LTR 319, CMT 1]*

**Response**: BPA believes that the cumulative impact analysis provided in Section 3.14 of the EIS fully complies with NEPA requirements by cataloguing cumulative projects in the region, considering the aggregate effects of relevant past projects in the region along with the potential effects from relevant present and reasonably foreseeable future projects, and identifying the incremental impact of the proposed Project when added to these cumulative projects. The CEQ handbook cited by the commenter, while a potentially useful reference document in certain circumstances, is neither formal CEQ guidance nor legally binding on federal agencies preparing EISs under NEPA.

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## G.4 ENVIRONMENTAL CONSULTATION, REVIEW, AND PERMITTING REQUIREMENTS

### G.4.1 ENDANGERED SPECIES ACT

**Comment**: *There is no evidence in the DEIS that the proposed project will be in compliance with the federal Endangered Species Act (ESA) of 1973, 16 USC §§ 1531-1544. Under the ESA, "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Section 9 of the ESA prohibits any actions that would "take" an endangered species, as well as actions that would cause an act constituting a "take." The Ninth Circuit has held that "a habitat modification which significantly impairs the breeding and sheltering of a protected species amounts to 'harm' under the ESA." It seems quite possible that the proposed Whistling Ridge wind project may kill a bald eagle, a migratory*

*bird, or an endangered species. The DEIS must evaluate the likelihood of each of these possibilities, and whether Incidental Take Permits are required from the U.S. Fish & Wildlife Service. A recent court ruling in West Virginia has made it clear that such permits are required under federal law when a wind project is likely to kill any individual animals protected by the Endangered Species Act. [LTR 161, CMT 9]*

**Response**: A discussion of the proposed Project's compliance with the federal Endangered Species Act is contained in Section 4.2 of the EIS. This section has been updated to include the US Fish and Wildlife's concurrence related to BPA's Section 7(a) consultation.

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## G.4.2 MIGRATORY BIRD TREATY ACT

**Comment**: *The DEIS fails to assess compliance with state and federal laws protecting bald eagles, golden eagles, migratory birds, and endangered species. There are reports of bald eagles and bald eagle nests at the proposed wind site. Yet there is no evidence that the proposed project will be in compliance with the state's Bald Eagle Protection Act, RCW chapter 77.12, and regulations associated with this act. Nor is there any evidence that the proposed project will be in compliance with the federal Bald and Golden Eagle Protection Act, 16 USC § 668-668( d). This act prohibits any person, association, partnership or corporation from taking a bald or golden eagle at any time or by any manner without a permit. A permit may be issued only if the take would be compatible with the preservation of the species. There is no evidence in the DEIS that the proposed project will be in compliance with the federal Migratory Bird Treaty Act (MBTA), 16 USC §§ 703-712. The MBTA requires that the U.S. Fish & Wildlife Service take enforcement against "any person, association, partnership or corporation" that "by any means or in any manner" pursues, hunts, takes, captures, kills, or attempts to take, capture or kill a migratory bird or any part, nest or eggs of any migratory bird. Under the MBTA, a corporation may take or kill a migratory bird only if the U.S. Fish & Wildlife Service determines that the take or kill is compatible with migratory bird treaties. This determination must include an evaluation of the bird's species abundance and distribution, as well as its migratory and breeding habits. The killing of a single migratory bird is sufficient to create criminal liability, and does not need to be intentional. [LTR 161, CMT 9]*

**Response**: A discussion of the proposed Project's compliance with the federal Migratory Bird Treaty Act is contained in Section 4.5 of the EIS. A discussion of the proposed Project's compliance with the federal Bald and Golden Eagle Protection Act has been added to the EIS under Section 4.7 of the EIS.

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### G.4.3 STATE, AREA-WIDE, AND LOCAL PLAN AND PROGRAM CONSISTENCY

**Comment:** *FP. A conversion permits and DNR surface mining reclamation permits (SMRP) are required for timber harvest and rock or gravel mining associated with conversion of forest land and the associated building or construction at the wind tower sites. This was not clear in the DEIS and the SMRP was not listed in Table 4-1. [LTR 172, CMT 3]*

**Response**: The permanently disturbed, cleared areas would be considered a "forest conversion" under the Washington Forest Practices Act because they would be implemented for the purposes of the Whistling Ridge Energy Project. At the time the FPAs were applied for, the Whistling Ridge Energy Project had not been approved, and therefore the forest conversion has not been approved. If the Governor of the State of Washington approves the Project, new FPA permits will likely be required.

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### G.4.4 COLUMBIA RIVER GORGE NATIONAL SCENIC AREA ACT

**Comment**: *We've got to stop building them so close to the Scenic Area until we know more about their long-term effects, and also come to an understanding about how much visual impact we should tolerate. [LTR 12, CMT 6]*

**Response**: The opinions of the commenter and their preference for other locations for the proposed project are acknowledged.

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**Comment**: *Why is your profit more important than the sacred beauty of the Columbia River Gorge? [LTR 22, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *The Congressional intent of the Gorge Scenic Act was to allow for ongoing economic activity in areas adjacent to the Scenic Area regardless of the affect that these adjacent areas may have on the view from the scenic area. In other words, there was to be no buffer zones to the buffer zone already established by the Gorge Scenic Area boundary. Also I believe that the construction of the Whistling Ridge Wind Farm would not degrade the scenic beauty of the Columbia River Gorge National Scenic Area. As a point of law, EFSEC does not have the authorization to establish new exclusion zones such as buffers to the Gorge Scenic Area without additional authorization from either the legislature or the US Congress. Visual Impact on the Columbia River Gorge National Scenic Area should be an issue of consideration in any*

*Environmental Impact Statement review, but the determination of significance of any impact is not capricious or arbitrary, it must be based on the rules that are in place today. Development outside of and adjacent to the Columbia River Gorge National Scenic Area is allowed under the law and as such visual impacts to the National Scenic Area are allowed because the proposed facility is not located within the Scenic Area. I support renewable energy. I also supported and participated in the creation of Columbia River Gorge National Scenic Area which is a national scenic treasure. The creation of the Scenic Area involved a significant public involvement process that carefully considered the location of the boundary of the Scenic Area. The potential for wind energy development in the Columbia River Gorge area was a consideration when those of us who put pen to paper and drew the boundary participated in the creation of the Scenic Area. This boundary was established to buffer the significant resources of the Scenic Area and the legislation that created the Columbia River Gorge National Scenic Area clearly consider potential affects from development outside of the boundary and determined that such development would not be subject to the Scenic Act. It is not EFSEC's role to substitute its judgment for that of the US Congress on this issue. EFSEC must recommend that Governor Gregoire approve this project. [LTR 28, CMT 6]*

**Response**: Comments acknowledged. The fact that the proposed Project is located entirely outside of the Columbia River Gorge National Scenic Area is acknowledged throughout the EIS, including in Sections 2.1, 3.8, 3.9, 3.14, and 4.11 of the EIS. The EIS also addresses the applicability of the provisions of the Act that created the Scenic Area, as well as the Scenic Area Management Plan, to the proposed project.

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**Comment**: *The NIMBYs are concerned with the project being "near" the Columbia Scenic Gorge area. But, it isn't within the Gorge Area. And, thus, isn't subject by attack by the Friends of the Gorge on that account. [LTR 31, CMT 3]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *We oppose the industrialization of rural areas expecially an area that is designated as a national scenic area. [LTR 33, CMT 5]*

**Response**: The opposition of the commenter to the location of the proposed project is acknowledged. Potential visual impacts of the proposed project, including impacts to views from within the National Scenic Area, are discussed and evaluated in Section 3.9 of the EIS.

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**Comment**: *Whistling Ridge is located outside the National Scenic Area and should not be subject to NSA concerns. Few if any turbines will be visible and this area of the Columbia River Gorge should be available to produce clean renewable energy. [LTR 34, CMT 3]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

**Comment**: *I am a native Oregonian and my father was a native Oregonian logger and logging road builder. I now live in Lyle, WA in the Columbia Gorge. Although I am supportive of alternate energy, I am more supportive of keeping the gorge as pristine as possible. When I saw the before and after photos that SDS had in their brochure I couldn't believe they thought these photos would incline people toward their position. It is obvious to me that the wind towers would be eyesores. We recently went to Yellowstone Park. As we drove through I thanked the people of vision who created and preserved the park's naturalness. We must do the same for what's left of the natural beauty of the gorge. My husband is a consultant in the lumber industry and we understand the difficulties the industry is having at this time. But the economic success of the few cannot be the only impetus to allow this project. There is only one Columbia Gorge, we cannot allow its beauty to be compromised. I am unable to attend either of the meetings, but I would like to register my opposition to this project. [LTR 39, CMT 1]*

**Response**: Please see response to Comment LTR 33, CMT 5 above.

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**Comment**: *Siting Columbia River Gorge would not degrade the scenic value of the Gorge. The turbines and their blinking lights may be slightly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point; however they are not within the scenic area itself. [LTR 40, CMT 5]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *I support renewable energy, adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. The rules governing the scenic area should not creep into managing surrounding areas. [LTR 40, CMT 8]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *In addition, locating 426-foot-tall turbines on the ridge line of the Columbia River Gorge would help power the values of the Gorge. The turbines may even be visible from some viewing areas within the National Scenic Area. The project would introduce industrial development into the natural, forested landscape and ENHANCE views in the National Scenic Area. I support renewable energy and I am in favor of industrial wind energy development within, and adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 44, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to express opposition to the proposal to site a large-scale wind farm on Saddleback Mountain in a location that is in the heart of the Columbia Gorge, and will be visible from several key viewing areas which are established in the Gorge National Scenic Act. [LTR 46, CMT 1]*

**Response**: Please see response to Comment LTR 33, CMT 5 above.

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**Comment**: *A giant scar on the Gorge land/river-scape (this includes the National Scenic Area). [LTR 49, CMT 4]*

**Response**: Please see response to Comment LTR 57, CMT 4 below.

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**Comment**: *Approximately 384 acres would be developed for the wind turbine foundations, connecting roadways and overhead and underground transmission lines. Each turbine would be more than 420 feet tall and equipped with blinking lights. The proposed wind turbines would cover more than 1,000 acres of highly visible ridgelines and would be seen from several designated key viewing areas in the Gorge including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-Underwood Road, and Panorama Point. The project would also be highly visible from communities and cities such as Mill A, Underwood, Hood River, and White Salmon. All wind developments should be sited east of the eastern boundary of the National Scenic Area (Maryhill and the Deschutes River) or in other areas not visible from the NSA. We need alternative energy sources, but here the cost in loss of other assets is too great! [LTR 51, CMT 2]*

**Response**: Please see response to Comment LTR 12, CMT 6 above.

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**Comment**: *The Columbia River Gorge is the only federally designated scenic area in the U.S. While I'm in total support of renewable energy, placing wind turbines where they are visible within the scenic area is in my mind completely contrary to the purpose of designating this as a scenic area. [LTR 57, CMT 2]*

**Response**: The opinions of the commenter concerning the intent of the National Scenic Act and congressional and other expectations at the time that Act was passed are acknowledged.

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**Comment**: *In addition, locating 426-foot-tall turbines on the ridge line of the Columbia River Gorge would degrade the scenic value of the Gorge. The turbines and their blinking lights would be highly visible from several designated key viewing areas within the National Scenic Area, including Interstate 84, the Historic Columbia River Highway, Columbia River, Cook-*

*Underwood Road, and Panorama Point. The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. [LTR 57, CMT 4]*

**Response**: Comments acknowledged. Potential impacts to views in the Project vicinity, including from within the Columbia River Gorge National Scenic Area, are discussed and evaluated in Section 3.9 of the EIS. In addition, a total of 13 visual simulations from various representative vantage points throughout the Project vicinity were included in the EIS, with 10 of these visual simulations from locations within the Scenic Area. Even for locations where visual simulations were not prepared, the potential visibilities of project facilities from locations throughout the project vicinity are shown in Figures 3.9-1 and 3.9-2 of the EIS, and regional visual impacts from the proposed Project are discussed in Section 3.9.3.1 of the EIS. The EIS also addresses the applicability of the provisions of the Act that created the Scenic Area, as well as the Scenic Area Management Plan, to the proposed project.

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**Comment**: *Regarding land use and the National Scenic Area. We all understand that regulations, boundaries, etc. do not preclude development of this type of project, however can you honestly say that the lawmakers and NSA visionaries understood (many, many years ago) that 400+ tall manmade, noisy, intrusive, structures would be created and erected. Can you honestly and with good conscience, ignore the basic intent of the National Scenic Act: "Preserve our nation's natural scenic resources", by siting loopholes, ordinance weakness, and the limits of our written language. Remember, this is permanent (30+years) and a resource that can never, never be reclaimed to its current grandeur. Please try to justify this project (as a whole or in parts) given this basic concept of natural scenic area preservation. If you knowingly and willingly ignore preservation of a scenic area, you will spoil our treasure just as oil is spoiling Florida beaches now. Please consider a reconfiguration of the project, at a minimum to eliminate the most visible turbines, specifically the "A1-A7" array. [LTR 60, CMT 7]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *I know that you are tired, and a bit numb to the comments so far and yet to come, but I request that you review each as if you lived here. As if you come to the Gorge to enjoy the natural scenery, as if it was in your back yard. Remember, this project is in everyone's back yard, it is a National Scenic Area. [LTR 60, CMT 12]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment** *…would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. [LTR 66, CMT 3]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

**Comment** *…or a view envisioned by the National Scenic Act Drafters. [LTR 67, CMT 4]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *I object to the contention that proximity to the Columbia Gorge National Scenic Area should prove a barrier to this project. The project is located outside the national scenic area boundary. The intent of Congress in drafting the scenic area legislation in 1986 was to enhance environmental protection and economic development within the Columbia Gorge. While we still face the need to precisely define certain scenic area boundaries and achieve a necessary mechanism for modifying those boundaries over time, it is very clear that the intent of Congress was not to restrict developments proposed outside the current scenic area boundary. This principle has already been demonstrated in Klickitat and Sherman counties, where wind farms are already visible from within the national scenic area, and the precedent so established should also apply elsewhere in regions adjoining but not included within the national scenic area proper. Yes, there will be some visual impact. But in keeping with my first point, as a society we cannot have our cake and eat it, too. Wind turbines or Gulf Coast oil spills? Not to over-simplify our options, but as a society we will be asked to make precisely this same choice many times, in many places, in the long decades ahead as we confront the global climate change crisis. We might as well face reality now. I vote for wind turbines. [LTR 68, CMT 3]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *Opposition to this project from various groups on the grounds of impact to the scenic area is ridiculous. It is located outside COL. G.SA Boundary Lines and they have no right to dictate land use on private property. [LTR 71, CMT 3]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *This project is outside the boundary of the National Scenic Area. [LTR 72, CMT 3]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *The impact to the Scenic Area is too great. We may need more energy from sources other than oil. We may need to do more research on conservation. However THIS windfarm is not crucial to solving the energy crises. The harm to the scenic area and local residents is too great. [LTR 73, CMT 2]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.
**Comment**: *The Scenic Area impacts have been discussed by many already. It would be more than unfortunate to allow all of the effort that has so far been expended to maintain the un-occluded foothill views within the designated area to be despoiled by a project of this magnitude, even though it may be located just outside of the Scenic Area. To many, especially in these times, aesthetic values are worth advocating for. [LTR 76, CMT 7]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *The Condit Dam on the White Salmon River is going to be removed. Day-after-day, Condit churns out 8-10 megawatts of power, almost half of the firm power Whistling Ridge would produce. Should we rethink the facility's removal? No! Because it's been determined that salmon recovery is a higher priority than renewable energy from the White Salmon River. So it is with the Columbia Gorge. The Gorge was set aside by Congress as a special place to be preserved and protected for all future generations. No one anticipated the abomination of 500', gleaming white towers with rotating blades being located on ridges just outside the National Scenic Area boundaries, otherwise the lines would have been drawn differently. If this proposal is permitted along with other proposals in the east Gorge, the iconic landscapes that the Scenic Act purports to protect will become subordinate by day to giant towers with whirling blades and by night to flashing red lights. If the Whistling Ridge project is permitted, then it will be time to ask Congress to redraw the boundaries. The incongruity of industrial wind energy projects up-and-down the Gorge on ridge-tops just beyond the Scenic Area boundary flies in the face of the very intent of Scenic Act itself. [LTR 77, CMT 2]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *At an initial hearing before EFSEC on Whistling Ridge, Wallace Stevenson, owner of SDS, said that his company has always tried to do the "right thing". CGAS assumes that this was said to help persuade EFSEC to render a decision favorable to Whistling Ridge. We would like to balance the record with this: Concurrent with establishing the National Scenic Area, Congress designated the lower White Salmon River under the National Wild and Scenic Rivers Act. The management area boundary included some SDS property, including lands along Spring Creek, a critical area for salmon spawning once they are reintroduced. The Forest Service offered SDS a land exchange so these lands would not be logged and the values for which the river was designated could be preserved. Apparently SDS was unable to get above appraised values for their lands, so the company cut the forest down to include Spring Creek and other areas where hiking trails and picnic areas were planned. Now we ask you, was this the right thing to do? [LTR 77, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *The EIS should clearly state that, should this proposal be approved, it would set a precedent by allowing the first wind farm visible from within the Columbia Gorge Scenic Area. [LTR 79, CMT 5]*

**Response**: It is unclear at this time whether approval of the proposed Project would set a precedent for siting other wind projects in the area. Since all projects are evaluated on a case-by-case basis, approval of this Project does not dictate that any other Project that may be proposed in the future would also be approved. In addition, most developers are aware of the challenges of attempting to site wind projects in this general area. For the Applicant, proposing a wind project in this area may make sense, but other wind project developers may have differing opinions. Nonetheless, because there are no current proposals for other wind projects in the area; such future development is considered too speculative at this time.

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**Comment**: *Thank you for the opportunity to comment on this draft. Please respond to our comments and concerns in the next version of the EIS. The SDS proposed wind turbine field you are now studying is unique in several respects: It would be the first such project located directly adjacent to the Columbia River Gorge Scenic Area and would introduce turbine towers visible from various locations within the Scenic Area. [LTR 79, CMT 14]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *The Gorge Act, though it did not visualize tall towers that would impact views from the gorge, is very specific about aesthetics. Since the Act's implementation, even single nonconforming houses have generated extensive debate. [LTR 79, CMT 14]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *Jim Luce called last week and left the following question "How does EFSC work with critical viewing areas in the Columbia Gorge Scenic Area?" Historically, protected areas are listed as part of our rules (OAR 34.5~22~0040) and the Columbia River Scenic Area is one those listed, see paragraph (g). By virtue of being listed an energy facility is not allowed. The big however is that we do not assume that an energy facility outside the scenic is automatically precluded. For example; when FirstWind proposed the Seven Mile Hill project, just east of the Dalles and bordering the scenic area, the issue of the CGSA came up amid the applicant was told that they could not place their facility in the that protected area. Multiple discussion were had that being able to see the facility from the CGSA was not the issue as you can stand within the CGSA and see a myriad of industrial views. However, as FirstWind withdrew the application that regulatory finding was not challenged. Thus, it remains our hypothesis that, for Oregon only a facility within the CGSA would be prohibited. [LTR 85, CMT 1]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

**Comment**: *Although the site is outside the Scenic Area, it will be visible from the Scenic Area. [LTR 92, CMT 2]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *We also offer the following observation with respect to the Columbia River Gorge Scenic Area. Whistling Ridge is proposed for location outside the National Scenic Area boundaries. It is outside the purview of the Columbia River Gorge Commission, the Scenic Area Management Plan, and all National Scenic Area Act Provisions affecting land use. Similar to Skamania County, Klickitat could not realize its community and economic development objectives or address its historically high unemployment levels, if Scenic Area proximity were to restrain wind or other types of development in the thirteen exempted urban areas (eg the cities of Hood River, Bingen, White Salmon, and the Dalles) or external to the National Scenic Area boundaries. Such an outcome would be inconsistent with the letter and intent of the National Scenic Area Act. [LTR 93, CMT 4]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *Since all wind turbines will be located outside of the Columbia Gorge National Scenic area, this should not even be an issue. I hope the lazy turning turbine blades will soon be a sign of progress, and a promise of better things to come. [LTR 96, CMT 5]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *The project area is outside the Scenic Area thus concerns that relate to it should/do not apply. [LTR 97, CMT 2]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *I am a strong supporter of alternative energy sources, as long as they are properly sited and designed to minimally impact significant natural resources. Unfortunately, in the case of Whistling Ridge, I cannot support this particular development due to its potential negative impact on the Columbia River Gorge. [LTR 101, CMT 1]*

**Response**: The views of the commenter that the proposed location of this wind project is less suitable than other locations are acknowledged. The potential impact of the proposed Project on views in the project vicinity, including from within the Columbia River Gorge National Scenic Area, are discussed and evaluated in Section 3.9 of the EIS.

**Comment**: *The Columbia River Gorge was designated as a National Scenic Area in order to protect and manage its scenic beauty and abundant recreation opportunities. Unfortunately, at the time of the original designation, the legislation did not address "view impacts" of adjoining buffer areas as seen from within the National Scenic Area. I would think that, if industrial wind farms would have been prevalent in the Northwest at the time, the legislation would have addressed siting restrictions for this type of use in those areas where it would negatively impact the National Scenic Area. The Pacific Northwest does not have a shortage of available sites for wind energy developments. [LTR 101, CMT 1]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *Views. Our Members have mixed opinions as to whether they would necessarily object to views of the wind turbines, however, most believe that structures of this nature are not in keeping with the spirit or beauty of a National Scenic Area even though such structures are built on land that is just outside of the boundary. [LTR 119, CMT 9]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *Eliminating the A1-A7 turbines keeps the Whistling Ridge project in compliance with the basic intent of the National Scenic Act: to "Preserve our nation's natural scenic resources". This allows EFSEC to support the preservation of a scenic area while also supporting wind energy. [LTR 124, CMT 6]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *Would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. [LTR 127, CMT 3]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. The plan is in direct opposition to the Scenic Area, as it would impose unalterable impacts on major viewpoints, and any proposal or alternative that does not ban it outright is missing the main point. [LTR 131, CMT 1]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *Is there perhaps a site better suited for this development than in the heart of the Columbia River Gorge National Scenic Area? I think it's vital that we protect the scenic beauty of this particular place. I already wince at every clear cut visible in the NSA. The last thing we need is to add industrial development to an area that has already been compromised by commercial interests. [LTR 134, CMT 1]*

**Response**: The views of the commenter that the proposed location of this wind project is less suitable than other locations are acknowledged. The potential impact of the proposed Project on views in the project vicinity, including from within the Columbia River Gorge National Scenic Area, are discussed and evaluated in Section 3.9 of the EIS.

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**Comment**: *The City of Bingen notes that the Whistling Ridge project is located outside of the Columbia River Gorge National Scenic Area and is therefore not subject to the National Scenic Area Act. The City of Bingen is also in an area that is not subject to the National Scenic Area Act. We would not be able to realize our community and economic development objectives if proximity to the Scenic Area begins to restrain that development. The city believes that restrictions on propel1ies located outside of the Scenic Area or that are exempt from the Scenic Area Act are inconsistent with the letter and intent of the National Scenic Area Act. Thank you for considering our comments. [LTR 137, CMT 2]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *It has come to my attention that there may be some opposition to the project because several of the turbines may be visible from within the National Scenic Area. I find the argument disingenuous and political in nature. I don't consider a few turbines to be an eyesore, rather they are a powerful symbol of our changing economy in the gorge and our national commitment to renewable energy. I find the complaints hollow because those who complain of having to see a few turbines from inside the NSA have not complained of similar visual impairments from nearby communities. Stand inside the NSA and you can see signs of commerce, industry and development from nearby communities that are outside the boundaries of the NSA. It is as Congress intended: a balance of environmental protection and economic vitality. As a member of Congress, I have been a strong supporter of the NSA. The legislation specifically states in the Saving Clause of the Act, that no protective measures or buffer zones should be established around the NSA. This project is outside the NSA. It is not subject to the rules of the NSA. It is an environmentally sound project that should be embraced and encouraged. I support it. It is the right project at the right time in the right place. [LTR 138, CMT 5]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *Our second area of concern relates to protecting the incredible scenic beauty of the Columbia River Gorge. This area is a local, national and even global treasure, recently rated in National Geographic as tied for number 6 in the world for its natural and sustainable beauty. [LTR 139, CMT 22]*

**Response**: Comment acknowledged. The extraordinary nature of the Scenic Area is acknowledged. As discussed in the EIS, no part of the proposed Project would be located within the Scenic Area. Furthermore, the use of various roads to access the Project Area and the potential effect of the proposed Project on views from within the Scenic Area are discussed in the appropriate sections of the EIS.

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**Comment**: *Regulatory restrictions: Whistling Ridge Energy Project is located entirely Outside the Columbia River Gorge National Scenic Area. While close, the fact that the project is outside the boundary is significant. [LTR 155, CMT 3]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *SPECIFIC COMMENTS. Visual resources AWB strongly supports the Paragraph 4.11 (pg. 4-9) DEIS interpretation of the Columbia River Gorge National Scenic Area Act (CRGNSA) and the corresponding "savings clause" found at 16 USC § 5440(a)(10). This project application is not, and should not be subject to the requirements of the CRGNSA. The DEIS appropriately acknowledges the proposed site is located outside of, but immediately adjacent to, the northern boundary of the CRGNSA. The DEIS continues that "although the proposed project thus is in close proximity to the CRGNSA, the CRGNSA Act expressly states that: Nothing in [this Act] shall . .. establish protective perimeters or buffer zones around the scenic area or each specia/management area. The fact that activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas." The DEIS concludes: "[a]ccordingly because the proposed project is located outside of the CRGNSA, the provisions of the CRGNSA Act do not apply to the proposed project." (Emphasis added) We could not more strongly agree. This accurate interpretation of the CRGNSA "savings clause" is also found in Paragraph 3.9.2.1 (Regional Landscape Setting) which concludes "[t]he project area is completely outside the Scenic Area and therefore is not subject to the Columbia River Gorge Scenic Area Management Plan or related regulatory requirements." (Emphasis added) This reasoning is continued at page 3-194 of the DEIS which concludes "... [t]his federal policy and Congressional mandate discourage projecting National Scenic Act policies, regulations and directives beyond the boundary of the Scenic Area." Federal regulation and zoning of development in an area that is largely private land, and the economic survival of existing counties and communities, were major concerns when the CRGNSA Act was debated in Congress. Several major compromises to the Act were adopted by amendment to address these issues before passage in its final form. These compromises included the purchase or trade of private lands that were highly scenic and would be heavily restricted in the SMA zone; less restriction on private lands in the GMA zone;*

*and urban areas that were completely exempt from restriction and a boundary that was to be the absolute boundary with no buffer or setback outside of the CRGNSA. This was the reasoning and intent behind the "savings clause" and the proposed project is exactly what was contemplated when it was adopted. The "savings clause" established a boundary - a boundary in every sense of the word - a place where regulation exists, and a line drawn where it ends. Beyond this boundary, it was intended that private landowners and counties would be allowed to have economic development activity without scenic restriction. Without the "savings clause", Congress would not have enacted the CRGNSA and President Reagan would not have signed the bill in to law. [LTR 162, CMT 6]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *RESOLUTION 2010-51 (A Resolution Demanding Retraction of the Department of Interior Comments on the Draft Environmental Impact Statement for the Whistling Ridge Wind Energy Project and explanation of its Actions in Commenting without Authority or Jurisdiction against the Secretary's and Administration Policy) WHEREAS, Whistling Ridge Energy Project filed an Application for Site Certification to the Washington Energy Facility Site Evaluation Council ("EFSEC") on March 10,2009 for the Whistling Ridge Energy Project; and WHEREAS, EFSEC is lead agency pursuant to the State Environmental Policy Act, and Bonneville Power Administration ("BPA") is federal lead agency pursuant to the National Environmental Policy Act; and WHEREAS, EFSEC and BPA have independently issued a joint Draft Environmental Impact Statement for this Project and arc seeking public comment on the DEIS; and WHEREAS, the entire .project is located outside of the Columbia River Gorge National Scenic Area ("Scenic Area") on privately owned lands in Skamania County; and WHEREAS, Federal Government regulation of private lands as well as the economic survival of Skamania, other local counties and communities were major concerns when the Columbia River Gorge National Scenic Area ("Scenic Area Act") was debated in Congress; which resulted in several major compromises to address these concerns before passage of the Scenic Area Act in its final form, without which, Congress would not have enacted the Scenic Area Act and President Reagan would not have signed it into law. These compromises included the purchase or trade of private lands that were regulated for the protection of scenery in the Special Management Areas, the designation of Urban Areas that are completely exempt from restrictions and the designation of an external boundary that by Congressional direction is the absolute boundary with no buffers or setbacks outside of the Scenic Area. Congressional intent is found in the "Savings Provision" at 16 USC § 5440(a)(IO) which states: Nothing in [this Act] shall . .. establish protective perimeters or buffer zones around the scenic area or each special management area. The fact that activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas."; and WHEREAS, The National Trail System Act, 16 USC §§ 1241-1251 authorizes Congress to designate National Scenic and Historic Trails but does not, by mandate or implication, authorize Interior to regulate or restrict private lands or to even negatively comment on or oppose private . projects proposed on private lands nearby, or visible from, designated trail sections; and WHEREAS, Skamania County recently received a copy of the U.S. Department of the Interior ("Interior") DEIS comment letter dated July 19, 2010, wherein*

*Interior raises concerns about visibility of the proposed project from the Scenic Area and the nationally designated Lewis and Clark National Historic Trail and suggests elimination of Whistling Ridge wind turbines that are visible from both the Scenic Area and the Lewis and Clark National Historic Trail; and WHEREAS, many thousands of miles of trails are designated throughout the Western United States under the National Trail System Act. With the exception of federal lands, and lands acquired by the Federal Government for preservation of trails, the Federal Government has no authority to regulate or restrict the use of private lands near trails designated under the National Trail System Act, for any reason, especially for purported visual effects on trail segments. Moreover, as described in the Interior letter, the "trail" at issue here is coextensive with US Interstate 84 and Washington State Highway 14 which are not pristine "trail" segments-they are major, busy multi-modal transportation corridors, including the only sea level train route (on both sides of the Columbia River) through the Cascades, with over 80 commercial trains -transiting per day. NOW, THEREFORE,BE IT RESOLVED THAT THE Board of Commissioners being concerned and alarmed with Interior's comments and apparent attempt at inappropriate Federal intervention on the consideration of the Whistling Ridge application, find as follows: The Board finds: Interior's reference to the National Trail Systems Act and the Scenic Area as authority for the comment letter is an abuse of federal authority that exceeds the legal and policy directives and Congressional intent of both the National Trail Systems Act and the Scenic Area Act. Interior's comments are particularly egregious where they recommend that renewable wind energy construction (proposed on private lands outside of the Scenic Area and miles away from any trail segments in Skamania County) that are visible from the National Trail Systems Act and the Scenic Area should be eliminated from the Project, or that the proponent must justify "feasibility" for the locations visible from 1-84. The Board finds: Many man-made structures and activities are-visible and will be visible along these "trails" that follow Interstate highways, where the most visible of "impacts" on travelers are the many semi trucks, trains, transmission lines, dams, industrial facilities, mines, and coal, gas and nuclear power generating facilities, as well as many cities, homes, commercial buildings, advertising signs and billboards, that they pass by. It is a gross abuse of federal authority to negatively comment on, and seek to obstruct a renewable energy project on private lands merely because a small portion is remotely visible from an Interstate highway. The Board finds: Consistent with our concerns raised above regarding National Trail Systems Act authority, that Interior's recommendation of restricting private land development in view of the Scenic Area is in direct violation of the critically important Scenic Area Act compromises and Savings Provisions the intent of which was to allow local counties economic development opportunity for their continued survival. 2 The Board finds: Interior's comments and recommendations have serious policy implications not only for renewable energy development but also for other non-wind energy related projects that are visible from the Scenic Area and National Historic Trails, such as electrical transmissions systems, dams, rail transportation, interstate commerce and traffic, as well as residential, commercial and industrial development in Skamania and other Counties near the Scenic Area and/or Counties 10cated near similarly designated trails under the National Trails System Act. The Board finds: Interiors comments contradict both the Secretary's publicly stated policy as it pertains to renewable energy as well as contradicting the clear energy policy direction of the current Administration. The Board finds: Finally, in addition to the comment concerning the Scenic Area and the Interstate Highway corridor, Interior provided specific comments related to purported groundwater issues-issues raised by local citizen neighbor opponents at the NEP NSEP A comment hearing. Skamania County has regulatory responsibility for groundwater issues, and will work with EFSEC to address the citizen comment.*

*This is not a federal issue. Interior has no authority to insert itself into this uniquely local issue, and its decision to do so demonstrates its lack of regard for Skamania County's authority: strongly suggesting inappropriate collaboration with Whistling Ridge project opponents. Now, therefore, be it finally resolved that the Board of Commissioners reacting to this clear abuse of authority without jurisdiction, hereby demand, in the strongest possible terms, that Interior's comments be immediately retracted and removed from the public record on this matter, and further respectfully request that the Secretary and the Administration clarify how Interior has acted within its authority, consistent with the stated policy direction of the Secretary and the Administration, and what this letter means for the implementation of the Administration's declared land management and energy policies. [LTR 164, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *As a citizenry here in the US we try to preserve a small number of exceptional areas. The Gorge (and the US citizens) deserve as gorgeous a Gorge as possible. There is lots of windy land in these United States that is not protected as a national treasure. Seeing windmills from anywhere in the Gorge Scenic Area would be a further loss. I am still adjusting to the changed landscape around Maryhill with the addition of windmills there in the last couple of years. They are interesting to see, but they detract from the formerly simply grand landscape. Please don't bring tall, moving, unnatural structures into view in Skamania County! Any additional mechanical objects on the horizon WILL detract from the wonderful and unique Columbia Gorge experience. [LTR 166, CMT 2]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *[In reference to DEIS Section] 3.9.2.3, Viewpoints, See comments under sections 3.91 and 3.9.1.3. Columbia River Gorge National Scenic Area - p.3-194. Visual impacts are among the issues to be addressed in NEPA and SEPA analysis. Although Congress has expressed reluctance to apply Scenic Area restrictions to lands lying outside the scenic area boundary, land uses outside the scenic area will impact the visual quality within the scenic area and should be subject to visual analysis consistent with the values encompassed by the CRGNSA. [LTR 177, CMT 61]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *The Columbia River Gorge and the Affected Communities The Whistling Ridge project would be sited in the heart of the Columbia River Gorge. Many of the proposed turbines would be sited immediately adjacent to and/or highly visible from the Columbia River Gorge National Scenic Area. In addition, portions of the proposed "haul route," along which construction materials and turbine components would be transported, are located within the National Scenic Area. Established by Congress in 1986, the National Scenic Area is an*

*extraordinary national treasure, an area protected under federal law for its aesthetic, biological, ecological, historic, and recreational values. See Columbia River Gorge National Scenic Area Act ("Scenic Area Act"), 16 U.S.C. §§ 544–544p. The Gorge, under the protection of the Scenic Area Act, offers unfettered scenic and historic views along the Columbia River, site of the final portion of Lewis and Clark's journey across the West. [LTR 179, CMT 6]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *The DEIS Misquotes and Misrepresents the Language and Meaning of the Columbia River Gorge National Scenic Area Act. The DEIS attempts to rewrite the Columbia River Gorge National Scenic Area Act to effect a dramatically different purpose than intended by Congress. This misrepresentation, if it goes uncorrected, would dramatically hinder EFSEC's and the BPA's ability to protect the public from adverse impacts to important local, state, and national resources. The DEIS includes the following passage that purports to quote the Columbia River Gorge National Scenic Area Act: The Act states that "no protective perimeters or buffer zones shall be established around the scenic area or each special management area. Activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas" (16 U.S.C. § 544O(a)(10)). DEIS at 3-194 (emphasis in original). The above language, reprinted verbatim from the DEIS, seriously misquotes and misrepresents the Act. The actual language in the Act is as follows: (a) Nothing in this Act shall ... (10) Establish protective perimeters or buffer zones around the scenic area or each special management area. The fact that activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas. 16 U.S.C. § 544o(a)(10) (emphasis added). The first sentence of the misquoted Act in the DEIS completely changes the meaning of the statute. The intent to misrepresent is clear. The difference in the meaning of the true wording versus the quoted wording is significant. The language in 16 U.S.C. § 544o(a)(10) provides that nothing in the Scenic Area Act shall establish protective perimeters or buffer zones. It does not, as the DEIS language states, outright prohibit protective buffers, for example under operation of some other local, state, or federal law. [LTR 179, CMT 37]*

**Response**: Comment acknowledged. The exact, verbatim language of Section 544O(a)(10) of the National Scenic Act was provided on page 3-141 and 4-9 of the Draft EIS. The portion of the Draft EIS cited by the commenter was meant to reasonably paraphrase Section 544O(a)(10) and was not intended to mislead. The discussion of Section 544O(a)(10) (on page 3-194 of the DEIS) has been revised to include the verbatim language of the statute.

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**Comment**: *EFSEC and the BPA must apply numerous other laws in their decision-making, and must protect affected resources and communities. The misquoted language in the DEIS implies that Congress mandated that some other law or factor, independent of the Scenic Area Act, could not result in the protection of lands adjacent to the Scenic Area. This is absolutely*

*incorrect. While the Scenic Area Act does not in and of itself impose buffers, neither does it prevent them under operation of other laws. [LTR 179, CMT 38]*

**Response**: Please see response to Comment LTR 179, CMT 37 above.

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**Comment**: *The western intersection of Cook-Underwood Road and State Route 14 is also important. The Applicant has proposed to use this intersection as part of the haul route, but has also not shown that road improvements at this intersection would not be necessary. These distinctions are important, because if this project does in fact involve road construction or ground-disturbing activities within the GMA, such activities must be reviewed by Skamania County under the Scenic Area laws and rules for whether they are allowed and for the protection of resources. SCC § 22.06.010. The agencies need to require better information about the proposed haul route, and resolve whether any road work would in fact be necessary. If so, Scenic Area review and a decision by Skamania County will be required. [LTR 179, CMT 46]*

**Response**: As stated in Section 3.11.2.1 (page 3-226 of the DEIS), "Improvements to County roads and private roads between SR 14 and the Project Area would be necessary to support the long and heavy loads that would be required for the delivery of the wind energy components." However, according to the County Engineer for Skamania County (Timothy Homann) the dimensions and alignments of the existing roadway cross-sections of County Roads in the Scenic Area are adequate to accommodate the large specialized trucks that would haul turbine components to the Project Area, provided oversize and overweight vehicles use the east intersection of SR 14 and Cook-Underwood Road and the east intersection of Cook-Underwood Road and Willard Road (Prefiled Testimony, Exhibit No. 12.00). Therefore, no improvements to County roads within the Scenic Area are anticipated.

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**Comment**: *Moreover, visual quality objectives for viewpoints within the Scenic Area exist. Although the Scenic Area Act does not apply these VQOs outside the Scenic Area, they are a useful way of measuring the scenic impacts of the project on the affected landscape pursuant to NEPA and SEPA. Both the Forest Service and BLM visual assessment methods were designed and have been gradually adapted and refined to address numerous impact types. Though neither method anticipated giant commercial wind turbines, both have been used to review utilities, dams, mining and other energy related infrastructure. The BLM visual contrast method in particular has proven to be very useful and adaptable to assessing wind turbine development. Yet on page 3-156 of the DEIS the project proponents dismiss the BLM visual contrast method due to the absence of pre-existing "visual resource objectives" (even though as stated earlier, these exist for the affected key viewing areas). The assumption appears to be that visual contrast cannot be determined unless one first establishes resource objectives. But visual contrast is a useful way of measuring impacts regardless of whether a resource management objective has been established, because it relies on simple and time tested analytical standards, summarized below from BLM Manual 8431. [LTR 180, CMT 7]*

**Response**: Please see comment responses under the Visual Resources section of this volume. As stated within that section, the use of the BLM methodology, particularly the application of the contrast rating, hinges upon the comparison with established visual classifications. As noted on page 3-156 of the DEIS, in order to use the BLM process for projects on private lands where no visual resource objectives have been established, it would be necessary to complete a full visual management inventory to delineate all lands in question and then classify each delineated area using the BLM classifications. The EIS does describe the visual setting on pages 3-161 to 3-164. The EIS also provides measures for Landscape Scenic Quality in Table 3.9-1 and applies these measures to each viewpoint. The application of USFS landscape management objectives to private lands would not be appropriate for this Project.

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**Comment**: *Scenic Quality Ratings and Viewer Sensitivity, [on] Page 3-157 of the DEIS states that "Scenic quality ratings were based on observations in the field, photographs of the affected area, methods for assessing visual quality, and research on public perceptions of the environment…" (emphasis added). It needs to be noted that wind project proposals in scenic landscapes tend to generate a lot of public concern and opposition, while proposals in less scenic areas (i.e. the prairie and plains states) generate very little opposition. For example, Cape Wind (off Cape Cod) several wind projects in New England and upstate New York, previous projects along the Columbia River Gorge National Scenic Area, including the abandoned Cascade Wind proposal not far from this site in Wasco County, projects proposed near the Wallowa and Steens Mountains in Oregon, and those in coastal areas have raised significant public opposition. In contrast, multiple projects proposed and built in the open range and farm land of the Columbia Basin have generated very little opposition based on aesthetic impact. This experience suggests that much if not most of the public is uncomfortable with the scenic impacts of commercial-scale wind energy projects in landscapes valued for their scenic qualities. [LTR 180, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *The Columbia River Gorge is clearly valued for its scenic qualities, both natural and cultural. It is a federally protected national scenic area. It has a unique bi-state commission that plans, regulates, and monitors to protect scenic quality. The American Society of Landscape Architects included the Columbia River Gorge as one of the 100 most outstanding landscapes in the United States, ranking it along with Yosemite, Yellowstone and other national icons. Clearly, the public has already weighed in on the issue of whether the Gorge is scenic and merits conservation, and the answer is "yes." [LTR 180, CMT 10]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *S.D.S. Co., LLC must modify its application to better address the applicable review criteria, to remove all portions of the project from the National Scenic Area, and to*

*substantially reduce the impacts of the project on scenic, natural, and recreational resources. As for consistency with land use laws, the application contains a fatal flaw: part of the project would be located within the National Scenic Area. The entire project is classified as an industrial use under the Scenic Area rules because it would be primarily involved in the production of electric power for commercial purposes. [LTR 182, CMT 2]*

**Response**: The proposed Project would be located entirely outside of the Columbia River Gorge National Scenic Area, as acknowledged throughout the EIS, including in Sections 2.1, 3.8, 3.9, 3.14, and 4.11 of the EIS.

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**Comment**: *Industrial uses are prohibited within the General Management Area of the Scenic Area. [LTR 182, CMT 3]*

**Response**: Comment acknowledged. The lead agencies understand Management Plan policies concerning industrial development in the Scenic Area and believe that the proposed Project does not involve aspects that run contrary to these policies.

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**Comment**: *I sincerely hope that the Council appreciates the unique challenges that the private sector confronts in operating within the Columbia River Gorge National Scenic Area. [LTR 185, CMT 2]*

**Response**: The comments concerning the additional requirements faced by proposed activities and development in the National Scenic Area are noted.

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**Comment**: *Those of us in Clark County are aware of the onerous requirements imposed by the Act. While much of Clark and Multnomah counties only have a peripheral stake in the Gorge, 6% of Skamania's land mass is privately held, and much of that falls within the Scenic Area. [LTR 185, CMT 6]*

**Response**: Please see response to Comment LTR 185, CMT 2 above.

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**Comment**: *Council members should, if they are not already, be aware of the history behind the Act and what is becoming a remarkable and implicit disregard for the takings of property rights that the Act seems to have spawned. The bitterness which has developed since passage of the Act is troubling especially for the communities in the Scenic Area. That bitterness is regrettable and is growing. It remains because advocacy groups campaign constantly for expansion of restrictions within and extensions beyond the defined CRGNSA boundary. The Energy Facility Site Evaluation Council has already heard considerable testimony along these lines; testimony that bears no repeating here. My point is simply that none of what has been*

*entered into the record is supported by the legislative intent of the Act's authors, or in the language of the Act as written. The proposition that whatever can be seen from within the Scenic Area should be treated as if it were within its boundary is ludicrous. It is also outrageous. I can tell you personally that when the law was written that was never the intent. This is outrageous because a reduction in the capacity of SDS' wind farm will render the entire project untenable. Outrageous because prohibiting SDS from pursuing the highest and best use of its lands in ways fully compatible with timber production, is a blatant property rights taking. Outrageous because Whistling Ridge, with the jobs and tax revenue and local purchases it will engender, is a private economic stimulus for a community that urgently needs one. And finally, asserting a de facto expansion of the Scenic Area boundary is outrageous because it pours salt on the wound of decades of local residents' bitterness toward the original Act despite its clearly limited mandate; there never was, nor should be, a buffer around or extension of the CRGNSA boundary. [LTR 185, CMT 8]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *The Whistling Ridge Wind Farm is also outside of the Columbia River Gorge Natural Scenic Area. The Congressional intent of the Gorge Scenic Act was to allow for ongoing economic activity in areas adjacent to the Scenic Area regardless of the affect that these adjacent areas may have on the view from the scenic area. In other words, there was to be no buffer zones to the buffer zone already established by the Gorge Scenic Area boundary. Also I believe that the construction of the Whistling Ridge Wind Farm would not degrade the scenic beauty of the Columbia River Gorge National Scenic Area. As a point of law, EFSEC does not have the authorization to establish new exclusion zones such as buffers to the Gorge Scenic Area without additional authorization from either the legislature or the US Congress. Visual Impact on the Columbia River Gorge National Scenic Area should be an issue of consideration in any Environmental Impact Statement review, but the determination of significance of any impact is not capricious or arbitrary, it must be based on the rules that are in place today. Development outside of and adjacent to the Columbia River Gorge National Scenic Area is allowed under the law and as such visual impacts to the National Scenic Area are allowed because the proposed facility is not located within the Scenic Area. [LTR 191, CMT 4]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *I also supported and participated in the creation of Columbia River Gorge National Scenic Area which is national scenic treasure. The creation of the Scenic Area involved a significant public involvement process that carefully consider the location of the boundary of the Scenic Area. The potential for wind energy development in the Columbia River Gorge area was a consideration when those of us who put pen to paper and drew the boundary participated in the creation of the Scenic Area. This boundary was established to buffer the significant resources of the Scenic Area and the legislation that created the Columbia River Gorge National Scenic Area clearly consider potential affects from development outside of the boundary and determined that such development would not be subject to the Scenic Act. It is not*

*EFSEC's role to substitute its judgment for that of the US Congress on this issue. [LTR 191, CMT 7]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *The Board finds: Consistent with our concerns raised above regarding National Trail Systems Act authority, that Interior's recommendation of restricting private land development in view of the Scenic Area is in direct violation of the critically important Scenic Area Act compromises and Savings Provisions the intent of which was to allow local counties economic development opportunity for their continued survival. [LTR 197, CMT 5]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *The Board finds: Interior's comments and recommendations have serious policy implications not only for renewable energy development but also for other non-wind energy related projects that are visible from the Scenic Area and National Historic Trails, such as electrical transmissions systems, dams, rail transportation, interstate commerce and traffic, as well as residential, commercial and industrial development in Skamania and other Counties near the Scenic Area and/or Counties located near similarly designated trails under the National Trails System Act. [LTR 197, CMT 6]*

**Response**: Please see response to Comment LTR 83, CMT 3 above.

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**Comment**: *In addition, the onslaught of wind turbines will continue to encircle the Columbia Gorge and destroy once-pristine views of the ridges and horizon that were one of the primary reasons the National Scenic Area was created. [LTR 201, CMT 2]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *I am all for Alternative Energy Projects, but, not at the expense of despoiling one of our National Treasures. We live in the area and have many visitors, all those visitors comment on the pristine beauty of the area. We need to retain the vista, not only of the area covered by the Scenic act, but also of the area bordering this stunning scenery for future generations. These vistas would be adversely impacted by the proposed project and directly effect the enjoyment of visitors and locals alike. Please don't allow the project to go ahead. [LTR 202, CMT 1]*

**Response**: Please see response to Comment LTR 33, CMT 5 above.

**Comment**: *I'm opposed to the project because this contradicts the spirit of the Columbia Gorge Scenic Area. Even though the project is outside the area, it was never envisioned that there would be this type of project that could be seen from within the scenic area. [LTR 205, CMT 1]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *While not technically within the boundaries of the Columbia Gorge Scenic Area, the Whistling Ridge Energy Project contradicts the spirit of the Scenic Area. Had anyone imagined the building of skyscraper-height structures just outside the scenic area, I'm confident that they would have designated a bigger area. We live in Hood River, Oregon, and the ridges upon which they are proposing the turbines are visible from all over the beautiful Hood River valley. [LTR 206, CMT 1]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *While supportive of clean energy, we are certainly concerned with the visual impact in the HEART of the scenic area. We are pleased with the development of the wind power further east in the Gorge and throughout various areas in the northwest. [LTR 210, CMT 1]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *I am against siting any wind turbines in any key viewing area of the Columbia River Gorge NSA. This wind farm will be visible from many points in the CRG NSA. [LTR 220, CMT 1]*

**Response**: Please see response to Comment LTR 33, CMT 5 above.

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**Comment**: *Please do not approve Whistling Ridge in any form. Please be part of maintaining the intent of the CRG NSA. Do not sell out this area for respite from the metropolis to the money-making interests of those wishing to benefit from wind-generated electricity. This, and any wind farm in view spaces of the CRG NSA should not be approved. I would be looking right at Whistling Ridge turbines every time I left my house to drive down the hill into Mosier. Thank you for taking my comment. [LTR 220, CMT 4]*

**Response**: Please see response to Comment LTR 134, CMT 1 above.

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**Comment**: *In regards to the whistling ridge wind farm proposal, I have to say that it is a poor location choice for a turbine farm for these reasons. 1. With-in the view corridor of a sensitive NATIONAL SCENIC AREA!!! ...Bad choice for people, national pride and the wind turbine industry. [LTR 226, CMT 1]*

**Response**: Please see response to Comment LTR 134, CMT 1 above.

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**Comment**: *While the Whistling Ridge Wind Project proponents deserve credit for responding thoughtfully to some of the previous objections to their earlier proposals, the revised proposal remains of great concern. If allowed the proposed wind mills will still seriously impact the beauty of the Gorge Scenic Area. As presently proposed viewers from numerous locations including parts of the cities of White Salmon, Underwood, and Hood River, as well as the Columbia River itself will have their views of the Gorge defaced by 425 foot towers of steel, rotating blades and flashing strobe lights. There are few areas in the world with as much natural beauty as we now have in this part of the Gorge. We should not sell it away. Granted our Nation needs alternative sources of energy and Skamania County needs new sources of revenue. But there are many less scenic areas of Washington, Oregon and the entire country which could also contain our windmills. Some things should not be traded for money. [LTR 230, CMT 1]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *I am an environmental planner by training and profession with over twenty years of experience writing, managing and reviewing environmental impact statements prepared in compliance with the State and National Environmental Policy Act. For nearly as long, I have worked and played in an around the Columbia River Gorge and am protective of its unique and spectacular scenic, natural, cultural and recreational resources. The Columbia River Gorge is a unique and irreplaceable treasure that includes federal and privately owned land and provides important regional economic development opportunities. The National Scenic Area designation was a compromise that offers a high level of protection against the threats posed by incompatible development in Special Management Areas, less protection and greater recognition of economic needs in General Management Areas and no regulation of activities in Urban Exempt Areas or lands outside of the Scenic Area boundaries. Interestingly, the Act provides these restrictions on land use but not against air pollution generated upwind that dims the Gorge's spectacular views on smoggy and hazy days. Our planet Earth is likewise a unique and irreplaceable treasure, just on a larger scale. It goes without saying that the scale of the numerous threats to our global environment is proportionately larger and more significant than those facing the Gorge. Of the many threats facing our planet, none are as grave or as irreversible as climate change. [LTR 231, CMT 1]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *The Whistling Ridge Energy Project does not breech the boundaries of the Columbia River National Scenic Area as the so called Friends of the Gorge would seem to want you to believe. They also were involved when the boundaries of the NSA were set but that was apparently a stepping stone for further advances against the survival of our local government. [LTR 235, CMT 2]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *After a good deal of thought about trade-offs between impact to local residents, the need for renewable energy, and the availability of sites in relatively unpopulated areas, I have concluded that the project is incompatible with the proposed site. It will affect many residents in the Gorge, which is a national scenic area. Other sites to the east exist. [LTR 237, CMT 4]*

**Response**: Please see response to Comment LTR 12, CMT 6 above.

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**Comment**: *If allowed the proposed wind mills will still seriously impact the beauty of the Gorge Scenic Area. As presently proposed viewers from numerous locations including parts of the cities of White Salmon, Underwood, and Hood River, as well as the Columbia River itself will have their views of the Gorge defaced by 425 foot towers of steel, rotating blades and flashing strobe lights. There are few areas in the world with as much natural beauty as we now have in this part of the Gorge. We should not sell it away. [LTR 241, CMT 2]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *The Friends of the Historic Columbia River Highway has sincere and strong concerns about the proposed Whistling Ridge Energy Project's potential impacts on the Historic Columbia River Highway, a district listed in the National Register of Historic Places. The Historic Columbia River Highway (HCRH) is a linear scenic and historic resource in Oregon extending from Troutdale to The Dalles. All of the HCRH is a Key Viewing Area within the Columbia River Gorge National Scenic Area (CRGNSA). Portions of the HCRH that are a trail are designated as a National Recreational Trail. Portions of the HCRH are closer to the proposed project than the sites chosen for visual resource analysis. In particular, Mitchell Point is due south of the proposed project and within the Special Management Area of the CRGNSA. There is an existing viewpoint/overlook within the Oregon Parks and Recreation Department (OPRD) property at Mitchell Point, including an interpretive sign at the edge of the cliff overlooking the Columbia River. See photo. Mitchell Point was the site of the famous Mitchell Point Tunnel (also known as the Tunnel of Many Vistas because of its five "windows" overlooking the Columbia River) on the Columbia River Highway (see photos). While the original tunnel is gone, planning efforts since 1987 have looked at ways to reconnect the HCRH in this area. In 2008 the Friends of the Historic Columbia River Highway financed an*

*engineering feasibility study that concluded that it is feasible to construct a new tunnel at this site, which could have "windows" at the former location of the viaduct. This proposal is included in the Mile Post 2016 Reconnection Projects, the most recent planning document published (see attachments). In addition, OPRD is currently developing a project to enhance the existing viewpoint. [LTR 242, CMT 1]*

**Response**: Please see response to Comment LTR 141, CMT 2 above.

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**Comment**: *The significance of this view was further confirmed when the Management Plan for the CRGNSA was adopted in 1991. The Underwood Bluff was given an Open Space zoning designation and a Gorge Walls, Canyonlands, and Wildlands landscape setting designation. Both designations were adopted in part in response to scenic resource inventories that established visually quality objectives. [LTR 242, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I can support wind energy projects but not with a location on the border of the National Scenic Area. The views from this protected region need to be protected also -- 400+ foot high turbines destroy part of what the Scenic Act stands to protect. These are not the views from a few local homes or a couple of small towns - these are the views of an entire region -- a protected region. Please do not degrade the Columbia River Gorge. [LTR 250, CMT 2]*

**Response**: Please see response to Comment LTR 134, CMT 1 above.

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**Comment**: *I drive through the gorge quite often. I think wind power is a good thing, but not in the gorge because of the scenic area and could have impacts on wildlife and plants. That would degrade the scenic area. For this reason this project should be denied. [LTR 253, CMT 1]*

**Response**: Please see response to Comment LTR 134, CMT 1 above.

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**Comment**: *Not where they are visible to the National Scenic area. [LTR 255, CMT 2]*

**Response**: Please see response to Comment LTR 134, CMT 1 above.

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**Comment**: *It becomes difficult to see the natural environment when those big towers move and blink at you, and the natural environment is what most people living in the county are there*

*to enjoy. It should be no surprise that rural people do not appreciate their county views turned into industrial zones, neither should it surprise us that proponent studies will seek to diminish the significance of this fact. [LTR 256, CMT 17]*

**Response**: Comment acknowledged.

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**Comment**: *The National Scenic Area supports renewable energy development and believes that the Whistling Ridge Energy Project will be enhanced with consideration given to the scenic values associated with the Columbia River Gorge National Scenic Area (CRGNSA). [LTR 257, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Approving this siting will set a precedent for decisions in the rest of WA when a wind farm is near a National Park or other scenically beloved area. The towers are not in the CGNSA, but are set very close (I have heard 20 feet from the boundary, but in any case a look at the enclosed map shows that they are very close) to the boundary. Because they are not in the boundary, the CGNSA has no legal authority over the wind farm placement. In OR, however, the Dept. of Energy Facilities Siting Council has written standards (enclosed) for siting. Two of them are that new energy facilities shall not have adverse effects on certain places, the Columbia Gorge being one, and second that new facilities shall not adversely affect scenic values recognized in federal or local land use plans, and the CGNSA Key Viewing Areas would be a perfect example. If the WA EFSEC fails in this case to consider well defined adverse impacts on a federal National Scenic Area, you are setting a precedent. I realize it is easy for WA government to sacrifice the Columbia Gorge because it is not near Seattle, but if you site towers here, what grounds will you use to deny siting near scenic areas like Mt Rainier, Puget Sound, and the Olympics? [LTR 262, CMT 1]*

**Response**: The guidelines of the Oregon EFSC are noted. These guidelines are not applicable to the proposed Project, which is proposed to be located in Washington State. Washington EFSEC does not have analogous guidelines or standards. Nonetheless, potential impacts of the proposed Project from views within the National Scenic Area have been evaluated and are discussed in Section 3.9, Visual Resources of the EIS. It is unclear at this time whether approval of the proposed Project would set a precedent for siting other wind projects in the area. Since all projects are evaluated on a case-by-case basis, approval of this Project does not dictate that any other Project that may be proposed in the future would also be approved. In addition, most developers are aware of the challenges of attempting to site wind projects in this general area. Nonetheless, because there are no current proposals for other wind projects in the area; such future development is considered too speculative at this time.

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**Comment**: *The Management plan set the afore-mentioned standards to protect the natural beauty of the Gorge from being overwhelmed by human construction. If you allow wind towers on the rim of the Gorge where they will be very visible, that makes a mockery of all these standards that private landowners have to abide by in building their houses in the CGNSA. Why should someone have to paint their house an inconspicuous dark brown if above him can be seen white spinning towers with red lights at night? [LTR 262, CMT 1]*

**Response**: The Columbia River Gorge National Scenic Area Act, the National Scenic Area it created, and the Management Plan for this Area are discussed in Section 4.11 of the EIS. As discussed in Section 4.11 and acknowledged by the commenter, the National Scenic Area Act expressly does not establish protective perimeters or buffer zones around the National Scenic Area. The Management Plan for the National Scenic Area reflects this limitation. Potential visual impacts of the proposed Project from various vantage points, including from within the National Scenic Area, are discussed in Section 3.9 of the EIS.

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**Comment**: *The Columbia Gorge National Scenic Area was created 25 years ago to protect the beauty of the Gorge. No buffer zone was created for its boundaries, but at the time no one envisioned the possibility of huge (greater than 400 ft. tall) wind towers on the tops of all its ridges. Recently wind towers went in just east of the Gorge Scenic Area boundary along Hwy. 97 as it winds up out of the Gorge going to Goldendale. If you doubt that wind towers impact the landscape, drive that road. You may like them or not, but they are now the first thing you notice, not the land. In fact, their movement is so hypnotic that I have trouble watching the road. The Gorge Management Plan that was created to carry out the National Scenic Area Act lists "key viewing areas" in the Gorge that deserve special protection, and the Management Plan gives clear standards for anything built that can be seen from the key viewing areas. The proposed wind towers will be just outside the boundary of "General Management Area (GMA)" coniferous forest land. I enclose the relevant Management Plan pages (2007 revision) that govern building on that category of land if it is visible from a "key viewing area." Some of these are: "Each development shall be visually subordinate to its setting as seen from key viewing areas." (p.I-I-7) "The silhouette of new buildings shall remain below the skyline of a bluff, cliff, or ridge as seen from key viewing areas." (p.I-I-S) "Colors of structures on sites visible from key viewing areas shall be dark earth-tones found at the specific site or in the surrounding landscape." (1-1-9) "The exterior of buildings on lands seen from key viewing areas shall be composed of non-reflective materials or materials with low reflectivity…" (1-1-9) "Exterior lighting shall be directed downward and sited, hooded, and shielded such that it is not highly visible from key viewing areas." (1-1-10) "Structure height small remain below the forest canopy level." (1-1-17) These towers will be visible from several "key viewing areas." Two of these key viewing areas are I-84, the freeway on the OR side, and the Cook-Underwood Rd. in WA. I have put those on the enclosed map as dots. Again, the towers will not be within the Scenic Area boundary, so the Scenic Area rules do not apply directly. On the other hand, the Scenic Area guidelines for building (see above) give clear standards for what "adversely affects" the Columbia Gorge. I have heard that the towers closest to the Scenic Area boundary will be only 20 ft. away from it, but let us say it is 200 ft. I have also heard that the towers area taller than 400 ft, but let us say they are 400 ft, including the blade. By the map enclosed, I find that the Cook-Underwood Rd. simulation viewpoint in the URS is about 1 3/8 miles from the*

*closest tower. Let us say that tower is 200 ft out of the Scenic Area, and 400 ft. tall. A little math (enclosed) shows that this tower is the visual equivalent of a 389 foot tower built just on the boundary, as seen from the Cook Underwood Rd. Looking at the standards for building within the Scenic Area, it is clear that a 389 ft tower built just inside the boundary would violate every building guideline listed - it would be on the ridge against the sky, far above the trees, shiny white, with a red flashing light at night. In addition, it would be moving, and the human eye and brain instinctively focus on movement. (I taught perception in college, and that was one of the principles.) This tower would be about the furthest thing from "visually subordinate" that could be imagined. It would dominate the landscape. These building guidelines are in the Management Plan to prevent structures from having an adverse impact on the Gorge, and can therefore be taken as criterion for when something would have an adverse impact. [LTR 262, CMT 1]*

**Response**: The Columbia River Gorge National Scenic Area Act, the National Scenic Area it created, and the Management Plan for this Area are discussed in Section 4.11 of the EIS. As discussed in Section 4.11 and acknowledged by the commenter, the National Scenic Area Act expressly does not establish protective perimeters or buffer zones around the National Scenic Area. The Management Plan for the National Scenic Area reflects this limitation. Potential visual impacts of the proposed Project from various vantage points, including from within the National Scenic Area, are discussed in Section 3.9 of the EIS.

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**Comment**: *In Oregon the Facilities Siting Council has written guidelines for siting energy facilities. (Division 22: General Standards for siting Non-Nuclear Energy Facilities) Two of these are: (345-022-0040) Protected Areas I) …the Council shall not issue a site certificate for a proposed facility located in the areas listed below. To issue a site certificate for a proposed facility located outside the areas listed below, the Council must find that, taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact to the areas listed below. (The Columbia Gorge National Scenic Area is a listed area.) (345-022-0080) Scenic and Aesthetic Values 1) The Council must find that the design, construction, operation and retirement of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic and aesthetic values identified as significant or important in applicable federal land management plans or in local land use plans in the analysis area described in the project order. A proposed wind farm on the OR side of the Gorge on Sevenmile Hill also would have had towers next to the Scenic Area boundary and visible from many key viewing areas. The question was, is seeing wind towers an "adverse impact?" Given the standards for building structures visible from key viewing areas within the Scenic Area, and the fact that wind towers violate all those standards, there is an objective way of saying that seeing towers would be an adverse impact. I do not know if the WA facilities siting authority has standards, but it should. Personally, I think that in certain cases it might be OK to see wind towers, and the standard could be quantified. I remember that in a previous version of the management plan, or in Wasco County's ordinances, no house visible from Key Viewing Areas could be built more than 35 ft. high. On my calculations sheet I have figured how far a 400 ft tower would have to be from the Cook-Underwood Rd. to be the visual equivalent of a structure 35 ft. tall at the Scenic Area boundary, 1 3/8 miles from Cook-Underwood. It would have to be 15.7 miles from the Cook-Underwood Rd. Maybe a standard could be make whereby*

*any wind towers, rather than being totally invisible, would have to be equivalent to allowable heights of structures within the Scenic Area. This would mean nothing could be built really close to the boundary. I hope that the WA council, like OR, will take into account large scenic values, especially when siting facilities near federally or state recognized preserved areas. I hope also that siting facilities of huge towers right on the boundary and very visible from a National Scenic Area will be rejected. I am for wind power, and find most of the wheat field siting satisfactory. But we do not need to put wind towers everywhere, just as we did not need to dam every river. Let us not make the same mistake again. [see PDF page 5 - 20 for aforementioned calculations and attached references] [LTR 262, CMT 1]*

**Response**: The guidelines of the Oregon EFSC are noted. These guidelines are not applicable to the proposed Project, which is proposed to be located in Washington State. Related Washington EFSEC guidelines, however, can be found in WAC 463-60-362. Nonetheless, potential impacts of the proposed Project from views within the National Scenic Area have been evaluated and are discussed in Section 3.9, Visual Resources of the EIS.

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**Comment**: *I am writing about the DEIS for the Whistling Ridge Energy Project, proposed in Washington state, along the Skamania and Klickitat county lines. Please help us protect the Gorge for future generations. It is a national treasure. [LTR 265, CMT 1]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *As a resident of Clark County and as one who has been involved in the decisions regarding the Columbia River Gorge since before and after the Columbia River Gorge National Scenic Areas was established, I have a deep appreciation for the Gorge and a deep awareness of what it takes to operate a successful business in the Scenic Area and in the Pacific Northwest. My family and I enjoy visiting the Gorge frequently from our Vancouver home, and we are not interested in seeing the character of the Gorge destroyed or significantly altered. [LTR 269, CMT 1]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *The proposition that whatever can be seen from within the Scenic Area should be treated as if it were within its boundary is ludicrous. It is also outrageous. I can tell you personally that when the law was written that was never the intent. This is outrageous because a reduction in the capacity of SDS' wind farm will render the entire project untenable. Outrageous because prohibiting SDS from pursuing the highest and best use of its lands in ways fully compatible with timber production, is a blatant property rights taking. Outrageous because Whistling Ridge, with the jobs and tax revenue and local purchases it will engender, is a private economic stimulus for a community that urgently needs one. And finally, asserting a de facto expansion of the Scenic Area boundary is outrageous because it pours salt on the wound of*

*decades of local residents' bitterness toward the original Act despite its dearly limited mandate; there never was, nor should be, a buffer around or extension of the CRGNSA boundary. [LTR 269, CMT 1]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *My husband and I live in White Salmon, W A. We, like thousands of other families, have purchased homes in this area because of the "protected" beauty of the National Scenic Area (NSA). It should continue to be protected as a priceless asset to the NW and our country. It is time for our government to stop supporting any project that is politically expedient at the expense of the citizens. We are hopeful that reason will prevail and that the powers that be perform a careful and thorough analysis of every single possible negative impact to our local communities and environment by this project. [LTR 273, CMT 1]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *How could anyone have ever anticipated that when the NSA act was created by Congress that the most politically powerful family in the Gorge would many years later propose siting a huge industrial wind farm over 400 feet above a ridge immediately outside the boundary lines of the NSA and in plain view of their own White Salmon, Hood River, and Skamania County neighbors? [LTR 273, CMT 1]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *Also, a significant and large area of the Columbia Gorge National Scenic Area will have sightlines negatively affected if the project goes ahead. Therefore, I ask that the State of Washington deny the proposal. [LTR 280, CMT 3]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *Your approval of an industrial facility impacting, but not technically in the boundary of The Columbia Gorge National Scenic Area (NSA) would set a precedent that could open the flood gates for any development visible from the NSA but not technically within its boundaries, including, but not limited to Las Vegas style casino signs, Space Needle type establishments, and high rise developments on formerly forested ridges. You have the power and authority to prevent setting the precedent that the Columbia River Gorge is open to a gold rush of industrial development. [LTR 283, CMT 3]*

**Response**: It is unclear at this time whether approval of the proposed Project would set a precedent for siting other wind projects in the area. Since all projects are evaluated on a case-by-case basis, approval of this Project does not dictate that any other Project that may be proposed in the future would also be approved. In addition, most developers are aware of the challenges of attempting to site wind projects in this general area. For the Applicant, proposing a wind project in this area may make sense, but other wind project developers may have differing opinions. Nonetheless, because there are no current proposals for other wind projects in the area; such future development is considered too speculative at this time.

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**Comment**: *We must be good stewards of this national scenic area, not its destroyers. [LTR 283, CMT 12]*

**Response**: Comment acknowledged.

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**Comment**: *The construction of the proposed facility would entail unacceptable traffic and emergency response impacts for residents and visitors to the NSA, particularly to key viewing points in the Underwood area. [LTR 283, CMT 14]*

**Response**: Please see response to Comments LTR 64, CMT 1, and LTR 170, CMT 3 above, and LTR 318, CMT 12 below.

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**Comment**: *Should the residents and visitors to the Columbia River Gorge National Scenic Area be subjected to the intrusion of the construction and presence of an industrial wind energy facility that statistically is likely to become owned by an out of state entity that sells its power out of state? [LTR 283, CMT 19]*

**Response**: Comment acknowledged.

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**Comment**: *[In reference to Section 3.6.2.1, Impacts, Proposed Action; PDF pg. 192], "[d]iscourages" does not mean that people and agencies can't speak up when they don't want turbines littering the rural landscape. The NSA is a national treasure. It is also an economic boon to this area. Tourism contributes millions of dollars to the coffers of the counties located in the NSA. [LTR 286, CMT 62]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *The visual scenery that thousands of people come to enjoy, and those of us who live here enjoy it all the time, would be destroyed by horizon-topping wind turbines. This is too high a price to pay. Wind farms don't belong in forests and they don't belong on the boundaries of the NSA. [LTR 286, CMT 62]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *This project is proposed to sit on the boundary of the Columbia River Gorge National Scenic Area, and it is not clear why that location has been selected. The project would directly impact the beauty and appeal of the Lewis and Clark National Trail and the Columbia River Gorge Scenic Area - one of the treasures of Washington and Oregon heritage. [LTR 297, CMT 2]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines. Surely there are plenty of places to site wind turbines so that they don't besmirch the wonderful vistas to/in/from the Columbia Gorge National Scenic Area. It's a scenic area; wind turbines are anything but scenic! [LTR 298, CMT 1]*

**Response**: Please see response to Comment LTR 134, CMT 1 above.

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**Comment**: *Many, if not all, of the proposed turbines and the strobe lights thereon will be highly visible from the Cook Underwood Road Key Viewing Area, as well as from numerous points throughout the NSA. Issue: Is the proposed project legal under Title 22 of the Skamania County Code (Title 22)? [LTR 301, CMT 3]*

**Response**: As noted by the commenter, Title 22 of Skamania County Code (SCC) is discussed in Section 3.8.2 of the EIS. Title 22 specifies that its purpose is to carry out the provisions of the Scenic Area Management Plan, which (pursuant to the statute creating the Scenic Area) only applies to development within the Scenic Area. *See SCC 22.02.030*. Furthermore, when reading Title 22 of the SCC in combination with Title 21 of the SCC, it is very clear that only Title 21 is intended to apply to development outside of the Scenic Area, and that Title 22 is limited in its application to only development within the Scenic Area. *Compare SCC 21.16.010 with SCC 22.02.050*. In determining which title of the SCC to apply, the key factor thus is the location of the proposed development, not the location from which that development can be viewed. This distinction is reinforced by the review and approval provision of Title 22, which states "No building, structure or parcel of land shall be used, and no building or structure shall be hereafter erected, altered or enlarged, including those proposed by local, state or federal agencies, in that portion of the County lying within the Columbia River Gorge

National Scenic Area in any manner that is inconsistent with the provisions of this Title." *SCC 22.06.010*. Therefore, the fact that development outside of the Scenic Area may be seen from within the Scenic Area, even from locations defined as key viewing areas by Title 22, does not trigger the requirements of Title 22.

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**Comment**: *The Oregon EFSEC provides that before issuing a site certificate the Council must determine by a preponderance of evidence that there will be no significant adverse impacts to the scenic, aesthetic, recreational, and wildlife resources of the Columbia River Gorge. OAR 345-022-0000(1 )(a). Title 22 includes numerous provisions demonstrating that Skamania County, like Oregon, has protected the NSA Key Viewing Areas within Skamania County from scenic intrusions originating from both inside and outside the Scenic Area. Conclusion: Title 22 protects the "Viewshed" of Cook Underwood Road, and requires that any development which can be seen from Cook Underwood Road be "Visually Subordinate" to its setting as seen from Cook Underwood Road. [LTR 301, CMT 4]*

**Response**: Please see response to Comments LTR 262, CMT 1 and LTR 301, CMT 3 above.

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**Comment**: *Section 3.8.2 of the DEIS briefly mentions Title 22 and incorrectly assumes that, because the Whistling Ridge project is located outside the NSA boundaries, Title 22 is not applicable. Section 22.02.050 of Title 22 provides, in pertinent part, that "This title applies to all lands in that portion of Skamania County lying within the Columbia River Gorge National Scenic Area ... and to no other lands within the county ..." The Cook Underwood Road Key Viewing Area lies within the National Scenic Area. Thus, Title 22 applies to the Cook Underwood Road Key Viewing Area. [LTR 301, CMT 6]*

**Response**: Please see response to Comment LTR 301, CMT 3 above.

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**Comment**: *Section O provides that "The silhouette of new buildings shall remain below the skyline of a bluff, cliff or ridge as seen from key viewing areas." Clearly, the proposed Whistling Ridge project cannot pass these tests. The project's proponents are likely to point to the language in Section 22.02.050 of Title 22 stating that "This title applies to all lands in that portion of Skamania County lying within the Columbia River Gorge National Scenic Area ... and to no other lands within the county ..." and argue that, based on the italicized language, Title 22 is not applicable to the proposed project because it lies (in some cases approximately just 60+/- feet) outside the NSA. While it may be true that the project lies outside the NSA, it is undeniable that Cook Underwood Road does lie within of the NSA. It is also undeniable that some or all of the turbines and their strobe lights will be highly visible from Cook Underwood Road and therefore lie within the view shed of Cook Underwood Road. [LTR 301, CMT 9]*

**Response**: Please see response to Comment LTR 301, CMT 3 above.

**Comment**: *Title 22 includes numerous provisions demonstrating that Skamania County, like Oregon, has protected the NSA Key Viewing Areas within Skamania County from scenic intrusions originating from both inside and outside the Scenic Area. The proposed whistling ridge energy project is illegal under title 22, because it cannot pass the test of visual subordination. [LTR 301, CMT 13]*

**Response**: Please see response to Comments LTR 262, CMT 1 and LTR 301, CMT 3 above.

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**Comment**: *Lastly, the Columbia Gorge Scenic area includes the skyline, at least the quality of the scenic area does. This project will have a horrible impact on the scenic beauty of this area. There is no place like it in our country. [LTR 305, CMT 2]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *To those charged with making a decision on the proposed Wind turbine project on Whistling Ridge: We support wind energy projects, however: Not near houses; Not where they are visible to the National Scenic area. Not in the middle of a forest where animals become endangered. Perhaps the Broughton Lumber Company would be able to trade the proposed site for one further removed from houses and the Gorge. [LTR 310, CMT 1]*

**Response**: Please see response to Comment LTR 12, CMT 6 above.

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**Comment**: *Whistling Ridge Energy Project would create an essentially permanent, potentially radical, change in the scenic features which motivated the establishment of the Columbia River Gorge National Scenic Area (CRGNSA), recognized nationally and internationally to contain one of the great landscapes of the world. [LTR 315, CMT 2]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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**Comment**: *Regulations and boundaries do not preclude development of this type of project, however, is the vision of the National Scenic Area 400ft tall structures? [LTR 317, CMT 28]*

**Response**: Please see response to Comment LTR 57, CMT 2 above.

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**Comment**: *Oregon pulled a project on 7 mile hill due to infringing on the National Scenic Area (even though it was outside boundaries). I hope that Washington will reciprocate the effort to protect the integrity of our national treasure. [LTR 317, CMT 45]*

**Response**: Comment acknowledged.

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**Comment**: *This project is situated on top of the Columbia River Gorge National Scenic Area so our decision will have nation and international ramifications. [LTR 317, CMT 62]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *I do not agree that homeowners in the NSA have been asked to camouflage their houses and now you want to string turbines and red lights out. Not fair. [LTR 317, CMT 88]*

**Response**: Comment acknowledged.

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**Comment**: *Activities/uses inconsistent with management directives for NSA should not preclude uses up to the boundaries of the Gorge. The intent of Congress is clear on this. [LTR 318, CMT 1]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *I object to the contention that proximity to the National Scenic Area should prove a barrier to this project. The project is located outside of the scenic area boundaries. The intent of congress was to enhance economic development and project the environment within the Columbia Gorge...The intent of congress was not to restrict development within the current boundary. [LTR 318, CMT 26]*

**Response**: Please see response to Comment LTR 28, CMT 6 above.

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**Comment**: *The Gorge was set aside by Congress as a special place to preserve. If this proposal is permitted the iconic landscapes the Scenic Act protects will be lost. [LTR 318, CMT 52]*

**Response**: Please see response to Comment LTR 139, CMT 22 above.

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**Comment**: *I share the same concerns as other regarding the impact to National Scenic Area. [LTR 318, CMT 56]*

**Response**: Please see response to Comment LTR 57, CMT 4 above.

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## G.5 DISTRIBUTION LIST

**Comment**: *I am writing to comment on the Whistling Ridge Energy Project Draft Environmental Impact Statement (DEIS). Please include my comments in the public record, and include my name on the mailing list for all future notices and decisions. [LTR 36, CMT 1]*

**Response**: All comments submitted to the lead agencies for this Project have been included in the Project's administrative record. The Project mailing and distribution list also has been updated to include the requested individuals.

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**Comment**: *I am writing to comment on the Whistling Ridge Energy Project Draft Environmental Impact Statement (DEIS). Please include my comments in the public record, and include my name on the mailing list for all future notices and decisions. [LTR 161, CMT 1]*

**Response**: Please see response to Comment LTR 36, CMT 1 above.

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**Comment**: *Please add the following people to the federal agency distribution list for this project: Dan Wiley, Chief of Resources Stewardship, Lewis and Clark National Historic Trail, 601 Riverfront Drive Omaha, NE, 68102, (402) 661-1830, Dan_Wiley@nps.gov; Lee Kreutzer, National Trails System, National Park Service, 324 S. State, Suite 200, Salt Lake City, UT, 84111, (801) 741-1012, ext. 118, Lee_Kreutzer@nps.gov. [LTR 164, CMT 3]*

**Response**: Please see response to Comment LTR 36, CMT 1 above.

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## G.6 LIST OF PREPARERS

**Comment**: *The Applicant and its Consultants Appear to Have Played an Improper Role in the Drafting of the DEIS, Leading to a Biased and Result-Oriented Document. The agencies' ability to prepare an EIS that would provide a balanced and objective analysis, leading to a decision that addresses the interests of the general community and not just the Applicant, have become further compromised by an apparent decision to allow the same consultants who*

*prepared the application on behalf of the Applicant to also prepare analytical content in the DEIS. [Footnote: These consultants include employees of URS Corporation, West Inc., and others. Although several consultants who prepared the application also are listed in section 6 of the DEIS as "preparers" of the DEIS, none of them noted their role in preparing the application on their disclosure statements in Appendix F.] [LTR 179, CMT 29]*

**Response**: Neither SEPA nor NEPA require that an EIS disclose a consultant's past work in preparing a permit or other application for a proposed Project. Nonetheless, for each consultant who worked on the site certificate application and also contributed to preparation of the EIS, a notation has been made in Section 6 of the EIS.

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## G.7 GENERAL COMMENTS

**Comment**: *Why the big push on no wind mills in Underwood? Diversity can be defined in many different ways. Diversity is a commitment to recognizing and appreciating the variety of characteristics that make individuals unique in an atmosphere that promotes and celebrates individual and collective achievement! Examples of these characteristics are: age; cognitive style; culture; disability (mental, learning, physical); economic background; education; ethnicity; gender identity; geographic background; language(s) spoken; marital/partnered status; physical appearance; political affiliation; race; religious beliefs; sexual orientation. There is another diversity just as powerful and that is the natural diversity of Mother Nature in the form of Wind power, or wind energy, it is a renewable resource; it is from the sun. The intensity of solar radiation is diverse across the globe. Some areas receive intense amounts of sunlight, while others receive much less. The result is a temperature gradient; a gradient which is mediated by the flow of air to and from areas of dissimilar temperatures and pressure systems in our atmosphere. Uneven heating of the earth's atmosphere, in addition to irregularities on the earth's surface and the rotation of the earth create wind. Terrain, water bodies, and vegetation then shape flow patterns.... in other words Diversity!!! Although, the wind is not constant, and may blow at a variable pace, it can become difficult to rely upon this source of power on the quieter days, when there's no breeze. Not much different than we human beings, we are not constant, we may blow at anytime, we can be difficult to be relied upon, and we do have quieter days. [LTR 1, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The wind is free and with modern technology it can be captured efficiently. [LTR 1, CMT 3]*

**Response**: Comment acknowledged.

**Comment**: *Wind turbines have a role to play in both the developed and third world. [LTR 1, CMT 8]*

**Response**: Comment acknowledged.

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**Comment:** *So what does all this mean? Here is what I have gotten from all the rhetoric. We as humans are as diverse and fickle in our opinions as mother nature is in hers. On the one hand you have a Company who has agriculture and forestry down to a science. On the other hand you have special interest groups arriving in the area concerned about environment; Mother Nature, rivers, and views and they too have agriculture and the fruits of their labors down to a science. So with these two groups who both profess to be "Green" and stand for all things "Green" why are they bickering? ~ Money? The one group thinks the windmills will detract from the value of their propet1y, destroy the view, ruin business, and will apparently stop at nothing to convince you of their opinion, while the other group thinks wind power is an alternative to energy besides fossil fuels (I believe in this). They have done their convincing with truth, facts, and openness to convince you of their opinion. A quote from J. Ollie Edmunds: "This country was not built by men who relied on somebody else to take care of them. It was built by men who relied on themselves, who dared to shape their own lives, who had enough courage to blaze new trails with enough confidence in themselves to take the necessary risks. This self-reliance is our American legacy. It is the secret of that something which stamped Americans as Americans." In conclusion I believe that company's like SDS are made up of men and women who shape their own lives, have good moral character, rely on themselves, and blaze new trails toward making our community and our environment a better place to live. They have proved themselves as good stewards of our land for the last 60 years. More so than any special interest group to date!!! So, please let us move forward and get on with building the windmills at whistling ridge. [LTR 1, CMT 11]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 2, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 2, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *EFSEC should recommend that Governor Gregoire accept this project. I support renewable energy, anything to replace the coal exhaust blowing down the gorge! We know we can't have it all! [LTR 3, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing as a resident of the Columbia River Gorge and as a small business owner. Many fellow business owners depend on the natural beauty of the Columbia River Gorge for their livelihoods. It is also the reason many of us choose to live here. I am also writing as a strong supporter of green energy and having a PhD in environmental engineering, I understand the importance of eliminating carbon based energy. I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. [LTR 4, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 4, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. There are plenty of areas outside the Columbia River Gorge National Scenic Area that are far more suitable for such a development. [LTR 4, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 5, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I highly support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. There are plenty of areas outside the Columbia River Gorge National Scenic Area. There are other locations available. [LTR 5, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 6, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. There are plenty of areas outside the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 6, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I join with Friends of the Columbia Gorge and its many supporters to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 9, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I strongly support renewable energy, but I am opposed to wind energy development that would cause such significant negative impacts to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 9, CMT 4]*

**Response**: Comment acknowledged.

**Comment**: *Just to let you know that I am a resident of rural Klickitat County (just out of White Salmon) and support this project. [LTR 10, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Now I'm a big fan of renewable energy, but something about this march of the turbines reminds me of what happened when The Dalles Dam was built and drowned Celilo Falls. We didn't appreciate what we lost at the time, and now it's unlikely we'll ever get the falls or the salmon back for decades to come, maybe never. [LTR 12, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I strongly support renewable energy, but I am opposed to wind energy development that would cause such significant negative impacts to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 13, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *As resident of White Salmon for 60 years I can se no harm of any kind from this project. I have been all over this area many times and it is a perfect location for a wind farm. BPA main line runs through this property so no additional big lines needed. I fully support this project. SDS always goes a good job on all their projects. Please give them a big go ahead. [LTR 14, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *As residents of the area that will be able to see some of the turbines of this proposed project, we are in favor of it. We can't continue the practice of saying "Yes, we need it but not here". This will not get us where we need to be down the road. SDS is a good and responsible Company that cares. It is their land, they have the right to this project and will do it in an responsible manner. It is funny that some of the people who are against this project were the same ones that were cutting hiking trails on SDS property in this same general area-having no real respect for someone else's land. [LTR 15, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *As a small local business located in Bingen, WA - not far from the proposed location - we would like to offer our support for the approval of this project. The turbines are located outside the gorge scenic area, are environmentally acceptable and will provide needed energy for the region. SDS should be complemented for its concern to safeguard the local economy and the environment I believe people who are taking the 'not in my backyard' position are both selfish and short-sighted. [LTR 16, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 19, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I was born and raised in Skamania County, Washington and my husband and I have lived in the Columbia River Gorge most of our adult lives. We love this area and can think of no place that we would rather live. We are not always thrilled with the constant winds we receive at our house but cannot change the fact that we live in a very windy location. It seems foolish not to harness this abundant energy and use it to our advantage. We ABSOLUTELY SUPPORT the Whistling Ridge Energy Project and applaud SDS Lumber for trying to bring clean energy to Skamania County. [LTR 20, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *To those conducting public hearings on The Whistling Ridge Energy Project: We are part of that silent majority who do not like to attend meetings where people argue and make us feel intimidated. We feel that our voice does need to be heard on this matter, it is very important to us. We support the Whistling Ridge Energy Project. [LTR 21, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *In our opinion, the people who are causing the obstacles in implementing this natural resource are the same people who have opposed most everything else that is proposed in the Gorge. They have personal agendas which are not for the good of the community but for their selfish interests. Wind Energy is a Good thing for the Gorge, a Good thing for the economy*

*of the Gorge and a good, clean alternative that all the environmentalists have been insisting on. Let's move forward and let a Good thing happen. [LTR 21, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 23, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 23, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would be just what the environment needs. Wind energy is totally supported by me! EFSEC should recommend that Governor Gregoire support this project. I support renewable energy, wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 24, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I strongly endorse the Whistling Ridge Wind Energy Project. The Project has gone through the EIS process and found no significant impacts to wildlife, the scenic value of the Columbia Gorge Corridor or to other resources. The Northwest is in desperate need of other power sources and we can't be reliant on hydro-power in the decades to come. I am appalled that many of the groups who are opposed to this project are the same people calling for removal of dams on the Snake River. Where will we get our power in the future. Many of our AFRC members have located cogeneration power plants on their sites as efforts to supplement needed clean power here in the Northwest and we strongly support this effort by SDS Lumber to provide more green energy. Please help bring some common sense to the process and support the Whistling Ridge Wind Energy Project. [LTR 25, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We are writing because we will be out of area for the meetings in Underwood and Stevenson. We are against the proposed Whistling Ridge Project for these following reasons… [LTR 26, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We demand that a hard, long look be given the decision to sanction this project. SAY NO!!! [LTR 26, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *I disagree with the slanted view of the Friends of the Gorge regarding the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. This project has been studied for seven years and found to pose no wildlife impact and it is located entirely OUTSIDE the Gorge Scenic Area. I respectfully disagree with Friends of the Gorge's position and ask that you approve Whistling Ridge. [LTR 27, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would not have negative impacts to the environment. The project is located on commercial timberland that have been subject to decades of intensive harvesting operations under a sustain yield forestry program regulated by the Washington Department of Natural Resources. [LTR 28, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. EFSEC should recommend that Governor Gregoire allow this project. This proposal is on a ridgeline because that is where it is WINDY. The project would disturb a small area of SOMEONE'S PRIVATE PROPERTY. I support renewable energy. [LTR 29, CMT 1]*

**Response**: Comment acknowledged.

**Comment**: *With the mess in the Gulf and President Obama's speech last night, we have to support non-fossil clean renewable sustainable energy like the Whistling Ridge wind project. [LTR 31, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I am completely opposed to any wind turbines that can be seen from the scenic gorge area. I am specifically opposed to the sds wind farms proposed. [LTR 32, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We are writing in opposition to the Whistling Ridge Wind Energy Project. We live in Husum, WA which is in the impact area of the project. We oppose the project for a number of reasons… [LTR 33, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause NO significant negative impacts to sensitive wildlife and plant habitat and would not degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire support this project. [LTR 34, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support renewable energy and I support the Whistling Ridge development adjacent to the Columbia River Gorge National Scenic Area. I support Whistling Ridge and wind energy in the gorge. [LTR 34, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. I support the proposed project because it will provide alternative energy so necessary should we hope to one day not have to rely on fossil fuels for our power. The EFSEC should recommend that Governor Gregoire approve this project. [LTR 35, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *In other words OKIMBY OK in my backyard I support renewable energy and I support this wind energy development. [LTR 35, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I have lived in the area of this proposed project for 18 years and have followed wind energy developments closely for most of that time, both here in the Columbia Gorge and nationally. I serve as an environmental representative on the technical advisory committees of three wind power projects in the area. I have participated in field visits to wind projects all over the West. I have a degree in biology and have read a great deal of the scientific literature pertaining to wildlife-turbine interactions. As someone who is well informed about both wind power and ecology, I have a number of concerns regarding the DEIS prepared for the Whistling Ridge Energy Project. [LTR 36, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I, Robert P. Duncan and my wife Jacqueline B. Duncan are in favor of the wind farm in Skamania county. [LTR 37, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am a resident of the community of Mill A in Skamania County, Washington - having moved to this community in 1976 and lived here since then (except for 5 years while teaching at Pepperdine University in California -- now retired from teaching). My home is located just west of the proposed Whistling Ridge Energy Project. [LTR 38, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Wind-generators are an excellent method of energy production and will do much to help our country decrease our dependence on foreign oil. They are clean, efficient, and are even better than "renewable" since they do not consume anything (no wood, coal, etc.) I strongly support the Whistling Ridge Energy Project, and I encourage EFSEC and BPA to approve it. [LTR 38, CMT 3]*

**Response**: Comment acknowledged.

**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause NO significant negative impacts to sensitive wildlife and plant habitat and would not degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire ACCEPT this project. [LTR 40, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I want to take a few minutes to register my support for the subject project as proposed by SDS Lumber Company. Although I occasionally drive-by SDS mill in Bingen, I am not and have never been connected with SDS in any way whatsoever: not as an employee, contractor, supplier, by marriage, friendship or in any other fashion. Neither do I stand to gain or profit in any way by SDS's development of the proposed wind energy project. There can be no conceivable, legitimate reason for this project not to be given your support and authorization to move forward as soon as possible. I very much hope that final approval will be forthcoming. [LTR 41, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to express my support of the Whistling Ridge Energy Project plans. I am a long-time resident of Skamania County and have watched as residents struggled through economic hard times for many, many years, whether related to timber owls, or tourism. Other Gorge counties are benefiting from the Gorge's abundant wind supply and, as an opponent of nuclear power and also a salmon recovery advocate, I very much favor the clean energy wind farms provide. [LTR 43, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing in support of the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project WILL NOT cause negative impacts to sensitive wildlife. As proposed, this project will not degrade the scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire APPROVE this project. [LTR 44, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The DEIS is*

*complete, comprehensive and no further analysis is required. I support the Whistling Ridge Energy project. [LTR 45, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I have not had an opportunity to carefully review this proposal, but due to the short public comment period, I want to go on record and express that my wife Jodi and I oppose this project and urge you to recommend denial to Governor Gregoire because Whistling Ridge is environmentally irresponsible and would harm the Columbia River Gorge. Thank you for taking our input into consideration. [LTR 46, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. Studies have shown that the proposed project would have no negative impact on wildlife and plant habitat and would not affect the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire approve this project. I support renewable energy, and reducing our reliance on foreign oil, particularly given the current situation in the Gulf of Mexico. This project is an important step in the right direction for the state of Washington and for the Gorge's energy independence. [LTR 47, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support the Whistling Ridge Energy Project. I believe America needs to move ahead with clean energy solutions which don't depend on oil. I hope you will also support this project. [LTR 48, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Huge profits (surplus electricity sold back to the electricity brokers for resale to CALIFORNIA/Seattle) for the Stevenson Empire. The only long-term benefit here is decades of easy money for one entity: Stevenson Empire. Oops, almost forgot the other beneficiaries: electricity brokers who sell to California and Washington's big municipal users. I am tired of 800# gorillas, such as the Stevensons, throwing their weight around so indiscriminately around here to the detriment of average and below-average locals. Don't the Stevensons have enough wealth already? How much is enough for them? Somebody please make them stop! Talk is cheap. If the Stevensons truly cared about the local community, decades ago they would have spent serious money on a construction solution (such as an overpass for the Bingen lumber mill)*

*to the audibly and psychologically disturbing train horn and noise which plagues Bingen and Hood River residents several times per day and night! [LTR 49, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *The choices are limited: Proceed with the project and other similar wind farms. Increase the energy production from oil, gas, nuclear, and coal and accept the ensuing environmental devastation. Do without the energy. One wonders how many of the NIMBY opponents are willing to forego cooling and heating their homes to avoid seeing the windmills in their distant view! It seems that a mild aesthetic impact (although I personally find windmills aesthetically pleasing) and the loss of some bird population is a far lesser evil than pollution of air and water. The loss of life and treasure associated with the various wars we engage in to protect the supplies of fossil fuels is an additional matter of concern. [LTR 50, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing in opposition to the proposal by Whistling Ridge Energy LLC to construct up to 50 turbines along 2,000 foot-tall ridgeline on the boundary of the Columbia River Gorge National Scenic Area near White Salmon Washington. [LTR 51, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project will not cause significant negative impacts to sensitive wildlife and plant habitat and will not degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire approve this project. [LTR 52, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would substantially improve the economic conditions in these two counties without causing negative impacts to sensitive wildlife and plant habitat or impacting the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire approve this project. [LTR 53, CMT 1]*

**Response**: Comment acknowledged.

**Comment**: *I support renewable energy, and encourage EFSEC to recommend that Governor Gregoire approve this project. [LTR 53, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to express my support for the Whistling Ridge Energy Project. Solar, wind, and bio-fuels are our energy future. We NEED to start thinking clean renewable energy instead of the old model of "polluting", "limited resource", "harmful to the environment" types of energy. I know the Gorge is a special place and needs to be preserved but I see wind energy doing just that. Windmills are far less harmful than the polluting coalfired Boardman plant that spews "dangerous pollutants" into our air and water that ultimately affects the quality of life here in the Gorge. [LTR 54, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *For these reasons we hope you do not allow, the Whistling Ridge Project as there are plenty of other locations suitable for winds farms in eastern Washington and Oregon. [LTR 55, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Let me be known that I am strongly opposed to the wind farm being proposed for the Underwood Bluff in Washington. [LTR 56, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 57, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 57, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. EFSEC should recommend that Governor Gregoire approve this project. [LTR 58, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Mr. Chairman and Members of the Council, I commend you and BPA for commissioning an excellent environmental document, which provides a rock solid foundation on which to inform your ultimate action on the Whistling Ridge Wind Energy Project. [LTR 61, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing this letter to you to tell you of my support of the proposed Whistling Ridge Energy project. I have no business or personal connections to anyone connected to this project. I have no financial loss or gain from this project. But I do use electricity and I support any alternative energy production. Even our President last night said we must become less dependent on current technology. I believe this project is a benefit to the county. Incidentally I live 15 miles distant from the proposed project. [LTR 65, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support the Whistling Ridge wind project. [LTR 71, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am in favor of this wind project. Environmental Impact Statement found no significant negative Impacts that would preclude the development of this wind project. [LTR 72, CMT 1]*

**Response**: Comment acknowledged.

**Comment**: *Not fauna, flora nor scenic impacts. [LTR 72, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am opposed to this project as it is written. It is hard for me to believe that the parties responsible for drafting this DEIS can be objective and impartial for this proposal. EFSEC is an agency known for siting energy facilities and the BPA is an agency which deals with power generation and distribution of that power. Nothing personal, it is your duty to be objective. [LTR 74, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Why does Portland get to decide what goes in the gorge because it ruins their view, when we see only lights across the river? And why should windows in a tunnel come before much needed jobs? This was a plan up the river. If there is another meeting it should be people of Skamania County people only as they are the ones impacted. [LTR 75, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *The horrifying, large-scale oil contamination event in the Gulf has increased the pressure to develop viable, alternative sources of energy. Wind-generated power, popularly advertised as being "clean" or "green," is, however, not without drawbacks. The in-toto, as well as individual problems associated with wind turbines and large turbine arrays may, under certain circumstances and at particular locations, outweigh their benefits. Regardless of opinion regarding this proposed project, there must be unbiased, objective documents that permit the public access to information and to guide decision-makers to their tasks as well. The inattention to detail, lack of thoroughness, and to the appearance of fairness is very discouraging to see, especially in print. This EIS was created, with time to spare, compared to the time we have been allotted to review it and to prepare comment. [LTR 76, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Skamania County needs the Whistling Ridge Energy Project to be a success - and SDS can make it happen. Projects such as this, which are environmentally friendly, economically friendly and community friendly spur similar ideas. They almost force existing and new companies to reconsider how they plan to operate in communities that need growth – but hope to maintain the hometown, rural area environment. As the council continues with the hearing tonight - I would ask that you consider who is sharing their comments for and against this project. Those for the project - I suspect they live here, and have for a long time. I suspect*

*that they have seen what Skamania County once was, what it could be - and how this project will be of great value to our home. [LTR 78, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *We are residents of Skamania County, Washington and would like to provide our support for the proposed Whistling Ridge wind power site. Alternative sources of energy are a vital part of our future, and fit with National goals of implementing programs to achieve energy sources. We commend SDS for taking the initiative to research and implement this energy source west of the Cascades. The analysis of mitigation methods to achieve a safe and effective energy source such as wind power have already been implemented in other areas of Washington State, as well as throughout the world. We are hoping to see more of these projects implemented in the future. [LTR 80, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *First and foremost, I wanted to be brief and not waste your time. I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would have significant positive economic impacts without effecting wildlife and plant habitat. In my opinion, this project would NOT affect any scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire approve this project. [LTR 81, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I was born, raised and currently live next to this proposed project site. I have found that many people form an opinion based on untrue facts. I have read and reviewed the draft environmental impact statement, and in doing so have evaluated all the pros and cons of this project like any project you have people on both sides and sometimes in the middle. I feel that it is obvious that the pros way outweigh the cons. This project is a must; and quite frankly a need here in our community! [LTR 81, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am in full support for renewable energy. We need to understand for our future to be successful, this project must go through. SDS Lumber Company has worked hard and has given so much to this community. Most of the people that are opposing this do not live in this area and do not really understand what our needs are right now and what they will be in the future. Thank you for your time. [LTR 81, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *We believe the Whistling Ridge Energy Project will do nothing more than improve this beautiful county we call home. Thank you in advance for taking the time to read this email and consider our opinion for this project. [LTR 86, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 87, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 87, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I cannot believe in this age of BP that we are questioning any environmentally friendly wind project. This, just like all such projects, should be expedited as fast as possible. [LTR 88, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *It would be in every ones best interest to be in FAVOR of the excellent energy creation project proposed for Skamania County. Whistling Ridge will benefit the entire region with clean affordable electric power for generations. This is exactly what we need here. I live in district 3 in Skamania County where this project is proposed and support it wholeheartedly. I would encourage both of your fine organizations to approve Whistling Ridge as soon as is reasonably possible. [LTR 89, CMT 1]*

**Response**: Comment acknowledged.

**Comment**: *I am all for the Whistling Ridge energy project. I think it's a good idea to put this wind that we have in good use. The gorge and where I live in Murdock, we get a lot of wind so why not make good use of it and benefit people by supplying jobs and energy. I like the name Whistling Ridge because the wind does whistle here at times. [LTR 90, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This is the Columbia River Gorge Natural Scenic Area, you don't put wind turbines in the Grand Canyon, and you don't put them here. I say why don't you put these turbines on your SDS mill site right on the Columbia River in Binger there is plenty of wind there. These wind turbines belong nowhere near the Columbia River Gorge National Scenic Area, this is not the right place. [LTR 91, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *As for the right project, it really saddens me that the SDS Lumber Co. can stroll in and clear cut the entire side of Underwood Mountain or spend thousands of dollars mailing everyone a slick brochure on how much this area needs this project. We don't need it, you need it. Myself as a landowner in Underwood can't cut a tree down or paint my house a different color without jumping through the gorge Commission hoops. [LTR 91, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I live in the Gorge. I am opposed to the proposed site of Whistling Ridge Energy Project. [LTR 92, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The brochure photo from Hwy 84 is misleading. What it does not show is Mt. Adams, East of the site. [LTR 92, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Klickitat County appreciates the opportunity to provide this comment on the joint Draft EIS for the Whistling Ridge Energy Project. Whistling Ridge is proposed for location in Skamania County, adjacent to Klickitat County. Klickitat has permitted several wind projects over the past decade, so has acquired experience with evaluating and mitigating project impacts,*

*as well as an appreciation for the socio-economic benefits wind development can bring to a rural community. It is within this context that the County offers these comments and support for Whistling Ridge. [LTR 93, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Environmental Review for Whistling Ridge. This is EFSEC's fourth wind development project, and the state has been addressing wind project siting now for a decade. BPA has been addressing wind project siting for nearly two decades, if not longer. EFSEC's and BPA's environmental review processes are comprehensive. Skamania County has reviewed Whistling Ridge for consistency with its land use plans and zoning requirements, as documented through Resolution 2009-54. Klickitat County respects this determination. [LTR 93, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Conclusion Klickitat County appreciates your consideration of these comments. EFSEC and BPA are thoroughly reviewing the Project, which, if constructed, will be an economic and environmental asset to the region and state. [LTR 93, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Renewable Northwest Project (RNP) provides the following comments with respect to the environmental review conducted for the Whistling Ridge Energy Project pending before the Energy Facility Site Evaluation Council (EFSEC) and currently undergoing a comment process for the joint BPA and EFSEC Draft Environmental Impact Statement (DEIS). [LTR 95, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We are writing to express our support for acceptance of environmental information contained in the DEIS, and to commend EFSEC, BPA and Whistling Ridge Energy for their compliance with both the spirit and the letter of applicable siting standards and process, including Washington's Wind Power Guidelines. RNP was actively involved in the negotiation and development of the 2003 Washington Wind Power Guidelines, as well as the revised 2009 Washington Wind Power Guidelines. We were also active participants in the 2008 Oregon-Columbia Plateau Ecoregion Wind Energy Siting and Permitting Guidelines. [LTR 95, CMT 6]*

**Response**: Comment acknowledged.

**Comment**: *This survey work is beyond what has typically been done in other Northwest wind power projects, and is consistent with the guideline's theme of siting the project in a manner that will avoid, minimize and mitigate impacts. We applaud the Project sponsors for the open and transparent manner in which they conducted their research, shared their findings, and engaged the interested public in a series of discussions, field trips, and constructive dialogue. We appreciate the sensitivities associated with a project proposed for location between DNR land historically associated with Northern Spotted Owls and the Columbia Gorge National Scenic Area. [LTR 95, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *In sum, RNP believes that the Whistling Ridge Energy Project has demonstrated the commitment to meaningful engagement with wildlife agencies, to rigorous environmental review, and to constructive community dialogue that we believe is consistent with the Washington Wind Power Guidelines, and that characterizes responsible wind energy development in the Northwest's commercial forestlands. We appreciate the opportunity to provide this comment. [LTR 95, CMT 10]*

**Response**: Comment acknowledged.

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**Comment**: *Like many people giving open testimony, I am all FOR the project. [LTR 96, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *There are those who want to stop all progress, just for the sake of having no change. Then there are the Not In My Back Yard people. And, from the worldwide environmental perspective, wind power is much friendlier than transporting oil halfway around the world in ships. The location of this turbine project seems to be the primary question. Whistling Ridge is where the wind is abundantly available, locally. The ridge's name is derived from the fact that the wind literally whistles through the trees when it blows. Trading the whistling noise for the soft slap of turbine blades, and then only when the wind blows, may be better than the whistle. The power connecting substation can be located optimally close to the project sight and right next to a main Bonneville distribution line. This very rural area will limit impact on a very few humans. [LTR 96, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *For the reasons stated above, I endorse and SUPPORT this project. [LTR 96, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *As a five year resident of Klickitat County and a near lifelong Gorge area resident I support the Whistling Ridge Energy Project & urge your support of this project. [LTR 97, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Also & more importantly I urge the Council to disregard the Portland Oregon downtown based Friends of the Gorge's (FOG) thoughts/efforts to miss lead the EFSE Council. Otherwise any large corporation or private organization like FOG worth 7.5 million can offer/promote a lot of directed comments & miss represent the true opinions of the area citizens who reside in the nearby communities & live here within the Gorge. [LTR 97, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *There are many other reasons that I am against the Turbine project. I am opposed to the destruction of the landscape and the wildlife that will be affected. The migratory birds are at risk, golden eagles, bats etc. In other installations it has been noted that with wildlife nearby disappears or is killed. The Fish and Wildlife Service recommends not to place these turbines on ridges. [LTR 98, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I am not opposed to wind turbines, but these ridges so close to the scenic area and long established communities are not a good fit. I told Jason Spadero almost 3 years ago, just because you have this land here and you want to be in the energy industry doesn't mean that it is a good fit. [LTR 98, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *I was unable to attend the recent public hearings regarding the Whistling Ridge Energy Project proposed by SDS Lumber Company. I am in full support of this project and strongly favor its implementation. [LTR 99, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Sustainable wind energy is an obvious course to pursue in this area of sustainable and abundant energy source. [LTR 99, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I understand, now the Oregon coal fired plant is about to become history! What is wrong with these people? They say it creates acid rain in the gorge. BS I say! The only air quality problem we have is when the west winds blow, bringing all the airshed problems of Portland and Vancouver with it. Global warming. Al Gore and all of his fellow believers need to go somewhere and start their own country someplace else! Our weather and climate are changed forever, each time, a volcano erupts somewhere in our world, but then in their environmental movement, never talk of this! I have no issues over taking care of our environment. We should, it's our duty to do so as stewards of our world we live in. The problem is extremism! In anything is counterproductive and really destructive to our way of life and our country's economy. [LTR 100, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *So my feeling on wind farms, let's get it done! Time is wasting. Let's take advantage of this great resource, the wind! [LTR 100, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am 70 years old, disabled and retired. I live a lot in these 70 years. I've seen a lot and done a lot and learned a lot! All this green madness that's going on now is going to destroy us in the end. You've got my vote for the Whistling Ridge project! [LTR 100, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Please deny the application for the Whistling Ridge development, and help preserve the soul of our Columbia River Gorge. [LTR 101, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Please do not put the wind turbines on Whistling Ridge. [LTR 102, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The project west of the Dalles has been canceled and the middle mt. project south of Hood River has been stopped. If we would have known that Whistling Ridge was to become an industrial wind factory we never would have bought property in Mill A. Common sense tells us this is a bad idea and should never be put in. [LTR 102, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I steadfastly oppose the Whistling Ridge Project for a number of reasons. Primarily, it is a terrible site as it impacts the Columbia Gorge National Scenic Area in a very big way. Industrial Wind Farms destroy all natural character of the places they are sited. I know. I drive through the eastern Gorge quiet frequently and healthy, wide open feel and wildness of the area is gone now dominated by twirling blades, roads, power lines and thousands of red lights at night. To some this may be an acceptable sacrifice way out in flat farm country, it is completely the opposite, however here on the edge of the Columbia Gorge!!!! We do need to address increasing energy demands but NOT on the edge of a nationally recognized treasure like the Columbia Gorge. [LTR 103, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *What is wrong with the project? Everything! 50 wind turbines 426 feet tall on the very edge of a National Scenic Area is insane. They are too high, too many and in the wrong place!! If California, or Canada, need this power, they can build their own turbines on their land and ruin their scenery, etc. Let's not be their FOOLS! [LTR 104, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *A wind farm is an affront to the land and to living things! For all of the above reasons please deny this application. The environmental impact is too great. Please demonstrate wisdom for all living things. [LTR 104, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. Washington State utilities must reach the goals set by Initiative 937. [LTR 105, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. [LTR 105, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. The choice is clear support Whistling Ridge and Skamania County by approving this project. [LTR 105, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 106, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 107, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. [LTR 107, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. The choice is clear: support Whistling Ridge and Skamania County by approving this project. [LTR 107, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 108, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 109, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Washington State utilities must reach the goals set by Initiative 937. Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. Skamania County has the wind, SDS Lumber has the land: it is a match made in heaven. [LTR 109, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. [LTR 109, CMT 3]*

**Response**: Comment acknowledged.

---

**Comment**: *The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. [LTR 109, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *As a Washington resident who often enjoys the recreational activities available in Skamania County and the Columbia River Gorge (and hence contributes to the local economy), I feel that windmills would enhance rather than detract from the natural beauty of the area. Those who oppose the responsible construction of windfarms are selfish and short-sighted. The choice is clear: support Whistling Ridge .and Skamania County by approving this project. [LTR 109, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I'm tired of our country being held hostage to Big Oil with its many foreign sources. I am tired of the ecological disasters that accompany the exploration, refining and consumption of oil. It is imperative that safe, non-polluting forms of energy are encouraged. Wind River is such an alternative. Not to approve this wind farm would be both irresponsible and unAmerican! [LTR 110, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 111, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Washington State utilities must reach the goals set by Initiative 937. Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. Skamania County has the wind, SDS Lumber has the land: it is a match made in heaven. [LTR 111, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. [LTR 111, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. [LTR 111, CMT 4]*

**Response**: Comment acknowledged.

---

**Comment**: *As a Washington resident who often enjoys the recreational activities available in Skamania County and the Columbia River Gorge (and hence contributes to the local economy), I feel that windmills would enhance rather than detract from the natural beauty of the area. Those who oppose the responsible construction of windfarms are selfish and short-sighted. The choice is clear: support Whistling Ridge .and Skamania County by approving this project. [LTR 111, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. I am a medical student at the University of Washington, School of Medicine, and while my professional focus is not on the environment, I am well aware of the human impacts that environmental damage can cause. [LTR 112, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The recent tragedy in the Gulf Coast highlights the previously existing need for alternative energy, and opponents to its development are contributing to environmental damage while claiming to be fighting against it. Washington State utilities must reach the goals set by Initiative 937. Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. [LTR 112, CMT 2]*

**Response**: Comment acknowledged.

**Comment**: *Skamania County has the wind, SDS Lumber has the land: it is a match made in heaven. Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. [LTR 112, CMT 3]*

**Response**: Comment acknowledged.

---

**Comment**: *The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. The choice is clear: support Whistling Ridge and Skamania County by approving this project. [LTR 112, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I strongly support the Whistling Ridge Energy Project. [LTR 113, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We need renewable clean energy now! This project has it all. Great wind and low impact. It is time to move for energy independence now. [LTR 113, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 114, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Washington State utilities must reach the goals set by Initiative 937. Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. Skamania County has the wind, SDS Lumber has the land: it is a match made in heaven. [LTR 114, CMT 2]*

**Response**: Comment acknowledged.

**Comment**: *Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. [LTR 114, CMT 3]*

**Response**: Comment acknowledged.

---

**Comment**: *As a Washington resident who often enjoys the recreational activities available in Skamania County and the Columbia River Gorge (and hence contributes to the local economy), I feel that windmills would enhance rather than detract from the natural beauty of the area. Those who oppose the responsible construction of windfarms are selfish and short-sighted. The choice is clear: support Whistling Ridge and Skamania County by approving this project. [LTR 114, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *Sorry I could not make it to the meeting 6-17. I was not feeling well. I am all for the Whistling Ridge Energy project. [LTR 115, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We really need the project to help with energy costs. As many seniors are low income and have a hard time affording utilities this would be a big help. [LTR 115, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I want to leave my children with clean, reliable, inexpensive electricity to power their future. That means developing alternative sources of energy and having a whole mix of power options to serve our growing population. [LTR 116, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Wind energy is one of those choices and it makes sense to develop it at Whistling Ridge. Few places exist with the strong winds and transmission lines for such a project. [LTR 116, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Wind energy is clean, renewable, cost competitive, and is a product we can make right here and use or export to the rest of the country, just like timber. It creates no pollution and can coexist peacefully with the wonderful variety of wildlife we enjoy. Please allow this project to go ahead so that we can leave our children with alternatives for their energy future. [LTR 116, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The Whistling Ridge project would technically not be within the scenic area, but it would bring an unnatural and terribly imposing negative visual impact to the scenic area. It sets a horrible precedent for industrial-scale and visually imposing and discordant development that will be quite visible from an area prized for its wild areas and scenic beauty: [LTR 117, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Since this project, like all other windmill projects, is subsidized, shouldn't the tax payer dollars benefit the most people, not just the investors? Please reconsider this project for the issues above. The country needs alternative energy sources, but we need to be smart about it as well. Once the visual impact is altered by a project like this, it is altered for all decades. [LTR 117, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Since I could not attend the hearing on the wind farm proposal, I want to now voice my opposition to this project. [LTR 118, CMT 1]*

**Response**: Comment acknowledged.

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**Comment** *…and invasion of our beloved quiet and privacy we have enjoyed for over 20 years. We understand the value of "harnessing the wind" but, please, not SO close to an established community! Thank you for your consideration. [LTR 118, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *The Board of Directors of Northwestern Lake Development Homeowners' Association submits the following comments regarding the Draft Environmental Impact Study (DEIS) conducted by EFSEC and BPA with respect to the Whistling Ridge Energy Project (the Project). I. Introduction. We represent the owners of 30 residential properties located near the mouth of Little Buck Creek where it empties into Northwestern Lake. There are currently 23 residences built, most of which are full-time residences (as distinct from most recreational cabins located along Northwestern Lake). Our community is approximately two miles east of the Project, and is near the bottom of the Little Buck Creek watershed. The Project would sit at the head of this watershed. Because of our proximity to the Project, we have major concerns about the possible adverse effects it might have on us and our environment. [LTR 119, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Given that there are abundant optional locations for this type of project, we cannot support this Project until there is conclusive documentation that it will not have "adverse effects" on our lives and our environment. We respectfully request that EFSEC and BPA rigorously investigate, document, and evaluate our concerns. Thank you. [LTR 119, CMT 13]*

**Response**: Comment acknowledged.

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**Comment**: *Wow! It could happen here. Our little community can be a part of a new clean energy economy. I salute Whistling Ridge Energy/SDS efforts to really make this happen. Power has to come from somewhere and what a better place than a locally produced renewable source right in our backyard. We have the wind resource, the transmission lines, and a local company and willing workforce that can make this happen. Let's do this one right. [LTR 120, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Ultimately, the arguments against wind turbines boil down to detractors "don't like the way they look." They are entitled to this opinion. If educated about the dirty alternatives or presented with the very real possibility of their sons and daughters being involved in future conflicts to secure our nation's energy security I'm certain their opinions would change. [LTR 120, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The new energy economy is not about a silver bullet that renders everything else obsolete. Wind energy is going to be just one part of an increasingly interlinked and interdependent network of distributed renewable energy generation facilities. Solar, hydro,*

*biomass, waves, geothermal, and wind are the silver buckshot that will move our country towards energy independence. I would be proud to say that I'm from a forward community that is contributing towards this effort. Oh, and, for the record… I think wind turbines look amazingly cool. [LTR 120, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to urge you to deny permission for the wind energy project proposed by Whistling Ridge. Although wind energy may be appropriate in some areas, it is simply short-sighted and destructive to allow for-profit corporations to plant wind farms in sensitive areas, with major financial incentives, without the state and country first making a careful study of what locations are appropriate. [LTR 121, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This kind of marring of the landscape is virtually impossible to undo, and the benefits of the excess energy production are far-off and limited. The project could easily end up being a complete boondoggle, with citizens and the environment paying the price, not just financially, but in loss of our beloved natural areas. So much more energy could be saved by some modest efforts at energy conservation, and the environment of our region would benefit too. I urge you to take on the vested interests and push for real conservation measures, calling on the people of Washington to each do their part, instead of opting for the easy political gains of hyping alternate energy while selling out the state to self-interested corporations. [LTR 121, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Beyond all this, I fully support the following message from Friends of the Columbia Gorge: I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat and would degrade the outstanding scenic beauty of the Columbia River Gorge National Scenic Area. EFSEC should recommend that Governor Gregoire deny this project. [LTR 121, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *The project would introduce industrial development into the natural, forested landscape and indefinitely alter views in the National Scenic Area. I support renewable energy, but I am opposed to industrial-scale wind energy development within or adjacent to the*

*Columbia River Gorge National Scenic Area, a designated national scenic treasure. [LTR 121, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 122, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This wind farm will give the Skamania County economy a necessary boost. Our county has struggled for too many years with high unemployment, which is far above the state average. Now Skamania County has an opportunity to take advantage of a natural resource, which is clean and economically viable. This industry is exactly what our county needs. It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing? Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I urge the Council to approve the SDS application and advance this important project quickly. [LTR 122, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I'm writing to express my opposition to the Whistling Ridge Energy Project. [LTR 123, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *What's more, while the proposed site is just outside the Columbia River Gorge National Scenic Area, it is highly visible from many locations within the scenic area. The original legislation for the NSA called for extremely limited development within view from Interstate 84 and Highway 14. This project will be extremely visible from those locations. SDS has been running ads in the local paper showing how visible these towers will be from within the NSA. At some point we need to look to the congressional intent to protect the views of this area. I highly doubt the framers of the scenic area act ever envisioned allowing 400 foot towers (with bright red lights on each of them at night) where they are so visible. The Columbia River Gorge is an area I consider to be sacred to me and my family. This is the wrong project for the wrong area. Please say no to the Whistling Ridge Energy Project. [LTR 123, CMT 3]*

**Response**: Comment acknowledged.

**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 125, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This wind farm will give the Skamania County economy the boost it needs. We are too dependent on timber harvests and federal timber payments. Too many residents are stuck in low-income brackets while unemployment ranks far above the state average. Fortunately, Skamania has another natural resource to develop: wind. Bringing another industry here is exactly what our county needs. It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing? Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I hope the Council approves the SDS application and that the project advances quickly. [LTR 125, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 126, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This wind farm will give the Skamania County economy the boost it needs. We are too dependent on timber harvests and federal timber payments. Too many residents are stuck in low-income brackets while unemployment ranks far above the state average. Fortunately, Skamania has another natural resource to develop: wind. Bringing another industry here is exactly what our county needs. It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing? Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I hope the Council approves the SDS application and that the project advances quickly. [LTR 126, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. I am all in favor of wind projects such as this. [LTR 128, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am concerned about the impacts of major industrial construction on the ridgeline boundary of the Columbia River Gorge National Scenic Area near White Salmon. I live in the City of Mosier, where our businesses depend on the tourism created by the natural scenic beauty of the Columbia Gorge. In a recent survey (Mosier Community Survey, 213138) 99% of the Mosier Valley residents who responded rated "scenery and natural beauty" as Very Important to them. For a wider view, read the final report of the Columbia Gorge Future Forum, in which many Gorge residents responded negatively to the industrialization of the Gorge by the wind turbine industry and in which one of the most commonly shared Gorge values was our scenic beauty. And who hasn't read the National Geographic review of the Gorge as the 6th most highly rated destination in the world because of the "…incredible job of protecting the views…" It greatly concerns me that we can so easily despoil forever what is so rare and so highly valued by the rest of the world. And for what? The sacrifice of long term vision for immediate profit? Profit for a very few at the expense of the other Gorge communities and counties whose economic development depends on the protection of the scenic Columbia Gorge? I hope that greed does not lead us into making decisions that will negatively impact most of our current population and that our future generations will forever regret. [LTR 129, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I, as ought to be anyone with sense, am opposed to the project and to any attempt to analyze it into creation, including the current DEIS. [LTR 131, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 132, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Washington State utilities must reach the goals set by Initiative 937. Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. Skamania County has the wind, SDS Lumber has the land: it is a match made in heaven. Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. [LTR 132, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. [LTR 132, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I support the project as a whole. [LTR 133, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. Please keep the Gorge looking as it did in the days of Lewis & Clark. We have so few areas in the U.S. where a historical landscape is unmarred. [LTR 136, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The City of Bingen, located in Klickitat County adjacent to the proposed Whistling Ridge Energy Project, is supportive of alternative renewable energy including wind energy facilities. Wind energy projects are one way the State of Washington and the United States can help reduce the reliance on traditional, nonrenewable energy sources. [LTR 137, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I write to offer my strong support to the proposed Whistling Ridge Energy Project in Skamania County. [LTR 138, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This is a viable project on privately held commercial timberland outside of the National Scenic Area. [LTR 138, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *EFSEC... the very name indicates that you must evaluate appropriate siting for proposed energy facilities, but does it demand that you must site? Have you ever recommended against siting a wind energy facility? This siting, if it occurs, will set a precedent with troubling and long-standing consequences for not only forested lands in Washington, but will also put at risk all other national and state treasures, parks, and scenic areas. History is replete with disastrous consequences from forging ahead to achieve short-term financial windfalls without adequate regulatory oversight and caution. Big money interests and unfortunately, sometimes government, suppresses and ignores mounting scientific evidence that is contrary to its financial and political goals (as in the effects of tobacco, deforestation and most recently, deep-water drilling). Must we blindly go forward and ruin all that has been set aside? Once it is gone, it is gone. Employing wisdom and forethought, if there is ever a time for EFSEC and BPA to determine "NO, the cost is too great!" this is it. [For attachments: The "How To" Guide to Siting Wind Turbines to Prevent Health Risks from Sound, see PDF starting at page 179, Simple guidelines for siting wind turbines to prevent health risks, see PDF starting at page 62, Environmental Noise Guidelines: Wind Farms, see PDF starting at page 73, Public Health Impacts of Wind Turbines, see PDF starting at page 93, Noise Control Regulations for Industry and Commerce, see PDF starting at page 123, Wind Turbines, Health, Ridgelines, and Valleys, see PDF starting at page 128, Deputation to the Standing Committee on General Government Regarding Bill C-150 April 22 2009, see PDF starting at page 134, Mars Hill Wind Turbine Project Heath Effects – Preliminary Findings, see PDF starting at page 141, Health Concerns and the Need for Careful Siting of Wind Turbines, see PDF starting at page 178] [LTR 139, CMT 29]*

**Response**: Comment acknowledged.

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**Comment**: *The thirteen members of the Board of Directors of the Skamania County Economic Development Council unanimously support approval of the Whistling Ridge Energy Project. We have reviewed the Draft EIS and believe that it is objective, comprehensive, accurate and authoritative. [LTR 140, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I have lived in the Columbia Gorge (White Salmon, WA) since 1950 and just recently moved to The Dalles, OR. The Whistling Ridge Energy Project is ideally located, out of the Gorge Scenic area and would disturb very few people – if any. I am 100% in favor of this project and hope you can see your way clear to approve this very worthy project without any further delay. [LTR 149, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We live in Underwood, and fully support the Whistling Ridge Energy Project. We have heard no reasonable or convincing reasons why the project should not proceed to completion. [LTR 150, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 152, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I appreciate the opportunity to comment on the Whistling Ridge Project. Normally I would just say: yes, do it, it's a renewable. But the Columbia Gorge is a one of-a-kind place. I grew up in the gorge; I spent a lot of my youth exploring it, including the forest lands in Skamania County. I observed up close the movement to establish the National Scenic Area. A primary reason the NSA was established was the poor stewardship of some of the Gorge's extraction industries such as SDS Lumber. The prevailing approach of SDS and their cohorts was and is to cut/quarry as fast as possible. In the past years, SDS cut to within an inch of the NSA and in full view of its core scenic assets (clear cuts across from Viento Park and nearby areas). SDS would argue they were/are playing by the rules. Perhaps they were, but I suspect they found some sort of barely legal ways to bend the rules. The death of the viewsheds in the NSA is death by a thousand cuts. Some would argue there are already an interstate freeway and a railroad and a whole dam but that is exactly WHY the preservation of what remains of the viewshed is so important to the value of the NSA. Much of the Columbia Gorge is now a National SCENIC area. We need to preserve the scenic quality whenever possible; the rules of the NSA are clear on that point. SDS has always viewed the NSA and the NPS with disdain and has done their darndest to stick their finger in the eye of those who love the Scenic Area. I don't think they should be allowed to do it again. [LTR 153, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. I am adamantly opposed to this project as it would violate the spirit of the law of the Columbia Gorge Scenic Area Act and destroy the intended viewshed of the area. I am a supporter of alternative energy in general. But, I firmly believe that industrial wind turbine development should be installed in areas that are very remote from people and vital natural resources. [LTR 154, CMT 1]*

**Response**: Comment acknowledged.

**Comment**: *I strongly urge the Council to see the value of this project for the short and long term local, regional, and national benefits to society and our goal toward a clean energy future. Thank you for taking the time to review my comments. [LTR 155, CMT 9]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. [LTR 156, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Skamania County has the wind, SDS Lumber has the land: it is a match made in heaven. Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. [LTR 156, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *The choice is clear: support Whistling Ridge and Skamania County by approving this project. [LTR 156, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *As a Skamania County resident who would be located near the area where the SDS' 75 megawatt wind farm would be sited, I am in full support of this project. [LTR 157, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I have lived near forest lands owned by SDS since 1983 and know that SDS has always been a responsible and considerate neighbor to us at the Northwestern Lake area. I give them my full endorsement without any reservations. [LTR 157, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county lines. I am pleased that the best available area for renewable energy is being utilized. The ridgelines allow the greatest amount of wind energy to be captured. [LTR 158, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am 100% in favor of the Whistling Ridge Project. I have lived in Skamania County 84 years, except 3 years U.S. Navy Service in W.W.2. [LTR 159, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing in support of the Whistling Ridge Energy Project. [LTR 160, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I have lived in the area of this proposed project for 18 years and have followed wind energy developments closely for most of that time, both here in the Columbia Gorge and nationally. I serve as an environmental representative on the technical advisory committees of three wind power projects in the area. I have participated in field visits to wind projects all over the West. I have a degree in biology and have read a great deal of the scientific literature pertaining to wildlife-turbine interactions. As someone who is well informed about both wind power and ecology, I have a number of concerns regarding the DEIS prepared for the Whistling Ridge Energy Project. [LTR 161, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *On behalf of the Association of Washington Business (AWB), thank you for the opportunity to provide comments on the Whistling Ridge Draft Environmental Impact Statement (DEIS). Formed in 1904, AWB is Washington's oldest and largest statewide business association, and includes more than 7,000 members representing over 650,000 employees. AWB serves as both the state's chamber of commerce and manufacturing and technology association. 90 percent of AWB members employ fewer than 100 people and more than half of AWB's members employ fewer than 10. We write today in support of the May, 2010 DEIS and offer the following general and specific comments in support thereof. [LTR 162, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The U.S. Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the Bonneville Power Administration's Whistling Ridge Energy Project, Skamania County, Washington. The Department offers the following comments for use in developing the Final Environmental Impact Statement for the project. [LTR 164, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am a Portland resident with a second home in White Salmon, Wa. I have a view of Mt Hood and Underwood Mountain (among other things). I am opposed to adding windmills to the views in the Gorge, as long as that is possible. [LTR 166, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *In response to the Draft EIS, this letter is submitted to you to document our continued support for the Whistling Ridge Energy Project. As Chiefs of the Klickitat and Cascades Tribes of the Yakama Nation, we have worked closely with Jason Spadaro, President of SDS Lumber Company, on the Whistling Ridge Energy Project for several years. SDS Lumber Company approached us cooperatively and very early in their process, asking us to review their property and identify any concerns we may have with a wind energy project in the area. [LTR 168, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We strongly believe wind energy development should be encouraged in appropriate areas because it is clean energy. We believe the SDS land being proposed is a very appropriate area because the SDS wildlife surveys have shown no threatened or endangered plants or animals exist in the area and we do not find any cultural resource concerns to our Tribes. [LTR 168, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *We believe everyone should be supportive of wind energy in places such as this because it is clean energy and should be encouraged over traditional energy resources like natural gas and coal fired plants that consume large amounts of water and pollute our air,*

*hydroelectric dams that destroy our fish and nuclear power plants that poison our people. [LTR 168, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *On April 14-16, 2008, the 76th Western Snow Conference was held at the Best Western Hood River Inn, Hood river, Oregon. Climatologists, hydrologists, meteorologists, and geoscientists attended. They were from the universities of California, Washington, Oregon State, Portland State, Idaho, Idaho State, Boise State, Wyoming, Utah, Colorado State, and Nevada. Others attending were from the U. S. Army Corp of Engineers, U. S. Dept of Agriculture, U. S. Bureau of Reclamation, National Weather Service, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, U. S. Geological Survey, NASA Ames Research Center, Natural Resources Conservation Service, California Dept of Water Resources, San Francisco Hetch-Hetchy Water System, Bonneville Power Administration (BPA), British Columbia Hydro, and Portland General Electric. The theme of the conference was the impact of global warming and climate change on the following: 1.water storage and early melting of the snow packs In the Washington and Oregon cascade mountains, Colorado and Canadian Rocky mountains, and the California Sierra Nevada mountains; 2. melting and receding glaciers in the western U. S. and Canada; 3. changing hydrology of western rivers; 4. drastic reductions of the water levels of Lake Powell and Lake Mead, which are only one-half full; 5. Water deliveries to the lower Colorado River Compact states; 6.increaslng extreme drought conditions in the Southwest; and 7. Increasing severe Wildfires in the West. It was all about water, energy, and people. .The impact of global warming in the western U. S. may be worse than the assessments of the Intergovernmental Panel on Climate Change. During the conference the subject of water for the Increasing populations of the western U. S. was introduced. The compound Increase in the U. S. population could easily cancel out a 20% increase in water and energy conservation. The· Population Division of the U. S. Census Bureau has published a report, GCTTI- P Data Set-2007, which states that the U.S. is the third most populous country in the world, with about 304 million as of July, 2008. The U.S. population is increasing at a rate of 0.95% per year (1.8 million per year), which is the highest of any Industrialized nation and which is expected to reach 418 million just 34 years from now. The U. S. Census Bureau states that California had a population of 36,553,000 on July 1, 2007, which is now increasing by one-half million per year. California has more people than the combined population of the states of Washington, Oregon, Idaho, Nevada, Arizona, Montana, Wyoming, North and South Dakota, Colorado, Utah, New Mexico, and Nebraska. California has as many representatives in Congress as all of the above-mentioned states. California has 3.5 times more representatives in Congress than the Columbia River Basin states of Oregon, Washington, and Idaho. This power bloc in Congress could be detrimental to· these states. The U. S. Dept of Energy states that the U. S. consumes nearly 100 Quads of energy per year, which is just over one-fourth of the world's consumption. A Quad of energy is nearly 1 exa joules (1 billion billion joules), or 1 peta BTUs (1 million billion BTUs), The U.S. energy consumption is projected to increase by 1.5% in the same 34-year time period. It is only a matter of time before the expanding populations of the Southwest will require more electric power and water above and beyond that saved byco!1servation. Who will supply the power? There is a high probability that no more power generating dams and nuclear fission power plants will be built in the near future*

*in the Northwest. The additional power will probably come from the development of more wind farms. Some of the wind-powered generated electricity from the Northwest is already going to California. Eastern Washington and part of eastern Oregon is the home of six wind farms, with 924 wind turbines generating about 1.1 billion watts peak power when the wind is blowing. With an efficacy of about 0.33, the average power is about 356 million watts, which is enough electricity for 226,000 homes. The Biglow Canyon Wind Farm in Sherman County, Oregon, plus two other proposed wind farms in eastern Oregon, when completed will add another 800-950 megawatt peak power to the BPA grid. The yearly energy output of the Washington wind farms is about 3127 gigawatt hours, which is slightly more than the 2892 gigawatt hours of the Rock Island Dam on the Columbia River and about 60% of the energy output of the little Goose Dam on the Lower Snake River. The yearly electrical energy output of 91,928 gigawatt hours from the 11 dams on the U.S. portion of the Columbia River is 29 times greater than the output of the six Washington wind farms. These seem like very large numbers; however, the potential for more wind power in eastern Washington and Oregon is encouraging since only about one 1% of the leased or owned land around the wind farm is now utilized. Who will supply the water? The Colorado River is presently the source of much of the water for Las Vegas, Nevada and Phoenix, Arizona. The allocation of Colorado River Basin water to Colorado, Wyoming, New Mexico, Utah, Arizona, Nevada, and California is governed by the 1922 Colorado River Compact which promised 7.5 million acre feet of water to California, Arizona, and Nevada. An acre foot is the amount of water covering an acre of ground to a depth of one foot or the amount of water used by a typical U.S. family in one year. The 7.5 million acre feet (maf) was one-half of the annual flow of the Colorado River and was not depriving the up-stream states of water. However, the growing populations of these upper stream states now need more of the flow, and the Compact Is now under more political stress. The scheduled depletions for this year total 11.8 maf, which will be unsustainable in the future. Global climate models don't always agree with each other in the predictions of rain and snow fall, but they universally agree the U. S. Southwest is drying up. There is a 50% chance that lakes Mead, Powell, and Mojave will dry up by 2021. Besides Las Vegas, Nevada, and Phoenix, Arizona, other cities that will be drastically affected will be Los Angeles and its surrounding area, and San Diego, California. 3 Developers have expanded the environs of these cities without much thought regarding the future water supply. So where will the water come from? Rash distillation of 10 maf of Pacific Ocean water would be extremely energy intensive and would require the construction of many huge solar or nuclear power plants, which would raise the cry "not in my back yard." The population of California is predicted to increase by 10 million by 2028, while the Colorado River flow will be drastically reduced. It was remarked at the conference that obtaining water for the increasing population is already a problem and is rapidly getting worse. It was also brought up that the Columbia River could supply 10 maf to California without stressing the Columbia River Basin since the average yearly water outflow at Bonneville Dam is 137.5 maf. Nothing was discussed regarding the environment of the Columbia River Gorge or the salmon. The Southwest states are aware that the diversion of 10 maf through an aqueduct over the plateau of eastern Oregon to the California border would be much easier and less expensive than the 1000~mile-long Trans Alaska Pipeline, which crosses three mountain ranges, 800 or more rivers and streams, and costs nine billion dollars. This aqueduct would parallel the existing high-voltage electrical transmission lines starting near The Dalles, Oregon, and extending 255 miles to the California border south of Klamath Falls, Oregon (elevation 4105 feet). The extension from the California border to Shasta Lake is about 75 miles downhill. Some of the energy lost In pumping Columbia River water up onto and along the eastern Oregon plateau would be recovered by in-line hydroelectric*

*generating systems utilizing the water falling down from higher elevations to Shasta lake. Engineers have much experience in designing and building large pumping systems and pipelines. There are no show stoppers, with the electrical energy coming from the expanded eastern Oregon arid Washington wind farms. The states of Arizona and Nevada know that an aqueduct skirting east of the cascade and Sierra Nevada mountains extending to the Colorado River near Las Vegas is also quite feasible. We only need to remember a plan to divert Columbia River water to California (in the 1950s), which was blocked by Washington senators Henry Jackson and Warren Magnuson, who were chairmen Of Important senate committees. It is now clear that the Issue is not dead and will be revived. People in the Southwest are now talking about water for their children and also for the next generation. [LTR 170, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Thank you for the opportunity to comment on the draft environmental impact statement for the Whistling Ridge Energy project located about seven miles north of the City of White Salmon in Skamania County. The Department of Ecology (Ecology) reviewed the information provided and has the following comment(s): TOXICS CLEANUP: Connie Groven (360) 407-6254 Toxics Cleanup program comments submitted May 12, 2009, still apply to the project described (see enclosure). There are no new comments submitted at this time. Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action. If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above. Thank you for the opportunity to comment on the determination of significance scoping notice for the Whistling Ridge Energy project (Application No. 2009-01) located in Skamania County as proposed by Whistling Ridge Energy LLC. [LTR 171, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action. If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above. [LTR 171, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *Project Location. The proposed Project is located on private land, approximately 7 miles northwest of the city of White Salmon in Skamania County, Washington. The Project encompasses approximately 1,152 acres of land in sections 5, 6, 7, 8, and 18 of Township 3 North, Range 10 East, and in section 13 of Township 3 North, Range 9 East, Willamette*

*Meridian. Summary of the Proposed Action The Bonneville Power Administration (BPA) is proposing to interconnect up to 70 megawatts (MW) of new wind energy from the proposed Project to the North Bonneville-Midway 230- kilovolt transmission line. The interconnect would occur at a new sub-station to be built about 5 miles west of BPA's Underwood Substation in Skamania County. The interconnect was requested by the Project proponent, SDS Lumber Company, in Bingen, Washington. The SDS Lumber Company has created a new limited liability company called Whistling Ridge Energy LLC (WRE) that would finance, develop, and operate the Project. The Project is expected to operate for at least 30 years. The proposed Project would consist of no more than 50, 1.2 MW to 2.5-MW wind turbines up to 426 feet tall, as well as infrastructure such as newly constructed and improved roads, transformers, underground energy-collector lines, a substation, and an operations and maintenance facility. The Project area consists of 1,152 acres of mostly commercial forests in various age categories, of which 384 acres would be disturbed by the Project, and all but 61 acres would remain in commercial forest. Most of the property where the turbine strings are planned has been recently clear-cut harvested and will be further disturbed with the development of the turbine pads. [LTR 173, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *This office represents Save Our Scenic Area (SOSA), a Washington corporation representing persons interested in the scenic, recreational and natural values of the Columbia Gorge. SOSA's primary mission is to preserve the Columbia River Gorge National Scenic Area view-shed; to further maintain the existing rural and scenic character of Underwood, Washington, and surrounding communities in Washington and Oregon; and work to preserve the intent of the Columbia River Gorge National Scenic Area Act. WRE proposes to construct as many as 50 wind turbines on ridge lines on their property in Skamania County to produce a minimum of 70 MW. I write today to provide comments on the recently issued draft environmental impact statement (DEIS) for the WRE proposal. [LTR 175, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *This office represents Save Our Scenic Area (SOSA), a Washington corporation representing persons interested in the Whistling Ridge Energy Project (WRE). SOSA's primary mission is to preserve the Columbia River Gorge National Scenic Area view-shed; to further maintain the existing rural and scenic character of Underwood, Washington, and surrounding communities in Washington and Oregon; and work to preserve the intent of the Columbia River Gorge National Scenic Area Act. I write today to provide comments on the recently issued draft environmental impact statement (DEIS) for the WRE proposal. WRE proposes to construct as many as 50 wind turbines on ridge lines on its property in Skamania County to produce a minimum of 70 MW. The project includes the construction and operation of a substation to be owned and operated by BPA that will connect the project to the Federal Columbia River Transmission System (FCRTS or the Grid). As discussed herein the project includes the*

*turbines, the electrical connection system, the necessary infrastructure and the BPA substation. [LTR 176, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Counsel for the Environment (CFE) appreciates this opportunity to comment on the Whistling Ridge Energy Project (Whistling Ridge) Draft Environmental Impact Statement (DEIS). The following comments seek to ensure that the Final Environmental Impact Statement (FEIS) fully captures and analyzes the proposed project's environmental impacts, potential mitigation measures, and reasonable off-site and on-site alternatives so that permitting authorities can make a fully informed decision. CFE takes no position regarding the merits of the project at this time. [LTR 177, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Save Our Scenic Area (SOSA) is involved with the Whistling Ridge Energy (WRE) project application as an Intervener. SOSA is a non profit corporation formed by concerned local Gorge citizens. Its primary mission is to help preserve the Columbia River Gorge National Scenic Area view shed; to further maintain the existing rural and scenic character of Underwood, Washington, and surrounding communities in Washington and Oregon; and work to preserve the intent of the Columbia River Gorge National Scenic Area Act. I am writing today to provide comments on the recently issued draft environmental impact statement (DEIS) for the WRE proposal. SOSA is submitting several different comment letters, covering a variety of subject matter within the DEIS. We have also reviewed the comments submitted by the Friends of Columbia Gorge, agree with them and incorporate them by reference. There are multiple environmental issues involved in the consideration of this project and it is important that each be given through consideration in the EIS process. We find that, in many areas, the present DEIS is completely insufficient and we urge that the NEPA/SEPA responsible officials prepare a supplemental DEIS. The following 24 pages of charted comments, plus Exhibits, are intended to address some, but not all, of the deficiencies noted in the WRE DEIS. In all cases, the deficiencies are explained. In most cases, particular remedies are suggested. Because no remedy is proposed by SOSA does not mean there should not be one implemented by the NEPA/SEPA responsible officials. Two of the larger sized Exhibits will be included as separate PDF files: exhibit 2E and exhibit 2F. All other exhibits appear at the end of this charted comment letter/file. Thank you for this opportunity to comment on the DEIS. SOSA trusts that the DFEIS and FEIS will provide facts and analysis on the issues raised herein. [LTR 178, CMT 31]*

**Response**: Comment acknowledged.

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**Comment**: *This DEIS divides and splits information in a way that makes it difficult for the reviewers to assess any aspect of concern without reading the entire document word for word and placing wording into a spreadsheet for organization as is done here. Remedy - Redo the entire DEIS and organize into a coherent and comprehensible document. [LTR 178, CMT 77]*

**Response**: Comment acknowledged.

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**Comment**: *General Comment on DEIS - The layout of information within the DEIS makes it difficult to understand and assess the true nature of the Project. Remedy - No obvious remedy to suggest. [LTR 178, CMT 137]*

**Response**: Comment acknowledged.

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**Comment**: *General Comment on DEIS - Incorporate others' testimony by reference. Remedy - SOSA hereby incorporates by reference, the comments of: Keith Brown and Teresa Robbins, Skamania County Residents (SCR) Mike and Joyce Eastwick, SCR Mary Repar, SCR Friends of the Columbia Gorge Dawn Stover, Klickitat County Resident Sally Newell, SCR Paul Smith, SCR [LTR 178, CMT 138]*

**Response**: Comment acknowledged.

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**Comment**: *Save Our Scenic Area (SOSA) is involved with the Whistling Ridge Energy (WRE) project application as an Intervener. SOSA is a non-profit corporation formed by concerned local Gorge citizens. Its primary mission is to help preserve the Columbia River Gorge National Scenic Area view-shed; to further maintain the existing rural and scenic character of Underwood, Washington, and surrounding communities in Washington and Oregon; and work to preserve the intent of the Columbia River Gorge National Scenic Area Act. I am writing today to provide comments on the recently issued draft environmental impact statement (DEIS) for the WRE proposal. SOSA is submitting several different comment letters, covering a variety of subject matter within the DEIS. We have also reviewed the comments submitted by the Friends of Columbia Gorge, agree with them and incorporate them by reference. There are multiple environmental issues involved in the consideration of this project and it is important that each be given through consideration in the EIS process. [LTR 178, CMT 145]*

**Response**: Comment acknowledged.

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**Comment**: *Of all the wind energy projects that EFSEC and BPA have reviewed to date, the Whistling Ridge Energy Project is easily the most controversial and problematic, as well as the*

*project most likely to cause significant environmental impacts. This is the only project proposed to be located within forested habitat. [LTR 179, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Rather than restate Friends' arguments at length in the instant comments, Friends relies on its previous submissions to EFSEC, as well as its briefing to the Skamania County Hearing Examiner in the prior administrative appeal involving Skamania County's proposed (now abandoned) energy zoning amendments (County File No. SEP-08-35), [Footnote: Copies of all the relevant documents from both proceedings are attached hereto as exhibits] except as modified or supplemented below. Friends also adopts and reiterates all arguments of Save Our Scenic Area regarding land use consistency. [LTR 179, CMT 41]*

**Response**: Comment acknowledged.

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**Comment**: *This memo is intended to provide an independent professional evaluation of the Draft Environmental Impact Statement for the Whistling Ridge Energy Project, proposed to be located in the central part of the Columbia River Gorge near White Salmon, Washington. The memo is provided at the request of Friends of the Columbia Gorge. Background. I am a professional landscape architect with over 31 years experience. I am currently employed as a Senior Landscape Architect by MIG Inc., a multi-disciplinary planning and design firm with over 100 staff in California and Oregon. My areas of professional emphasis include scenic resource assessment, natural resource planning, landscape ecology and ecological restoration. My clients have included the Oregon Department of Transportation, the U.S. Forest Service, the National Park Service, the Washington Forest Law Center, the Forest Stewardship Council, Metro, Friends of the Columbia Gorge, Western Resource Advocates and several private landowners located within the Columbia River Gorge National Scenic Area. Prior to entering private practice, I was chief landscape architect at the Mt. Hood National Forest. My work included having the lead role for management of scenic resources, and design of several projects within the Columbia River Gorge. I have included a more complete resume as an attachment. I have reviewed the sections of the Draft Environmental Impact Statement (DEIS) that address scenic impacts, including maps, drawings, photos and simulations, and will focus my comments on scenic impacts. I am familiar with the general area from previous work in the Gorge. Project Description. The proposal is to construct a wind energy project in the southeast portion of Skamania County, Washington, north and west of Underwood Mountain. Up to 50 commercial-scales wind turbines are proposed on forested land owned by SDS and Broughton Lumber Companies. According to the DEIS, the total land area involved is 1,152 acres, of which about 384 acres would be developed with turbines and associated facilities and roads. The proposed towers would each be over 400 feet tall, including three blades each up to 150 feet long. Analysis by the proponent demonstrates that most of the proposed turbines would be visible from multiple key viewing areas (KVAs) within the Columbia River Gorge National Scenic Area, as well as from other public and private viewpoints. The project site lies within the Cascade Range, and is at the western edge of the Columbia Plateau. The landscape topography includes a series*

*of ridges west of White Salmon that orient generally northwest to southeast and overlook the Columbia River and Hood River, Oregon. Current land use is commercial timber. The surrounding landscape is a patchwork of forest, brushfields, and meadows in varying stages of regeneration from timber harvest, as well as dramatic mountain vistas, steep rocky cliffs, pastoral lands, and the Columbia River. Landforms in the vicinity are steep, complex and dissected by deep ravines. Wind Facilities and Aesthetic Impacts. Wind energy is still a relatively new type of land development, both in the Pacific Northwest and nationally. The first large-scale commercial wind energy project in the United States appeared at San Gorgonio Pass near Palm Springs, California in the early 1980s. This project and others in California (Altamont and Tehachapi passes) were and still are controversial, with aesthetic impacts often noted as a serious issue. The past few years have seen a significant number of proposals for wind energy development. Parts of the region, most notably the Columbia Basin, have already been visually transformed by the sheer number of turbines installed. Wind energy projects are land extensive, with single turbines needing 50 or more acres of free space around them. If present trends continue, hundreds of thousands of acres in Oregon and Washington will be developed with wind turbines within the next decade. [LTR 180, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Friends of the Columbia Gorge asked me to prepare an expert comment letter on the Whistling Ridge Wind Energy Project DEIS. I reviewed this document and its appendices. My comments will mostly address the baseline data used to assess impacts and proposed mitigation measures. A summary of my comments appears on page 24. I am an ecologist with 25 years of research and consulting experience on issues related to wildlife management and conservation problems. My qualifications for preparing this declaration are summarized in my curriculum vitae, which is attached. I received a Ph.D. degree in ecology from the University of California at Davis in 1990. Following four years of postgraduate research in the Agronomy and Range Science Department at UCD, I have worked for citizen groups, businesses, attorneys, and government agencies, largely on solving problems affecting wildlife, especially on special-status species. I have eleven years of experience with the biological impacts caused by wind turbines. I performed multiple monitoring and research programs in the Altamont Pass Wind Resources Area (APWRA), and I senior authored many reports that followed, most of which were peer-reviewed. I consulted for the California Energy Commission on matters related to wind farm development. I also consulted to wind power companies, and helped project applicants obtain permits to repower a portion of the APWRA. My contribution to wind energy development has been to produce research-based solutions to avoiding, minimizing, and reducing bird collisions with wind turbines. [LTR 181, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *My name is Gary Kahn and I am an attorney representing Friends of the Columbia Gorge. Friends is a non-profit organization with approximately 5,000 members dedicated to protecting and enhancing the resources of the Columbia River Gorge.*

*Friends'membership includes hundreds of citizens who reside within the Columbia River Gorge National Scenic Area. Friends supports renewable energy development, so long as projects are responsibly sited and comply with all applicable laws. Friends of the Columbia Gorge opposes the Whistling Ridge Energy project as it is currently proposed. [LTR 182, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The Washington Department of Fish and Wildlife (WDFW) has reviewed the above-referenced documents and offers the following comments at this time. Other comments may be offered as the project progresses. WDFW is continuing to carefully considered the potential impacts to natural resources on the site. [LTR 183, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *So, that is why I agree that SDS lumber, a long held family-owned business, should be allowed to move forward with its Whistling Ridge Energy Project. [LTR 185, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *It is inconceivable to me that a few people, with their own interests in mind, will succeed in stopping a well-designed wind farm project from being built on private land that is located outside the CRGNSA on the grounds that the project defiles the Gorge. Give me a break! It most surely does not, and their claims fail to approach any standard of common sense. [LTR 185, CMT 11]*

**Response**: Comment acknowledged.

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**Comment**: *I strongly urge the Council to separate what is true from what is not, from what is self-service from what is in the best interests of the working families in south central Washington and north central Oregon, and that you recommend approval for the Whistling Ridge Energy Project to the governor. We also add that we hope that approval can be expedited. Thank you for your consideration. [LTR 185, CMT 12]*

**Response**: Comment acknowledged.

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**Comment**: *The Skamania County Agri-Tourism Association is a Washington non-profit corporation dedicated to the promotion and improvement of sustainable agri-tourism in*

*Skamania County. Our mission is to create and maintain favorable business conditions for association members. All members own and operate agricultural businesses in Underwood, Washington which is located in eastern Skamania County. Our unincorporated community sits directly across the Columbia from Hood River, Oregon. Members of the Skamania County Agri-Tourism Association include: [for list of member businesses see PDF page 2] [LTR 186, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action. [LTR 187, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *First, I am in favor of the wind turbines. [LTR 188, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *The U.S. Environmental Protection Agency (EPA) has reviewed the Bonneville Power Administration (BPA) Draft Environmental Impact Statement (DEIS) for the proposed Whistling Ridge Energy Project (CEQ# 20100187) in Skamania County, Washington in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Clean Air Act (CAA) §309. Section 309 of the CAA directs EPA to review and comment in writing on the environmental impacts associated with all major federal actions. [LTR 189, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The DEIS for this project includes a good analysis of anticipated environmental impacts from the project and identifies mitigation measures to offset the impacts and monitor effectiveness. Also, the DEIS states that Best Management Practices (BMPs) would be used to minimize any potential impacts. [LTR 189, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to say the conclusions reached by the authors of the DEIS are wrong. It needs to be redone to reflect reality. [LTR 190, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS and EFSC application for the Whistling Ridge Energy Project, proposed in the Underwood area, along the Skamania and Klickitat county line. I have sent under separate cover my comments to EFSC. I have extensive background in ecological management and forest ecosystem In the Cascades. I am a member of a US Forest Service advisory committee for ecological restoration of east side ecosystem for the Northern Spotted Owl in Oregon. I was appointed to this Resource Advisory Committee by the Sec. of Agriculture. As such I have been involved in a number of ecosystem reviews and management plans involving areas of similar characteristics as the Whistling Ridge Project. [LTR 191, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The proposed project would not have negative impacts to the environment. The project is located on commercial timberland that have been subject to decades of intensive harvesting operations under a sustain yield forestry program regulated by the Washington Department of Natural Resources. I have reviewed the wildlife baseline studies and I have visited the site. There are no significant sensitive wildlife and plant habitat areas associated with this project area. The ecology of this area is typical of a highly altered timber management property. Timber management operations will continue in this area for decades to come which is also evidence that the area is not currently or will it every evolve to a significant ecological resource area. It is a timber management area for industrial forest practices. Siting a wind farm in this area is an intelligent and appropriate compatible land use which will diversity the economic value of these timber lands and help to preserve these lands for timber production for decades to come. [LTR 191, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *BPA and EFSC should approve this project. [LTR 191, CMT 8]*

**Response**: Comment acknowledged.

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**Comment**: *On behalf of the members of Seattle Audubon, I am submitting these comments in response to the May 2010 Draft Environmental Impact Statement (DEIS) for the proposed Whistling Ridge Energy Project. We are a formal intervenor in the EFSEC Site Certification*

*proceeding for this project and we submitted scoping comments regarding the environmental evaluation of the project on May 18, 2009. Seattle Audubon was also an active participant in the development of the Washington Department of Fish and Wildlife's April 2009 Wind Power Guidelines. The mission of Seattle Audubon is to cultivate and lead a community that values and protects birds and the natural environment. Since 1916, Seattle Audubon has worked to protect birds of our region whose habitats are at risk. Our members have a long history of engagement on forest-related issues in Washington state and an on-going interest in the inter-relationship between bird habitat and human development activities in the forested landscape. [LTR 196, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We appreciate the opportunity to comment on the DEIS for this proposed project and look forward providing additional comment as the environmental review process and site certification proceeding move forward. [LTR 196, CMT 13]*

**Response**: Comment acknowledged.

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**Comment**: *For this reason this project should be denied. [LTR 198, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I, the Chairman of Yakama Nation Tribal Council, am requesting a continuance of thirty (30) days to review and comment on the Whistling Ridge Energy Project. My staff and I have not had the chance to meet on this important matter, and we would like to provide you with our input. [LTR 200, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *As residents of the area that will be able to see some of the turbines of this proposed project, my wife and I are in favor of it. [LTR 203, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We can't continue the practice of saying "Yes, we need these projects but not in my area". This will not get us where we need to be down the road. SDS is a good and responsible company that cares. It is their land, and they have the right to do this, and they will*

*do it in a responsible manner. PS - It is sad that some of the people speaking out against this project were the same ones that were cutting hiking/biking trails on SDS property in this same general area. They want to tell SDS what they can't do but at the same time, don't respect the private property of others. [LTR 203, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am part of that silent majority who does not like to attend meetings where people argue and intimidate me but I feel my voice does need to be heard. I support the Whistling Ridge Energy Project. [LTR 204, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Wind energy is a clean, quiet source which uses the natural winds of The Gorge. In my opinion, the people who are causing the obstacles in implementing this natural resource are the same people who have opposed most everything else that is proposed in The Gorge. They have personal agendas which are not for the good of the community but for their selfish interests. Wind Energy is a Good thing for The Gorge, a Good thing for the economy of The Gorge and a good, clean alternative that all the environmentalists have been insisting on. Let's move forward and let a Good thing happen [LTR 204, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Everyone I know in Hood River is strongly opposed to the construction of these giant turbines looming over our natural and beautiful slice of the world. Please don't approve this project! [LTR 206, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am opposed to wind turbines going up on the scenic ridgeway near White Salmon. [LTR 207, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support the decision to proceed with the Whistling Ridge Energy Project; however, a couple of things should be addressed… [LTR 208, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support the wind project at Whistling Ridge. [LTR 209, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I oppose the whistling ridge project. [LTR 211, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am in support of the Whistling Ridge project. [LTR 212, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I feel wind energy is one of the cleanest forms of energy generation possible, and those who live in areas amenable to wind generation need to make a few sacrifices to enable it. [LTR 212, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I live on Underwood Mountain, WA where the Whistling Ridge Wind Turbines are to be built. I have lived here 40 years, we are orchardist and grape growers. My house will be approximately 9000' from some of the turbines. I support the turbines. [LTR 215, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We need this type of energy. A lot of people say to move it east to the wheat fields, we have the wind here, and it should be utilized. But I do not want more than the 50 being planned. [LTR 215, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *He feels that we should reduce power usage instead of creating more power sources. We should have a quota as to how much power people use -- use the amounts people use now, and decrease it. [LTR 216, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *Received email from ColumbiaGorgeForum.org regarding a wind project in the gorge sponsored by SDS Lumber Company to construct wind turbines in the gorge. Opposed to this project due to the abuse of tax dollars. Don't ruin the beauty of the gorge! [LTR 217, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *My name is John Saulie-Rohman and I am writing in support of the Whistling Ridge Wind Project. I am a first year student at Columbia Gorge CC and my family is from this area (White Salmon) [LTR 219, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Even before the oil disaster I thought the wind project - Whistling Ridge of SDS of White Salmon, was a very good thing. As the population increases the need for energy will be paramount. So it is with deep appreciation and interest, I heartily endorse this project. PS my husband worked many years for Broughton Lumber Co and knew first hand their planning for the future. [LTR 222, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *After reviewing the draft EIS on the Whistling Ridge project I see no good reason for this project not to go forward. I live less than 2 miles from the proposed project and see no difficulty living near this project. [LTR 223, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *After reviewing the EIS I find it exceeding the requirements for this project. I support this project and see no environmental impacts that should delay it from advancing. [LTR 224, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Please do not put the wind turbines on Whistling Ridge. White Salmon and Hood River are known for the famed double mt. views. All of our property values will drop when the area becomes known for its multi-turbine views. We need wind power but not in such a beautiful place. The turbine mess out east is bad enough. I am always thankful when I get west of all those blinking lights. It is enough to ruin the eastern gorge with these industrial giants. I don't know how many turbines are out there but adding another 50 turbines to that mess won't make much difference now. To put up 50 turbines on Whistling ridge would blight the whole area. This is a world class scenic area and should be preserved as that. The project west of the Dalles has been canceled and the middle mt. project south of Hood River has been stopped. If we would have known that Whistling Ridge was to become an industrial wind factory we never would have bought property in Mill A. Common sense tells us this is a bad idea and should never be put in. [LTR 225, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am a student in the Columbia Gorge Community College - Renewable Energy Technology program, and I support the Whistling Ridge Energy Project. [LTR 227, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We do not have time to waste in repairing our environment after abusing it for so long. [LTR 227, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I do not support or agree with this energy project. I want no new wind generators to be placed in Washington State. [LTR 228, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Hidden behind Underwood Mountain from both the vast majority of the Scenic Area and view from local residents, yet accessible to wind and existing transmission lines, Whistling Ridge appears to be an ideal site for wind turbines. [LTR 231, CMT 5]*

**Response**: Comment acknowledged.

**Comment**: *I support the Whistling Ridge Energy Project. [LTR 232, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am VERY opposed to putting a wind turbine project there. [LTR 233, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I'm obviously not in the state of Washington, but in the area that would be impacted across the river more or less. We've had to fight this kind of project. This is the Cascades, you know. This is not some kind of away from people and away from lots of wildlife kind of area. [LTR 233, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *So this is not a good area for this project. [LTR 233, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *I support the Whistling Ridge Energy Project. [LTR 234, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I just wanted to say that it sounds great and I am glad to see that there are companies looking to the future for renewable energy sources! [LTR 238, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am interested in seeing this Whistling Ridge Energy Project go forward. Protecting the Columbia Gorge Scenic act is also very important, but we need to promote renewable energy sources when the opportunity presents itself. I feel this proposed site will project a low impact on our Gorge image. It's important to look at the wider scope of this project and the potential benefits it can bring to this area. [LTR 239, CMT 1]*

**Response**: Comment acknowledged.

**Comment**: *I support developing alternative energy sources, including in some cases, wind, but I oppose this project. [LTR 240, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I support alternative energy projects that are developed in areas with zero or very minimal impact on the native wildlife and forest; that do not decrease the livability of the area; and that are in the best interests of all citizens, not a company that is trying to profit. Such projects should be "owned" and overseen by regional and/or federal government bodies and fully reviewed for environmental soundness before they are implemented. [LTR 240, CMT 5]*

**Response**: Comment acknowledged.

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**Comment**: *While the Whistling Ridge Wind Project proponents deserve credit for responding thoughtfully to some of the previous objections to their earlier proposals, the revised proposal remains of great concern. [LTR 241, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Granted our Nation needs alternative sources of energy and Skamania County needs new sources of revenue. But there are many less scenic areas of Washington, Oregon and the entire country which could also contain our windmills. Some things should not be traded for money. [LTR 241, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *Please do not introduce wind farms into the Gorge Scenic Area. Encourage the Whistling Ridge proponents to relocate their project to a suitable site. [LTR 241, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *Our home is located within sight and sound of the Whistling Ridge Project and we absolutely agree wind and solar time has come. [LTR 243, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am in opposition of the Whistling Ridge Energy Project. I vote the proposed project is denied. [LTR 244, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I would like express my disapproval of the Whistling Ridge Energy Project. [LTR 245, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Laura Bushman phoned the comment line on 8/25 to register her opposition of the wind farms that is being proposed in the gorge (Whistling Ridge). [LTR 247, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am dead against the Whistling Ridge Energy Project. [LTR 250, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Ms. London phoned the Public Involvement extension on 8/26/10 at 7:05 am to voice her displeasure about the Whistling Ridge project. [LTR 251, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am totally opposed to it. [LTR 254, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *If things are so bad, where are the environmental groups? Why aren't they out protesting? Early on the wind power industry effectively dealt with the environmental groups. They rounded them up in a BPA round table discussion to generate mutually agreeable siting standards for wind power. This kept the environmental groups busy and made them feel like they were involved in the process while wind power developers where out securing sites for their projects. The round table talks ended with agreement on five voluntary siting criteria, all five of which were violated in the first proposed projects. Another aspect of the wind industries plan*

*was to bring in wind power promotional groups. These "environmental" groups gave the appearance of a divided environmental community on the issues of wind power. The third method that the wind power industry used to control environmental groups has been to give (or deny) them money. The Bullitt Foundation has been the major source of grant money used to control groups in the NW. The Bullitt Foundation promotes wind power. When wind power was planning on moving into the Hood River Valley it was not coincidence that the Hood River Valley Residence Committee had just received a Bullitt grant for $17,000. That proved an effective grant. When The Friends of the Gorge protested wind power development overlooking the Columbia River Gorge they had their Bullitt grant pulled for the first time in years. National Audubon Society and Audubon Washington are major receivers of Bullitt grants, and we believe this has kept them from doing the one and only thing that Audubon could do that would effectively check wind power abuses, and that is to expose them In the media. We have pleaded with Audubon Washington to launch a media attack on wind power abuses, but they have ignored us. They know what would happen to their Bullitt grants if they were to take effective action against even the most abusive projects. Do not think that all is well, just because dozens of groups are not protesting Gorge wind power development. Most groups have been targeted and effectively muzzled. [LTR 256, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *It was not that long ago when SDS proposed a major co-gen development for their mill. When they reached the public comment period for the proposal a member of the public discovered that the permit that they applied for was for a small mobile unit. The small mobile unit permit would have avoided major regulatory requirements. SDS immediately dropped their proposal. We seriously doubt that SDS or DOE could have gotten that far in the process without realizing that the wrong weaker permit was being applied for. All of this provides context for this proposal. The context you are getting here is more relevant than the false context that tells you that NW wind power makes sense, that proper siting is being applied, that the regulatory agencies are on the ball, and that the groups that you would expect to be in opposition are holding back because they really believe that wind power is not a problem. [LTR 256, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Thank you for the opportunity to review the Draft environmental Impact Statement (DEIS) for the Whistling Ridge Energy Project. The project has many positive features and will make a positive contribution to the region. [LTR 257, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We support development of wind, solar, biomass, geothermal, and other renewable energy projects in our region which are designed in a manner consistent with local regulations. MCEDD has supported the creation of the Columbia Gorge Bi-State Renewable Energy Zone as a means to engage in a cross-jurisdiction, inter-agency, bi-state collaborative approach to renewable energy development. [LTR 259, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *We look forward to working with the applicant as this project moves forward. [LTR 260, CMT 6]*

**Response**: Comment acknowledged.

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**Comment**: *Hello Energy Facility Site Evaluation Council, As I wrote during the public comment period in 2009, I support the Whistling Ridge project. (I live in Stevenson, WA, and I would not object to installations in my 'back yard' either, if it were possible.) The EIS seems to me to be thorough and comprehensive. [LTR 264, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *Thank you for extending the public comment period and allowing me to submit these comments into the record. [LTR 266, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *Like most folks with consciences, I certainly care about preserving our energy resources and producing clean energy. However, the proposed wind project will surely damage the scenic ridgeline bordering the Columbia Gorge National Scenic area. Moreover, the planned turbines will do damage to the wildlife of the area, especially to birds of prey. Please look elsewhere for such projects. [LTR 268, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines. The Columbia River Gorge National Scenic Area (CRGNSA) will be impacted again through the unnecessary slaughter of raptors being hit by the turbine blades. Raptors that are very*

*important to the species food chain in the Gorge in that certain species will over produce with the demise of the raptors. The sight lines that are preserved in the Gorge with regulations will be invasive to the beautiful sights of the CRGNCA and the Lewis and Clark National Historic Trail from even the Columbia River itself. The Washington Department of Natural Resources has clear cut forest on both sides of the Pacific National Scenic Trail within the CRGNCA. Why now would huge wind turbines be located upon a forested ridge line where industrial clear cutting would again most likely be utilized to place the huge turbine wind generators on that scenic destroying and forest destroying ridgeline? [LTR 274, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to voice my strong support for the Whistling Ridge Energy Project. Washington State utilities must reach the goals set by Initiative 937. Wind is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020, which means we need to build more wind farms. Lewis County has the wind, Weyerhauser Lumber has the land: it is a match made in heaven. Many studies have shown that the environmental impact of the Whistling Ridge Energy Project would be minimal. For the last century, the site has been used in commercial forest operations. The land has already been cleared, roads built, transmission lines already installed, and wildlife habitats already fragmented. The impacts on a few other species that might be affected are rated low-risk. The environmental benefits are numerous. Wind is clean, renewable, and does not consume water or produce waste. Whistling Ridge will generate 75 megawatts of electricity; enough to power 20,000 homes a year, without contributing to global climate change. The choice is clear: support Whistling Ridge and Lewis County by approving this project. [LTR 275, CMT 1]*

**Response**: Comment acknowledged. We believe that the commenter meant to reference Skamania County in their comment.

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**Comment**: *Thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Whistling Ridge Energy Project. We deeply appreciate the extension of time allowed to review the document, as it has allowed us a fuller understanding of the impacts that the state intends to consider relative to this project. The DE IS overall appears to us to be a shallow (in spite of its sheer mass) analysis of the impacts of the proposed project. Since our expertise in the field of natural resource studies is limited, we will rely on others to address the project's impacts on bird and bat populations, although we note that reliance on studies conducted by the project proponents seem suspect. A party with a vested interest in the construction of a wind farm would not necessarily be the party we would select to provide unbiased data on any aspect of the potential harm to the public or resources. We would be much more comfortable with analysis by independent professionals in the various fields of study, selected by the state agencies the public employs to safeguard these important public resources. [LTR 277, CMT 1]*

**Response**: Comment acknowledged.

**Comment**: *My comments are bolded and italicized, located after sections upon which I wish to comment. Most of this information was not included in the DEIS and it should have been part and parcel of the discussion. Its lack of inclusion is a fatal flaw in the DEIS and should be addressed by BPA, SDS, and EFSEC. I have not included the entire document. The document is in quotation marks. [For text from supporting document with added emphasis, see PDF] [LTR 279, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to submit a comment on the proposed Whistling Ridge energy project. I believe wind power will be an essential and large part of the future mix of energy sources, and generally do support wind projects, but I also think that each site that has been proposed for a project must be evaluated according to local criteria. [LTR 280, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I would like to express my strong support for the Whistling Ridge Energy Project. I am proud to live in a community adjacent to this project. I am proud to say we will have such a project here. We are doing our part to help our Country become as environmentally conscious as possible in our energy production and use. [LTR 282, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am proud to live here in Mill A, in Skamania County Washington. Turn the tables everyone, use the Whistling Ridge Energy Project as an asset!! [LTR 282, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *Thank you for the opportunity to submit comments regarding the above captioned proposed industrial wind generating facility in Underwood, Washington. I strongly believe that this proposed industrial facility clearly warrants a siting denial by your Council. There are fatal flaws in the concept, location, design, construction and operation of an industrial energy facility in Underwood, Washington and the Columbia River Gorge. [LTR 283, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The Whistling Ridge Energy proposed project is the wrong project for the Gorge, at the wrong time and wrong place. [LTR 283, CMT 20]*

**Response**: Comment acknowledged.

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**Comment**: *I'm sure that I have many more questions, but the 5 p.m. deadline is upon me and I want to make sure that I get these comments in on time. [LTR 284, CMT 7]*

**Response**: Comment acknowledged.

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**Comment**: *I forgot to include this article on wind farms creating challenges for the power grid, with my comments (submitted on 27 August 2010) in the document that I sent on Friday, entitled Comments_DEIS_BPA_Inadequate_27Aug2010. [LTR 285, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I have bulletized the article, below, for a quick summary of my concerns about wind generation and its effects on BPA's power grid: Fast-growing number of wind farms; Has created new challenges for those who manage the power grid; Almost two nuclear plants worth of extra power was sizzling down the lines; Storm caused the largest hourly spike in wind power the Northwest has ever experienced; At BPA, it was too much of a good thing; More electricity than its customers needed; More than the available power lines could export; More than the grid could readily absorb; The edict went out: Feather your turbine blades; slash output; It's one likely to go out with increasing frequency; The last three years have seen a doubling of the generation capacity of wind farms in the region; By 2013, wind generation capacity expected to double again; In the real world, wind development, coupled with wild swings in its output, are overwhelming the region's electrical grid and outstripping its ability to use the power or send it elsewhere; In theory, better coordination could help solve the problem, reducing costs, eliminating bottlenecks and solving scheduling conflicts; In practice, risk-averse engineers, utility managers or public utility customers worried about rates increasing; Renewables explosion forcing the transmission issue to center stage now; California, which already buys much of the Northwest's wind energy, increasing its appetite for green power; The solution to the problem is to beef up or build new power lines, a five to ten year proposition; Involves coordination on what to build, where to put it and who pays; Only 15 percent of the electricity generated by wind farms in the Northwest goes to the public utilities that buy power directly from BPA; BPA manages three quarters of the region's high voltage transmission system, including the sections serving most of the region's wind farms; BPA's job is to balance wind farms' up-and-down power output, blending it with other sources of power so total generation at any given time matches total demand -- a requirement to maintain grid reliability; As the region's wind fleet grows, an ever bigger slice of the hydro pie is being reserved to fill in when the wind doesn't blow as scheduled; That means foregone sales of surplus power, a source of*

*revenue that reduces BPA's rates for public utility customers; Dumping too much water over the spillways, to balance wind power production, harms fish; Another option is to cut generation at the wind farms; Too many curtailments undermines the economics of wind; "It's not fair to have a cost shift," said Elliott Mainzer, BPA's director of strategic planning; BPA proposed quadrupling its "integration" rate, Oregon's congressional delegation took up the wind developers' fight, accusing the agency of dragging its feet on renewables and focusing solely on maintaining low rates for its public utility customers. Sen. Ron Wyden was highly critical of the agency's attitude problem, and Rep. Earl Blumenauer even suggested it might be time for new leadership at the agency; In extreme situations, however, the agency continues to dump wind; At the current rate of wind development the region's system of dams and power lines will start running into consistent operational problems around 2013; In 2013, wind in BPA's territory will reach a total capacity of some 6,000 megawatts; The 6000 MW capacity ceiling will require major structural changes; The solution lies in better coordination of power plants across the west, more efficient use of existing power lines and some expansion of the grid; New lines often require new rights of way through sensitive habitat and private property, are phenomenally expensive, raising the show-stopping question of who pays; The piece that is not doing well is planning for moving wind out of the region; Changes won't come quickly, easily or cheaply. "We can't pay for everything at once, and we don't want to pay for everything on the table," said Jeff Bissonnette, a lobbyist for the Citizen's Utility Board of Oregon. "We have to figure out what makes sense to pay for first, second and third, and what makes sense for consumers and the environment." [LTR 285, CMT 3]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines. As you read the letters and impact statements that will be sent to you regarding this wind power project, the same ideas that have been covered before will be mentioned again, no doubt. But what I wish to have you connect with is how much we take for granted the beauty of this place and the life inhabiting it that makes it impact our senses. In our endeavor to make ourselves warm and happy, we hastily provide less than satisfactory power alternatives and arrive at an ugly display that destroys the beauty inherent in the place. It becomes a heartless displacement of animal and plant life as well as ruining natural geological formations that render peace and joy of heart to all who pass by to witness them. For some reason we are obsessed with destruction rather than with preservation of the Gorge for generations to come. Support a healthy scenic Gorge by presenting a true draft environmental impact statement that covers all the bases as well as the heights. [LTR 289, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near, the Skamania and Klickitat county lines. This proposal is likely to have different and greater wildlife impacts than any other wind energy*

*facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. [LTR 291, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines. STOP THIS TRAVESTY! THIS RUINATION IS CRIMINAL! This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a. forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. [LTR 292, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to comment on the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines. This area is some of the most beautiful landscape in the country. Its beauty cannot be sacrificed just for first choice location of an energy company. Remember the gulf oil spill - repair after the fact is never available. This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. [LTR 293, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am writing to express my concern about the Whistling Ridge Energy Project, proposed in the Underwood, Washington area (near the Skamania and Klickitat county lines). I have reviewed some of the materials related to the project, and I am concerned about the extent of wildlife impacts. The proposed project may result in greater wildlife impacts than other wind energy facilities in Washington because of its location along a forested ridgeline in the foothills of the Cascade Mountains. [LTR 297, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The Whistling Ridge Energy Project helps the state utilities reach the goals set by Initiative 937. It on industrial timber lands and the project plans are compatible with the State Forest Practices Act and County Planning Regulations. This is a west side wind project which is*

*the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020. SDS Lumber has developed a good plan for join us of its timber-lands to generate clear energy. This is a unique match that helps stabilize a major employer from cyclical financial cycles of the lumber market. [LTR 306, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *The sites are challenging, but the wind resource is strong. The developers have solid plans for high quality projects. It's time to get wind power generation a little closer to the people who use it. [LTR 312, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *I am so saddened by even the thought of Whistling Ridge Energy Project in the Underwood Washington area. The impact would last a life time, not only to the world acclaimed scenery that is beyond price, but to the sensitive habitat and wildlife as well… There is a need for wind but please, please reconsider the location of this project. [LTR 313, CMT 1]*

**Response**: Comment acknowledged.

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**Comment**: *We support this project. Review of the Draft EIS has not provided any reasons to justify opposition to the project. [LTR 317, CMT 2]*

**Response**: Comment acknowledged.

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**Comment**: *I am in favor of this project… [LTR 317, CMT 4]*

**Response**: Comment acknowledged.

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**Comment**: *I support the project and the Draft EIS. [LTR 317, CMT 11]*

**Response**: Comment acknowledged.

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**Comment**: *CA needs this power and we need to protect the children of CA. [LTR 317, CMT 38]*

**Response**: Comment acknowledged.

---

**Comment**: *I am in support of this project. [LTR 317, CMT 46]*

**Response**: Comment acknowledged.

---

**Comment**: *I own 70000 acres of land, it is well handled. We are in support of the project, it has been well checked. [LTR 317, CMT 47]*

**Response**: Comment acknowledged.

---

**Comment**: *We live in the Columbia River Gorge - the wind howls. All human activity has impacts so the question becomes - How big are those impacts? [LTR 317, CMT 49]*

**Response**: Comment acknowledged.

---

**Comment**: *The positive impacts outweigh the negatives; we ought to go for it. [LTR 317, CMT 51]*

**Response**: Comment acknowledged.

---

**Comment**: *I support this project, I believe it will help reach the goal mandated by our voters in this state to make renewable energy the greater part of our state's energy consumption. [LTR 317, CMT 52]*

**Response**: Comment acknowledged.

---

**Comment**: *I am in favor of this project… I think it is an appropriate use of our resources [LTR 317, CMT 53]*

**Response**: Comment acknowledged.

---

**Comment**: *I am against the proposal for Whistling Ridge, and feel the DEIS does not adequately address all ramifications and impacts this wind farm will have here in our community. [LTR 317, CMT 54]*

**Response**: Comment acknowledged.

---

**Comment**: *We need something positive in this county. [LTR 317, CMT 60]*

**Response**: Comment acknowledged.

---

**Comment**: *We support and encourage the Whistling Ridge Project. SDS is a good company and a great asset to our community. [LTR 317, CMT 61]*

**Response**: Comment acknowledged.

---

**Comment**: *Summarizes that those against the project state birds and wildlife, the noise, view, and construction as issues. Those for the project state that construction would bring us enough power for all practical purposes, revenue derived would enhance the tax base, jobs and income, and the owner right to use the property as they see fit. [LTR 317, CMT 66]*

**Response**: Comment acknowledged.

---

**Comment**: *I support this project. [LTR 317, CMT 67]*

**Response**: Comment acknowledged.

---

**Comment**: *I support this project; we need to start paying the price for clean energy. [LTR 317, CMT 68]*

**Response**: Comment acknowledged.

---

**Comment**: *I support the project; SDS has built this community upon stewardship and proper decision making. The wind turbines would show that our community is doing their part in protecting our world. [LTR 317, CMT 70]*

**Response**: Comment acknowledged.

---

**Comment**: *I support the proposed action. [LTR 317, CMT 73]*

**Response**: Comment acknowledged.

---

**Comment**: *We need a petition so that CA maximizes their resources instead of using our natural resources up. [LTR 317, CMT 74]*

**Response**: Comment acknowledged.

---

**Comment**: *Wind turbines do not belong in the foothills of the Cascade Mountain Range. [LTR 317, CMT 75]*

**Response**: Comment acknowledged.

---

**Comment**: *The project ought to be approved. [LTR 317, CMT 76]*

**Response**: Comment acknowledged.

---

**Comment**: *This project is in the wrong place. [LTR 317, CMT 77]*

**Response**: Comment acknowledged.

---

**Comment**: *I support the project. [LTR 317, CMT 81]*

**Response**: Comment acknowledged.

---

**Comment**: *I support the project. I would rather this project then nuclear energy. [LTR 317, CMT 82]*

**Response**: Comment acknowledged.

**Comment**: *I support the project. SDS have been great stewards of the land and will continue to do so. [LTR 318, CMT 3]*

**Response**: Comment acknowledged.

---

**Comment**: *You did a fine job on the EIS. We need this project to generate money. Hopefully we keep the electricity generated local. [LTR 318, CMT 4]*

**Response**: Comment acknowledged.

---

**Comment**: *The Port and myself support this project. It will provide an economic upturn. [LTR 318, CMT 8]*

**Response**: Comment acknowledged.

---

**Comment**: *We support this project. [LTR 318, CMT 9]*

**Response**: Comment acknowledged.

---

**Comment**: *I am a long-time Skamania County resident and am in full support of this project. [LTR 318, CMT 11]*

**Response**: Comment acknowledged.

---

**Comment**: *I agree with Paul Pearce, Ann Leuders, and Dave L'Hommedieu. This project will help our families thrive in the county. [LTR 318, CMT 17]*

**Response**: Comment acknowledged.

---

**Comment**: *I support the project because this is the only one that doesn't use water. [LTR 318, CMT 18]*

**Response**: Comment acknowledged.

---

**Comment**: *I am in favor of this project. This is important for both economic advantages and the fact that a 'home grown' company is doing the work. [LTR 318, CMT 20]*

**Response**: Comment acknowledged.

---

**Comment**: *I fully support this wind power project because I think it is highly needed. [LTR 318, CMT 21]*

**Response**: Comment acknowledged.

---

**Comment**: *We support this project. I think it would be a great stimulus for the economy. [LTR 318, CMT 24]*

**Response**: Comment acknowledged.

---

**Comment**: *I am in favor of this project. Wind energy is clean, renewable energy, and we should support it for that reason alone. [LTR 318, CMT 25]*

**Response**: Comment acknowledged.

---

**Comment**: *I support this project. [LTR 318, CMT 30]*

**Response**: Comment acknowledged.

---

**Comment**: *I am opposed to the project as it is written. [LTR 318, CMT 32]*

**Response**: Comment acknowledged.

---

**Comment**: *We request additional time to review the document and an additional hearing later in the process after people have had a full opportunity to review the EIS. [LTR 318, CMT 42]*

**Response**: Comment acknowledged, the end date of the DEIS public comment period was extended from July 19, 2010 to August 27, 2010.

**Comment**: *I am an advocate for the project. [LTR 318, CMT 47]*

**Response**: Comment acknowledged.

---

**Comment**: *I support the project and will submit written comments. [LTR 318, CMT 48]*

**Response**: Comment acknowledged.

---

**Comment**: *We support the project on the condition that it be reconfigured. We would like the seven southerly most A towers moved back into the project. [LTR 318, CMT 57]*

**Response**: Comment acknowledged.

---

**Comment**: *I would like to reiterate the request to a) extend the comment period and b) hold an additional public hearing. [LTR 318, CMT 65]*

**Response**: Comment acknowledged, the end date of the DEIS public comment period was extended from July 19th, 2010 to August 27, 2010 and public hearings were held on June 16th and 17th, 2010.

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ENERGY FACILITY SITE EVALUATION COUNCIL

August 2011