

Montano,Andrew M - KEC-4

From: Rick Till [Rick@gorgefriends.org]
Sent: Monday, May 18, 2009 5:01 PM
To: Nathan Baker; Fiksdal, Allen (CTED)
Cc: efsec@CTED.WA.GOV; BPA Public Involvement; Montano,Andrew M - KEC-4; H. Bruce Marvin; Gary Kahn
Subject: RE: Whistling Ridge Energy Project - Friends' Scoping Comments - Part 1
Attachments: Friends' Scoping Coments - Part 2.attachments.pdf



Friends' Scoping
Coments - Par...

Dear Mr. Fiksdal,

Please find attached the attachments to Part 2 of the comments submitted by Friends of the Columbia Gorge.

Thanks,

Richard Till, Land Use Law Clerk
Friends of the Columbia Gorge
rick@gorgefriends.org
522 SW 5th Ave., Suite 720
Portland, Oregon 97204-2100
(503) 241-3762 x 107
Fax: (503) 241-3873

Become a Friend of the Columbia Gorge at www.gorgefriends.org

-----Original Message-----

From: Nathan Baker
Sent: Monday, May 18, 2009 4:06 PM
To: Fiksdal, Allen (CTED)
Cc: efsec@cted.wa.gov; comment@bpa.gov; Andrew M. Montañó; H. Bruce Marvin; Rick Till; Gary Kahn
Subject: Whistling Ridge Energy Project - Friends' Scoping Comments - Part 1

Dear Mr. Fiksdal:

Please find attached Part 1 of the scoping comments of Friends of the Columbia Gorge on the above-referenced proposal. Rick Till will e-mail Part 2 shortly. Paper copies of both parts will be sent in today's mail.

Thank you for your time and consideration. If you have any questions or comments, please do not hesitate to contact me.

Nathan Baker, Staff Attorney
Friends of the Columbia Gorge
nathan@gorgefriends.org
522 SW 5th Ave., Suite 720
Portland, Oregon 97204-2100
(503) 241-3762 x101
Fax: (503) 241-3873



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Bend Field Office
20310 Empire Ave, Ste A-100
Bend, Oregon 97701
(541) 383-7146 FAX: (541) 383-7638

Reply To: 6320.0005 (07)
File Name: Wind Cascade Wind App Cmts.doc
Tracking Number: 07-1417
TAILS: 13420-2007-FA-0132

June 1, 2007

Mr. Adam Bless
Energy Facility Siting Coordinator
Oregon Department of Energy
625 Marion St. NE
Salem, OR 97301-3737

Subject: Application for a Site Certificate for the Cascade Wind Project, Wasco
County, Oregon

Dear Mr. Bless:

The U.S. Fish and Wildlife Service (Service) has reviewed the Cascade Wind Project (facility) application for a site certificate for a proposed 60 megawatt (MW) wind generation facility. The applicant's (UPC Oregon Wind, LLC) proposed facility includes 40 General Electric (GE) 1.5sle turbines with 253-foot rotor diameters on 263-foot towers. The turbines will be sited along ridgetops in three groupings, referred to as the north, central, and south arrays. The proposal includes: 1) approximately 9.64 miles of new roads and turnaround sites; 2) 4.56 miles of existing roads to be upgraded; 3) two permanent meteorological towers; 4) a system of 34.5 kilovolt electrical collection lines, both underground and overhead; 5) an electrical substation; and 6) an operations and maintenance facility with a shop, control room and maintenance area.

The Service has legal mandate and trust responsibility to maintain healthy, migratory bird populations for the benefit of the American public. We work collaboratively with our partners under conventions, treaties, laws and voluntary programs to ensure the conservation of more than 800 species of migratory birds and their habitats. We appreciate the opportunity to provide comments, and we look forward to working with you on this important project.

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EXHIBIT A
PAGE OF

The Service's primary concerns are: 1) cumulative impacts of wind energy projects to migratory birds and bat resources within the Columbia River corridor; 2) the potential for project specific mortality to birds and bats based on the project location adjacent to and within oak woodland, and near two ponds and associated wetlands; 3) adequate mitigation measures to offset unavoidable project impacts to biological resources; and 4) the need for a formal standardized monitoring plan.

Migratory Bird Conservation

The Service's "A Blueprint for the Future of Migratory Birds" and the "North American Landbird Conservation Plan" identify the challenges of conservation of migratory birds. These challenges include habitat loss, degradation, and fragmentation, and dispersed mortality factors, not directly related to habitat loss, that accompany the growth of human populations and the advance of technology. Wind energy development, power lines, communication towers, among others, cause ever increasing direct mortality. Collectively, these factors contribute to population declines and with anticipated future losses in habitat, pose a growing threat to birds and bats. Implementation of on-the-ground bird conservation strategies at Federal, State, local and project level will be necessary to address the steady increase in avian mortality factors, and population declines.

Most Oregon songbirds, wading birds, waterfowl and birds of prey are protected under either the Migratory Bird Treaty Act (MBTA) or the Bald and Golden Eagle Protection Act (BGEPA). The MBTA prohibits the taking of migratory birds except when specifically authorized by the Department of Interior (16 U.S.C. 703-712). The BGEPA prohibits the taking of bald eagles and golden eagles except when specifically authorized by the Department of Interior (16 U.S.C. 668-668d). While the MBTA and BGEPA have no provisions for allowing an unauthorized take, it is recognized that some birds may be injured or killed at wind turbines and power transmission features even if all reasonable measures to avoid injury and death are implemented. The Service's Office of Law Enforcement carries out its mission to protect birds under these Acts not only through investigations and enforcement, but also through fostering relationships with individuals and industries that seek to work proactively to mitigate the negative impacts of wind energy projects on protected birds. While it is not possible to absolve individuals, companies, or agencies from liability when they commit, assist, or authorize violations of Federal wildlife laws, the Service's Office of Law Enforcement and U.S. Department of Justice have previously exercised enforcement and prosecutorial discretion with entities that have made good-faith efforts to avoid the take (killing or injuring) of protected birds. We recommend discussions continue between the Service, ODFW, ODOE, and UPC Oregon Wind LLC, to ensure wind energy projects minimize and/or avoid construction and operational effects on protected birds. We further believe, due to the considerable uncertainty regarding the potential fatality rate of bats from wind turbine strikes, that provisions for protection of bat populations also be discussed.

The Service recognizes the local efforts by wind energy developers to minimize the risk to birds and bats from disturbance, habitat loss, and collisions with turbines and power lines. However, as wind energy development continues to expand and concentrate in wind rich areas such as the Columbia River corridor, a strategic approach to assess and offset direct and cumulative impacts to birds and bats should be incorporated into all proposed facilities to establish a consistent

approach to further minimize the take of migratory birds, and to offset the direct mortality to bats.

Cumulative Impacts

We recommend that an expanded environmental impact analysis include a cumulative effects analysis that incorporates all the bird and bat survey data conducted for existing, planned and reasonably foreseeable future wind power projects in the same vicinity including projects in Klickitat County to the north and Sherman County to the east. The rapid escalation of wind power projects east of the Cascades along the Columbia River has raised concern that the environmental impacts analysis for bird and bat resources may not adequately describe cumulative effects of planned wind power projects in the same vicinity. For example, based on information within the Klondike III/Biglow Canyon wind power project DEIS, a total of 3,134 MW of electricity or approximately 1,740 turbines (assuming an average of 1.8 MW/turbine) are reasonably foreseeable future wind power projects in the vicinity. Using the mortality rate per turbine provided in similar areas, 42 raptors, 1,740 – 3,480 passerines, and 2,610 – 4,350 bat fatalities would be expected each year for the existing, planned and reasonably foreseeable wind projects including the Klondike III/Biglow Canyon projects. Although mortality rates appear to be significant, the population effects to individual species from turbine mortality can be difficult to discern. The number, location, and type of turbine; the number and type of species in an area; species behavior; topography; and weather all affect turbine mortality rates and potential adverse impacts to regional populations of raptors and bats along the Columbia River corridor.

Project location within Oak Woodlands

Approximately one-half of the proposed turbines in this proposed facility pass through or are immediately adjacent to oak woodland habitats. In Oregon, Oregon white oak (*Quercus garryana*) woodlands provide unique habitat for many plant and animal species, but these habitats are rapidly disappearing due to increased urban and agricultural land use and the encroachment of conifers in oak stands. The Oregon Conservation Strategy (2005) identified a Conservation Opportunity Area (i.e., EC-02. Wasco Oaks) which encompasses the majority of the proposed facility project area. Recommended conservation actions have been identified for the Wasco Oaks area to address altered fire regimes, land use conversion and urbanization, and habitat fragmentation.

In the East Cascades, oak woodlands are relatively rare and occur primarily on the north end of the ecoregion. They are located at the transition between ponderosa pine or mixed conifers forests in the mountains, and the shrublands or grasslands to the east. Valuable habitat features of Oregon white oak include its dead branches and cavities, which provide safe places for bird and bat species to rest and raise young, and the production of acorns that are eaten by a variety of wildlife and are particularly important in the winter, when other foods are scarce.

Since no other newer generation wind projects have been developed in comparable oak woodlands avian/turbine interaction data is unavailable. Based on the unique features of oak woodland, the limited amount of this habitat type within the East Cascades Ecoregion, high wildlife value, and the considerable uncertainty of local fatality rates from the facility for bird and bat species known to occupy oak woodland, the Service recommends that wind power development proceed cautiously in oak woodland, and seek to avoid and minimize impacts

through project design (e.g., using turbines with greater generating capacity (greater than 2.0 MW) in order to reduce the total number of turbines), or consideration of an alternate site.

Recommendations for Mitigation and Monitoring

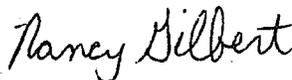
Since considerable uncertainty exists regarding the potential population level impacts to particular bird and bat species, the Service recommends that the proposed facility include the following recommendations to avoid, minimize, mitigate and monitor project impacts on avian and bats species.

- To mitigate direct and cumulative impact to birds and bats, consider an option to establish a wind energy mitigation fund or fee system to address direct and cumulative effects by protecting and improving habitats in the region. These mitigation funds could be leveraged or combined with other grant programs (e.g., Oregon Watershed Enhancement Board) to offset bird and bat mortalities over the lifespan of the wind energy development.
- Establish a 0.25 mile setback for three turbine locations (1, 11, and 12) from two open water ponds and associated wetlands within the project area. Because ponds serve as a consistently dependable food resource, concentrated foraging and roosting by bird and bat species are expected to occur increasing the fatality rate of nearby turbines. These ponds were identified as an attractant to bird and bat species in the Ecological Baseline Study completed for the project.
- Consider the use of turbines that would have a peak generating capacity greater than 2.0 MW, in order to reduce the total number of turbine within the project area. For example, the proposed facility would need 15 fewer turbines if 2.4 MW turbines were used. This action could significantly reduce bird and bat fatalities within the project area.
- Post-construction mitigation measures should include habitat restoration or preservation of oak woodland habitats. Possible approaches include: 1) Maintain a diversity of tree size and age across the stand, in particular large oak and ponderosa pine trees; 2) remove conifers or small oaks that are competing with larger oaks; 3) maintain snags and create snags from competing conifers to provide cavity habitat; and 4) encourage oak reproduction through planting or protective exclosures (Oregon Conservation Strategy (2005)). Restoration efforts should be developed and implemented in coordination with local and regional experts, and State and Federal agencies.
- For the Pacific Northwest region, the hoary bat (*Lasiurus cinereus*) and silver-haired bat (*Lasionycteris noctivagans*) appear to be at the greatest risk from collision with wind turbines. Overall populations of bats in the region are not well documented. Bat surveys should be completed to determine from a regional perspective the potential risk to these local populations. Surveys should also be completed to determine bat migratory patterns, patterns of local movements through the area, and the response of bats to turbines, individually and collectively.

- Proposed mitigation measures should include a formal monitoring plan and agreement to ensure that mitigation measures are completed and that habitat restoration and revegetation are effective.
- Monitoring standards and guidelines should be developed and implemented in coordination with local and regional experts, and State and Federal agencies. Statistical comparisons of bird mortality are the most common measure of data collected at these facilities. The unknown impact of new generation turbines on bird and bat mortalities increases the urgency to initiate long-term monitoring. Much of the discrepancy in bird collision data comes from two causes; a lack of comparable methodology between studies, and trying to compare disparately situated sites (Tingley 2003). Once estimates, methods, and metrics are comparable, they can be used to share site, design, and management information with other facilities to reduce harm to wildlife and their habitats.
- Monitor raptor-safe configurations in high risk areas and low risk areas. Periodically inspect to identify areas of concern and report on the installation, efficacy of design, and degradation in the field of whatever bird protection devices are employed (according to published literature on avian power line electrocution, field observations indicate a significant number of bird protection devices are incompletely or improperly installed and may degrade in the field).
- A 34.5-kilovolt overhead collection line has been proposed to link the central array with the south array that crosses, and then parallels Chenoweth Creek for approximately 0.5 miles. We recommend the overhead collection line span Chenoweth Creek and maintain a 200 foot minimum buffer to minimize construction and maintenance impacts on sediment, shade, and large wood recruitment.
- The decommissioning process of the proposed project should be addressed. The expected life span of the project and decommissioning process should be included in the analysis of impacts of the facility.

The Service appreciates the opportunity to provide comment on the proposed facility. We would like to work with you to further protect fish and wildlife resources within the project area. If you have any questions regarding the Service's comments, please contact Jerry Cordova or me at the Bend Fish and Wildlife Office at 541-383-7146.

Sincerely,



Nancy Gilbert
Field Supervisor

A

cc:

Mike Green, USFWS Region 1, Portland, OR.
Estyn Mead, USFWS Region 1, Portland, OR.
Doug Young, USFWS OFWO, Portland, OR.
Chris Carey, ODFW, Bend, OR
Keith Kohl, ODFW, The Dalles, OR
Rose Owens, ODFW, Salem, OR

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**Avian and Bat Mortality at the Big Horn Wind Energy Project, Klickitat County,
Washington**

K. Shawn Smallwood

18 October 2008

The Big Horn Wind Energy Project was constructed as planned, consisting of 133 1.5-MW capacity GE wind turbines arranged in 15 rows. PPM Energy, Inc. was the developer, and prepared the SEPA Checklist for the Big Horn Wind Energy Project in order to obtain the permit to build and operate it. As part of the SEPA Checklist, PPM Energy predicted project impacts, and so provided an opportunity to check on the accuracy of the predictions after a year of fatality monitoring.

PPM Energy predicted the project's impacts to birds and bats would be low (Table 1), based on the low mortality estimates that had been reported by other northwestern wind farms that had already been operating, and based on the findings of the Klickitat County Final Environmental Impact Statement (FEIS). The Klickitat County FEIS divided the County into six strata of relative raptor abundance, and the Big Horn project was located in the lowest stratum.

Table 1. Predicted impacts due to wind turbine collisions in the Big Horn Wind Energy Project. The estimates of impacts for subgroups of raptors was derived from percentages of each group among pre-construction observations, so assuming that species would be killed in proportion to their relative abundance based on visual scans. Bats were estimated by projecting rates reported from other wind farms in the Pacific Northwest.

Species group	Annual Project Fatalities	Fatalities per MW
Raptors	3-4	0.015 – 0.020
American kestrels	1.986-2.648	0.00993-0.01324
Large falcons, i.e. prairie falcons	0.294-0.392	0.00147-0.00196
Buteos	0.165-0.22	0.00083-0.0011
Eagles	0.114-0.152	0.00057-0.00076
Northern harriers	0.078-0.104	0.00039-0.00052
Passerines	267	1.338
Waterfowl	0 to few	~0
Waterbirds/Shorebirds	0 to few	~0
Bats	200	1.0025

The SEPA Checklist also provided predictions of cumulative impacts for Klickitat County, relying on WEST (2004) (Table 2). Those who prepared the Checklist assumed an eventual build-out of 1,000 MW of capacity in Klickitat County. To predict cumulative impacts, they extrapolated mortality estimates among US wind farms to this 1,000 MW of capacity. The estimates had been summarized in Erickson et al. (2001) for birds and Erickson et al. (2002) for bats, and projections of mortality for Klickitat County had been made by WEST (2004).

Table 2. Predicted cumulative impacts due to wind turbine collisions in 1,000 MW of capacity anticipated in Klickitat County, Washington (based on WEST 2004).

Species group	Annual Project Fatalities	Fatalities per MW
Raptors	33	0.033
American kestrels	21.846	0.021846
Large falcons, i.e. prairie falcons	3.234	0.003234
Buteos	1.815	0.001815
Eagles	1.254	0.001254
Northern harriers	0.858	0.000858
Total birds	1,461	1.461
Bats	467-600	0.467-0.600

My objective was to compare estimates of observed mortality after a year of fatality monitoring to the predicted fatality rates. However, I found substantial gaps in the report of the first year of fatality monitoring, which I attempted to resolve with my analysis of the data. Also, some of the methods differed from those I would have used, so I applied my own methodology (Smallwood 2007, Smallwood and Thelander 2008).

METHODS

Kronner et al. (2008) provided no fatality definition, or an explanation of how bird or bat remains were determined to be those of fatalities likely caused by wind turbines. I assumed that standards applied in other wind farm fatality monitoring efforts were applied by Kronner et al. (2008).

I had to assume that the seasons attributed to fatalities were the seasons when the carcasses were found, and not when the bird or bat may have actually died. Because the appendix listing the fatalities did not include estimates of time since death, I could not backdate the carcasses to the season when the fatality likely occurred. I expect there was some unknown level of error in this assumption.

I maintained Kronner et al.'s (2008) omission of fatalities discovered during their clean-up searches from 16-25 October, including two songbirds and one bat. I also used Kronner et al.'s (2008) seasonal search detection rates (Table 6 in Kronner et al. 2008), and I approximated the standard errors of these rates by taking the mean standard errors that could be calculated between the reported 2.5th and 97.5th quantile values. These values differed between the 2.5th and 97.5th quantiles, but only slightly. I ignored the results of the dog trials for searcher detection, because they were small in scope and did not differ from the human search detection rates due to small sample sizes.

I decided not to rely on the scavenger removal trial results that were reported in Kronner et al. (2008), who estimated mean days to carcass removal. I found that mean days to carcass removal is prone to bias, and this bias results in lower estimates of fatality rates (Smallwood 2007). Not only was mean days to carcass removal prone to bias, but the estimates reported by Kronner et al. (2008) were considerably longer than reported by anyone else in the U.S. (Smallwood 2007).

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Further yet, Kronner et al. used game hen chicks as surrogates for bats in scavenger removal trials, and non-endemic species as surrogates for birds. The use of game hens and surrogate species in general can bias the results of scavenger removal trials (Smallwood 2007). To adjust the estimates of fatality rates for scavenger removal, I used Appendix 1 values in Smallwood (2007) corresponding with 14 and 28 day search intervals used by Kronner et al. (2008). For bats, I used small bird removal rates in Smallwood (2007), acknowledging that I, too, had to rely on a surrogate species for bats. Based on the bat removal rates that have been reported from wind farm studies, it was likely that my use of small bird removal rates biased my estimates of bat fatality rates low.

No adjustment was apparently made for the nearness of wind turbines to property boundaries where searches were not allowed on the other side of the boundary. The 90 m search radius was not achievable for some unknown number of turbines, and the extent to which searches were not possible was not reported. I used a map of wind turbines and property boundaries depicted in the SEPA Checklist (CH2MHILL 2004) to measure distances between wind turbines and property boundaries of the turbine rows Kronner et al. (2008) reportedly ran into trouble with the boundaries.

I also decided to use a different estimator and a different means of obtaining error terms associated with the unadjusted estimates of fatality rates. The authors used bootstrapping to estimate variance for the unadjusted mortality estimate. They reportedly used bootstrapping because their monitoring amounted to a census of all the turbines. However, the Big Horn turbines were arranged in rows, so I estimated the standard error of mean fatality rates among rows of wind turbines. I adjusted my estimates of fatality rate, M_A , as:

$$M_A = \frac{M_U}{p \times R \times A}, \quad \text{eq 1}$$

where M_U was unadjusted mortality expressed as number of fatalities per MW of rated capacity per year, p was the proportion of turbine-caused bird fatalities found by searchers during searcher detection trials, R was the estimated proportion of carcasses remaining since the last fatality search and estimated by a compilation of scavenger removal trials across the U.S. (Smallwood 2007), and A was the proportion of the search area that was actually searched. I calculated the standard error of the adjusted fatality rate by using the delta method to carry the error terms associated with p and R (Goodman 1960).

RESULTS

Adjusted fatality rates tallied to 446 bats, 49 raptors, and 704 birds (Table 1). My estimates were larger than those of Kronner et al. (2008) for most species groups, especially for raptors (Table 2). My estimate of raptor fatality rate was 1.6 times greater than estimated by Kronner et al. (2008). My estimates were also higher than the fatality rates predicted by WEST (2004) before the wind turbines were installed (Table 3). The estimate for the observed raptor fatality rate was 12 to 16 times greater than predicted at the project level, and nearly 1.5 times greater than predicted cumulatively in the County (by CH2MHILL 2004). The estimate for the observed American kestrel fatality rate was 13 to 17 times greater than predicted at the project level, and

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1.6 times greater than predicted cumulatively in the County. In its first year, the Big Horn project killed 16 to 21 times the predicted number of Buteo hawks, and already doubled the predicted Buteo fatality rate for the County upon build-out of wind farms. It killed at least twice the number of bats that were forecast at the project level, and most of the predicted number of bats upon build-out of wind farms in the County.

DISCUSSION

The pre-project predictions of fatality rates made by WEST (2004) and repeated in the SEPA Checklist were too low. They were inaccurate on which species would be killed. For example, northern harriers were predicted to be killed, even though they have a history of leaving wind farms once the turbines are installed and they usually fly too low to encounter the rotor planes of modern wind turbines. WEST's (2004) predictions were grossly low for raptors, missing by factors of 12, 13, and 16, depending on the species and species group. Inaccuracies of this magnitude warrant reconsideration of the approach used to make the predictions. Either the estimates from other wind farms in the northwest were themselves much lower than reality, or there was some methodological problem with the predictions.

My estimates of fatality rates at Big Horn in some cases exceeded CH2MHILL's (2004) pre-project predictions of cumulative impacts resulting from an anticipated build-out of 1,000 MW of capacity in Klickitat County. According to the SEPA Checklist, the projected build-out of 1,000 MW of wind turbines would kill about 33 raptors per year. However, extrapolating the Big Horn fatality rate to 1,000 MW would lead to a prediction of 243 raptor fatalities per year. This prediction is remarkable because the Big Horn project was located in the stratum of Klickitat County rated to be the least used of the six strata composing the County (see SEPA Checklist). This would lead one to consider a prediction of 243 raptors per year as conservative; a more realistic prediction should be a much higher fatality rate.

According to the SEPA Checklist (CH2MHILL 2004), "These additional cumulative mortalities are relatively insignificant compared to the total bird and bat populations present and represent a small increase in the overall causes of bird mortality..." This conclusion might have been considered reasonable had the impacts been anywhere close to those predicted. However, the estimates of fatality rates following post-construction monitoring suggest that at least 243 raptors will be killed annually in Klickitat County, and more than double the number of bats than were predicted. I do not know what biological impacts these fatality rates will cause, but I would not classify them as "relatively insignificant." There is probably no other human source of mortality that comes close to these levels in Klickitat County.

My estimates of fatality rates were also higher than reported by Kronner et al. (2008). The differences were likely due to Kronner et al.'s (2008) use of mean days to carcass removal in scavenger removal trials. This term can result in estimates that are biased low (Smallwood 2007). There may be additional reasons for the differences, but I cannot determine what they were. One possibility might be the estimated *effective interval* which composes part of the denominator of the equation Kronner et al. used to estimate mortality. I suspect it may have resulted in low estimates, but perhaps I did not understand this term well enough to make this conclusion. The

description of this term in Kronner et al. (2008) was vague, and I remain unclear about what it is supposed to be doing in the equation.

REFERENCES

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- Erickson, W. P., G. D. Johnson, M. D. Strickland, D. P. Young, Jr., K. J. Sernka, and R. E. Good. 2001. Avian collisions with wind turbines: A summary of existing studies and comparisons to other sources of avian collision mortality in the United States. National Wind Coordinating Committee, c/o RESOLVE, Washington, D.C. 62 pp.
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Table 1. Estimates of wind turbine-caused fatality rates based on monitoring from 30 October 2006 through 29 October 2007 in the Big Horn Wind Power Project, Washington.

Species	Mean fatality rate, deaths/MW/year		Annual fatalities and 80% CI		
	Unadjusted	Adjusted	Total	LB	UB
Accipter sp.	0.0034	0.0273	5.4	-1.7	12.6
Red-tailed hawk	0.0039	0.0055	1.1	-0.3	2.5
Ferruginous hawk	0.0068	0.0118	2.4	-0.7	5.4
American kestrel	0.0306	0.1730	34.5	4.5	64.5
Long-eared owl	0.0024	0.0035	0.7	-0.2	1.6
Short-eared owl	0.0154	0.0221	4.4	0.7	8.1
Common nighthawk	0.0068	0.0530	10.6	-4.5	25.6
Chukar	0.0323	0.1851	36.9	-14.8	88.6
Gray partridge	0.0785	0.4769	95.1	8.4	181.9
Rock pigeon	0.0190	0.0342	6.8	0.8	12.9
Mourning dove	0.0572	0.4034	80.5	1.8	159.2
Red-shafted flicker	0.0024	0.0134	2.7	-1.1	6.5
Downy woodpecker	0.0034	0.0265	5.3	-2.2	12.8
Horned lark	0.2396	1.2862	256.6	76.2	437.0
Winter wren	0.0039	0.0220	4.4	-1.6	10.4
House wren	0.0046	0.0186	3.7	-1.3	8.8
Mountain bluebird	0.0119	0.0662	13.2	-4.8	31.2
Golden-crowned kinglet	0.0150	0.0835	16.7	0.9	32.4
Ruby-crowned kinglet	0.0136	0.0652	13.0	-4.7	30.7
Thrush sp.	0.0159	0.1236	24.7	-10.4	59.7
Varied thrush	0.0024	0.0134	2.7	-1.1	6.5
Townsend's warbler	0.0116	0.0749	14.9	-5.9	35.8
Yellow warbler	0.0024	0.0185	3.7	-1.6	9.0
Western meadowlark	0.0268	0.1650	32.9	-0.5	66.4
Spotted towhee	0.0037	0.0147	2.9	-1.1	6.9
Dark-eyed junco	0.0128	0.0709	14.2	0.1	28.2
Sparrow sp.	0.0060	0.0239	4.8	-1.7	11.3
Song sparrow	0.0049	0.0273	5.4	-2.0	12.9
Passerine sp.	0.0089	0.0356	7.1	0.1	14.1
Bat sp.	0.0076	0.0306	6.1	0.1	12.1
Big brown bat	0.0024	0.0185	3.7	-1.6	9.0
Silver-haired bat	0.1490	0.8158	162.8	50.8	274.7
Hoary bat	0.2037	1.3699	273.3	77.7	468.9
All bats	0.3627	2.2349	445.9	154.5	737.2
Total raptors	0.0625	0.2432	48.5	2.3	94.7
Total birds	0.6436	3.5236	703.5	32.8	1374.3

B

Table 2. Comparison of fatality rates at Big Horn Wind Power Project during 30 October 2006 to 29 October 2007 estimated by Kronner et al. (2008) and by me.

Species group	Mean fatality rate, Deaths/MW/Year		Ratio of Smallwood to Kronner et al. estimates of fatality rate
	Kronner et al. (2008)	Smallwood	
Raptors	0.15	0.24	1.6
Doves	0.12	0.43	3.6
Galliforms	0.23	0.66	2.9
Goatsucker	0.01	0.05	5.0
Passerines	1.99	2.54	1.3
Woodpeckers	0.04	0.04	1.0
Total birds	2.54	3.52	1.4
Bats	1.90	2.23	1.2

Table 3. Ratios of observed to predicted fatality rates specific to the Big Horn Wind Power Project and cumulative among anticipated projects in Klickitat County, Washington.

Species group	Ratio of mean observed to predicted impacts	
	Project	Cumulative
Raptors	12.2 to 16.2	1.47
American kestrels	13.1 to 17.4	1.58
Large falcons, i.e. prairie falcons	0	0
Buteos	16 to 21	1.93
Eagles	0	0
Northern harriers	0	0
Passerines	1.9	No prediction
Waterfowl	0	0
Waterbirds/Shorebirds	0	0
Total birds	No prediction	2.41
Bats	2.2	0.74 to 0.95

8

Montano,Andrew M - KEC-4

From: Rick Till [Rick@gorgefriends.org]
Sent: Monday, May 18, 2009 4:59 PM
To: Nathan Baker; Fiksdal, Allen (CTED)
Cc: efsec@CTED.WA.GOV; BPA Public Involvement; Montano,Andrew M - KEC-4; H. Bruce Marvin; Gary Kahn
Subject: RE: Whistling Ridge Energy Project - Friends' Scoping Comments - Part 1
Attachments: Friends' Scoping Coments - Part 2.pdf



Friends' Scoping
Coments - Par...

Dear Mr. Fiksdal,

Please find attached Part 2 of the scoping comments from Friends of the Columbia Gorge.

Thanks,

Richard Till, Land Use Law Clerk
Friends of the Columbia Gorge
rick@gorgefriends.org
522 SW 5th Ave., Suite 720
Portland, Oregon 97204-2100
(503) 241-3762 x 107
Fax: (503) 241-3873

Become a Friend of the Columbia Gorge at www.gorgefriends.org

-----Original Message-----

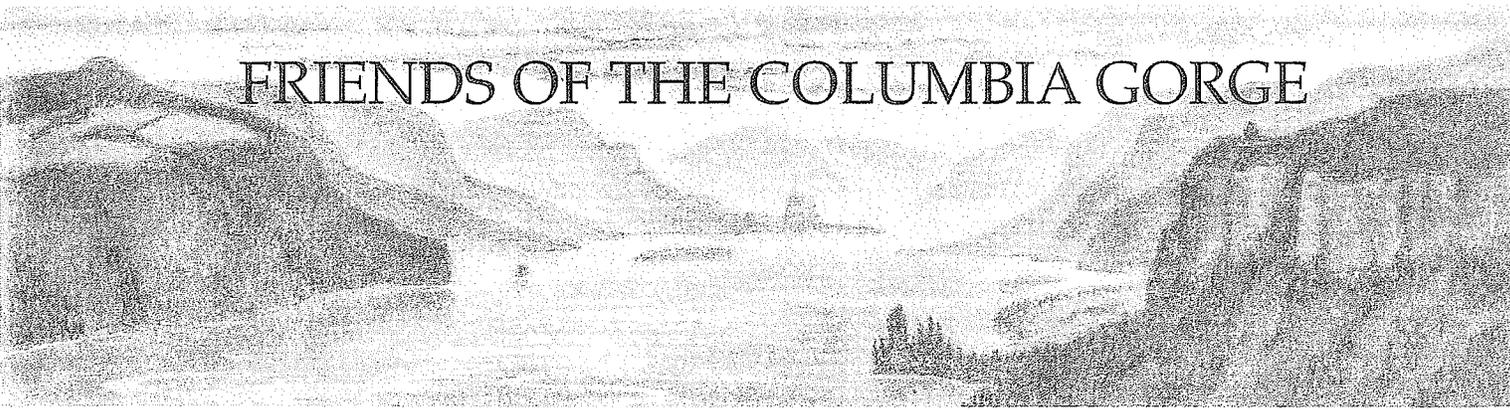
From: Nathan Baker
Sent: Monday, May 18, 2009 4:06 PM
To: Fiksdal, Allen (CTED)
Cc: efsec@cted.wa.gov; comment@bpa.gov; Andrew M. Montaño; H. Bruce Marvin; Rick Till; Gary Kahn
Subject: Whistling Ridge Energy Project - Friends' Scoping Comments - Part 1

Dear Mr. Fiksdal:

Please find attached Part 1 of the scoping comments of Friends of the Columbia Gorge on the above-referenced proposal. Rick Till will e-mail Part 2 shortly. Paper copies of both parts will be sent in today's mail.

Thank you for your time and consideration. If you have any questions or comments, please do not hesitate to contact me.

Nathan Baker, Staff Attorney
Friends of the Columbia Gorge
nathan@gorgefriends.org
522 SW 5th Ave., Suite 720
Portland, Oregon 97204-2100
(503) 241-3762 x101
Fax: (503) 241-3873



FRIENDS OF THE COLUMBIA GORGE

VIA E-MAIL AND FIRST-CLASS MAIL

May 18, 2009

Allen J. Fiksdal, EFSEC Manager
Energy Facility Site Evaluation Council
P.O. Box 43172
905 Plum St. SE
Olympia, WA 98504-3172

**Re: SEPA & NEPA Scoping for the Proposed Whistling Ridge Energy Project –
Application No. 2009-01**

Dear Mr. Fiksdal:

Friends of the Columbia Gorge has reviewed the above-referenced proposal and would like to provide the following scoping comments pursuant to SEPA and NEPA. Friends is a non-profit organization with approximately 5,000 members dedicated to protecting and enhancing the resources of the Columbia River Gorge. Our membership includes hundreds of citizens who reside within the Columbia River Gorge National Scenic Area.

SEPA and NEPA require that the decision making agencies take a hard look at the direct, indirect, and cumulative impacts of the proposed Whistling Ridge Energy Project. The Environmental Impact Statement (EIS) must include thorough analysis of the direct, indirect, and cumulative impacts to wildlife and aesthetic resources. To obtain accurate information on the likely impacts, both EFSEC and BPA must consult with agencies that have expertise or jurisdiction in managing the resources that would be adversely impacted.

Based on a cursory review of the proposed development, the project would cause significant adverse impacts to aesthetic resources in the Columbia River Gorge. This includes adverse impacts to viewsheds protected by the Columbia River Gorge National Scenic Area and views from the Lower White Salmon Wild and Scenic River Area, the Historic Columbia River Highway, the Lewis and Clark National Historic Trail, and the Oregon Pioneer National Historic Trail. Based on the likely significant adverse impacts to these resources, EFSEC and BPA must consider an alternative that would avoid any

impacts to views from these locations. In the interest of conserving administrative resources, this alternative should be identified as the preferred alternative at the outset of EIS preparation.

Wildlife Impacts

Modern industrial wind energy facilities have the potential to cause significant adverse impacts to range of wildlife species. The industrial-scale development can cause direct mortality from collisions with wind turbine blades and through barotraumas when bats fly too close to spinning blades. Facilities can also cause indirect impacts through displacement and habitat fragmentation. The EIS must include analysis of how the facility would impact sensitive and listed species such as the northern spotted owl and northern goshawk.

EFSEC and BPA must thoroughly analyze how the proposed facility would impact wildlife. This analysis must include avoidance measures, including relocating or removing turbines from the project. Only after avoidance is considered should EFSEC or BPA analyze mitigation measures.

The EIS must indicate all bird species that may or do occur within the Project Site that are protected under the federal Migratory Bird Treaty Act, 16 U.S.C. §§ 703–712, and any other state or federal legislation designed to protect avian species.

The EIS must analyze the likely cumulative impacts of wind energy development in the region. Currently approximately 1,800 megawatts of wind energy has been permitted in Klickitat County alone. To date, no cumulative impacts study has been conducted to ascertain the region-wide impacts of wind energy facilities on wildlife. During review of other wind energy facilities in the region both the Washington Department of Fish and Wildlife and the United States Fish and Wildlife Service have called for cumulative impacts analysis. See USFWS Letter, attached as Exhibit A. To date, no cumulative impacts analysis has occurred. This must be included before EFSEC and BPA permit additional wind power development, especially development in forested areas where there is a higher probability of adverse impacts to wildlife.

Notably, monitoring reports on the Big Horn Wind Project in Klickitat County have shown higher incidence of avian mortality than pre-construction survey and modeling predicted. See Big Horn Avian Mortality Report, attached as Exhibit B. EFSEC and BPA must ensure that the EIS uses the best available science for surveying and modeling protocols to ensure that projected impacts are sufficiently accurate and precise. The mortality projections should also include a margin for error. Based on this analysis the EIS should evaluate alternative siting options that would avoid or reduce wildlife impacts. The EIS should also evaluate potential post-construction mitigation measures in case actual mortality exceeds predicted mortality.

Facility design and operating conditions must also be considered in the EIS. Brightly lit substations have been associated with large clusters of bird fatalities at wind

facilities. The EIS must include detailed analysis of lighting at all turbines and other facility structures and how this lighting would impact birds and bats. Also, the wind speeds at which turbines operate may correlate to when specific species of bats or birds may be at the highest risk of collision. Creating operating protocols for what wind speeds turbine blades will be allowed to operate may provide opportunities to craft mitigating conditions that will avoid adverse impacts.

Finally, the EIS must provide detailed analysis of how the proposed facility complies with the Washington Department of Fish and Wildlife Wind Siting Guidelines.

Aesthetic Impacts

The proposed facility would likely cause significant adverse impacts to sensitive viewsheds. Most notably, this includes viewsheds protected by the Columbia River Gorge National Scenic Area Act. These protected viewsheds overlap with views from several sensitive areas, including the Historic Columbia River Highway, the Lewis and Clark National Historic Trail, the Oregon Pioneer National Historic Trail, and the Lower White Salmon Wild and Scenic River.

EFSEC must ensure environmental impacts to the views from these locations are thoroughly analyzed. *See Swift v. Island County*, 87 Wn.2d 348, 552 P.2d 175 (1976) (requiring an EIS for a residential development that would have significantly impacted sensitive areas in the vicinity, including Whidbey Island Historical District, which is listed on the National Register of Historic Sites, Fort Casey Historical State Park, and Crockett Lake, which is valuable waterfowl and shorebird habitat).

The proposed facility is proposed to be immediately adjacent to the National Scenic Area. As a threshold matter, the EIS must ascertain the precise location of the Scenic Area boundary to evaluate whether the proposed industrial facility would be located within the Scenic Area. To do so, EFSEC and the PBA must determine whether the NSA boundary has been formally surveyed. The results of such a survey must be approved by the Forest Service.

Many of the individual turbines may be highly visible, both during the day and the night, from within the National Scenic Area. This includes views from I-84, the Columbia River, Washington State Route 141, Panorama Point, Cook-Underwood Road, and the Historic Columbia River Highway. The EIS must thoroughly analyze the impacts of individual turbines on the viewshed as well as the cumulative impacts of all visible turbines.

The preferred methodology for evaluating aesthetic impacts in the Scenic Area is the Forest Service's Scenic Management System. This system creates a formal process for ascertaining viewer expectations in relationship to the complexity of the viewed landscape. EFSEC and the BPA should also consider the National Academy of Sciences' recent document entitled, *Environmental Impacts of Wind-Energy Projects* (National

Academies Press, 2007), which includes methodology for analyzing possible impacts from wind development on aesthetic resources.

SEPA also requires that the impacts analysis include an evaluation of whether the proposed action would be consistent with the goals and purposes of laws and regulations. WAC 197-11-330(3)(e)(iii). This regulatory review must include analysis of the degree that the proposal would be consistent with the criteria for protecting scenic resources found in the Management Plan for the Scenic Area. The EIS must identify the applicable scenic standards and evaluate whether the proposal would meet the objectives of the Plan. Any portion of the project that would frustrate the purposes of the Act and the Management Plan should be considered a de facto significant impact. In performing this evaluation, EFSEC and BPA must consult with the National Scenic Area office of the U.S. Forest Service.

EFSEC must also consider possible cumulative impacts from other projects proposed along the Scenic Area boundary. These include the Windy Point and Windy Flats facilities in Klickitat County.

The project would be highly visible from the Historic Columbia River Highway from Viento State Park to approximately Mosier, Oregon. This includes portions of the HCRH that have been restored since the adoption of the National Scenic Area Act and additional portions that are slated for restoration within the next decade. Portions targeted for restoration include the historic Mitchell Point Tunnel and its carefully crafted windows carved out of basalt. The restored tunnel will provide views of the Underwood Bluff and Underwood Mountain. The restoration work would continue to Ruthton Point Park, just west of the Hood River, Oregon. The details of restoration efforts can be found in The Historic Columbia River Highway Master Plan, prepared by the Oregon Department of Transportation and available at: <http://www.oregon.gov/ODOT/HWY/HCRH/documents.shtml> (hereby incorporated by reference; *see also* <http://hcrh.org/hwyneeds.html>).

The viewshed from this portion of the Historic Highway would be dominated by the southern-most portions of the proposed wind facility. The windows on a reconstructed Mitchell Point Tunnel would look directly north to the A-Array of the Whistling Ridge Energy Facility. Currently, that view is dominated by views of Underwood Bluff, which is designated as GMA Open Space under the Management Plan for the Scenic Area. The area is designated Open Space in part because of the outstanding scenic views.

The EIS must also address the degree that the proposal would frustrate the purpose of regulatory mechanisms that are designed to protect this viewshed. The Underwood Bluff is designated Open Space. This designation is required by the Scenic Area Act for location with "outstanding scenic views and sites," "historic trails and roads and other areas which are culturally or historically significant" 16 USC 544 Section 2(A)(1). Open Space designations are reserved for the most sensitive resources in the Scenic Area and as a result Open Space areas receive the highest level of protection. Management Plan at II-

3-1-II-3-12. Developing large-scale industrial infrastructure that would protrude into this viewshed would directly frustrate the purpose of the Scenic Area Act.

The EIS must also document the likely impacts to views from I-84. In addition to the length of I-84 from Viento State Park to Hood River, there must be thorough analysis of impacts to views from the stretch of I-84 from Hood River, Oregon, to approximately Mosier, Oregon. Turbines in northern portion of the project would highly visible from the east bound lanes of I-84. The EIS must include detailed analysis of how this view would be altered, including avoidance and mitigation measures.

The aesthetics impacts analysis must include a linear analysis of views from linear key viewing areas and overlapping historic trail viewsheds. This includes views from the Columbia River, Interstate 84, the Historic Columbia River Highway, including abandoned sections that are slated for restoration, Cook-Underwood Road, and Washington State Route 141. Analysis must include the length of the KVAs where the project would be visible, the number of turbines that would be visible for each length, the distance from the project for each length, and whether nighttime lighting would be visible.

Finally, the EIS must document the likely impacts from both daytime and nighttime lighting. While lighting is required by the Federal Aviation Administration, the location of required lighting must be documented in the EIS. Based on this information impacts can be documented and appropriate avoidance or mitigation measures can be reviewed.

Consultation with agencies with jurisdiction or expertise.

EFSEC must consult with and obtain comments from agencies that have jurisdiction or expertise regarding the impacted environment. RCW 43.21C.030(2)(d); *see also* WAC 197-11-920. The impacted environment includes the Columbia River Gorge National Scenic Area, the Lower White Salmon Wild and Scenic River Area, the Gifford-Pinchot National Forest, the Lewis and Clark National Historic Trail, the Oregon Pioneer National Historic Trail, the Historic Columbia River Highway, the Mt. Hood National Forest, and state parks in Washington and Oregon.

Agencies with jurisdiction or expertise in these areas include the Columbia River Gorge Commission, the National Scenic Area office of the USDA Forest Service, the Gifford-Pinchot National Forest, the National Park Service, the Oregon Department of Transportation, the Oregon Parks and Recreation Department, the Washington State Parks and Recreation Commission, the Oregon Department of Parks and Recreation. Agencies with expertise on wildlife issues include the U.S. Fish and Wildlife Service and Washington State Department of Fish and Wildlife.

Finally, the Washington Department of Natural Resources must be consulted regarding compliance with the Washington Forest Practices Act, which requires that all proposals that would convert the use of land to land uses other than commercial timber

operation. Forest land conversions require SEPA review by the county and a Forest Practice approval from the Washington DNR.

The EIS must include the results and conclusions of consultation with the above-referenced agencies regarding impacts to resources under their jurisdiction or expertise.

General mapping errors

The application at Figure 4.2-4 includes a mapping error. The entire area within T3N, R10E, Section 18 that lies south of the BPA transmission lines is zoned For/Ag 20. The application depicts part of this area as unmapped. EFSEC and BPA must correct this error in evaluating the proposed project for consistency with laws and regulations.

Impacts to grid capacity and required back-up power

The BPA must include cumulative impacts analysis of how the BPA will be able to integrate additional intermittent power sources into the grid. The BPA has previously completed some work in ascertaining how new wind energy projects can be accommodated on the grid. This cumulative impacts analysis must be incorporated into the EIS for the subject proposal. To the extent that the BPA's wind integration work meets the requirements of SEPA and NEPA, the current EIS may be tiered to prior environmental analysis.

Water quality impacts

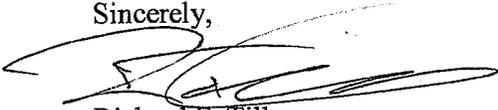
The EIS must evaluate the relative impacts of lower probability storm events that are reasonably foreseeable. The project area includes headwaters for tributaries to the White Salmon River and the Little White Salmon River. Condit Dam on the White Salmon River is currently slated for removal in 2010. Removal of Condit Dam will restore habitat for several species of ESA listed species. The Little White Salmon River is also habitat for anadromous fish species. In addition, the Little White Salmon is currently failing to meet water quality standards established by the Clean Water Act. The EIS must address the impacts of the stormwater run-off on these fish bearing water resources. This must include cumulative impacts analysis of impacts from the creation of impervious surfaces, the construction of industrial-scale roads that would generate sheet run-off, and impacts from deforestation in the two watersheds that contribute to increased pulse stream flows and increased sedimentation.

Conclusion

The Whistling Ridge Energy Project would be sited within sensitive viewsheds for several areas designated for protection, including the Columbia River National Scenic Area, the Lower White Salmon Wild and Scenic River Area, the Historic Columbia River Highway, and the Lewis and Clark National Historic Trail. The project would also be located in a forested area that is habitat for several threatened and sensitive species. The EIS must thoroughly document all of the likely direct, indirect, and cumulative impacts to

these resources. The EIS should include a preferred alternative that avoids impacts to these resources.

Sincerely,

A handwritten signature in black ink, appearing to read 'Richard F. Till', written over a horizontal line.

Richard F. Till
Land Use Law Clerk

Montano,Andrew M - KEC-4

From: Dawn Stover [dstover@hughes.net]
Sent: Monday, May 18, 2009 4:50 PM
To: efsec@cted.wa.gov; Montano,Andrew M - KEC-4
Subject: scoping comments on Whistling Ridge
Attachments: EFSECBPAscoping.doc; ATT00001.htm

Please find my comments attached.

May 17, 2009

Allen J. Fiksdal, EFSEC Manager
Energy Facility Site Evaluation Council
P.O. Box 43172
905 Plum Street SE
Olympia, WA 98504-3172

Andrew M. Montaña
Environmental Project Manager
BPA Public Relations
DKC-7
P.O. Box 14428
Portland, OR 97293-4428

Re: Whistling Ridge Energy Project (Application No. 2009-01, KEC-4)

Dear Mr. Fiksdal, Mr. Montaña and other Responsible Officials at EFSEC and BPA:

I am writing to provide comments about the scope of the Environmental Impact Statement for the Whistling Ridge Energy Project, proposed by SDS Lumber Company d.b.a. Whistling Ridge Energy LLC. Please include my comments in the public record, and include my name on the mailing list for all future notices and decisions.

I am a resident of Klickitat County, an amateur naturalist, and a frequent visitor to public lands. I have closely followed the development of wind power in the Columbia Gorge and Hills, including field visits to many projects. I serve as an environmental representative on the technical advisory committees of three wind power projects in the area. In your environmental studies and assessment, I encourage you to consider the following:

Scope of the Project

The Scoping Notice for the project states that the applicant is proposing to construct and operate up to fifty 1.2- 2.5-megawatt (MW) wind turbines with a maximum generating capacity of 75 MW on a 1,152-acre site in Skamania County. However, that Notice does *not* reflect the full scope of the project contemplated by the applicant.

SDS d.b.a. Whistling Ridge Energy LLC (SDS) has also proposed to construct 32 additional wind turbines on 2,600 acres of adjacent public land owned by the Washington Department of Natural Resources in Klickitat County. An Environmental Checklist prepared by the Washington Department of Natural Resources (DNR) on December 15, 2008, states that "the DNR has received an application from SDS Timber Company to

lease for wind power purposes.” That application—and the wind project for which it lays the groundwork—should be part of the EFSEC/BPA environmental review.

Although SDS claims it simply wants to “study” the possibility of a “phase 2” expansion on the DNR lands, turbine layouts and other preliminary plans clearly show intent to include these lands in the Whistling Ridge project. SDS has stated that the larger project would be more viable economically.

SEPA and NEPA do not allow a piecemeal approach to project evaluation. They require that EFSEC and BPA study the likely environmental impacts of the entire project, which will encompass lands in both Skamania and Klickitat Counties. According to WAC 197-11-055(2), the lead agencies must prepare an environmental impact statement “at the earliest possible point in the planning and decision-making process, when the principal features of a proposal and its environmental impacts can be reasonably identified.”

It is not too early to evaluate the project proposal in its entirety. SDS has submitted a site map that is no less detailed than the maps typically submitted with Klickitat County wind project applications, and has stated that it intends to begin construction in 2010. SDS has proposed connecting the entire project to the BPA power grid, and is in the BPA queue for an interconnection.

It appears that SDS is attempting to avoid full review by holding back the Klickitat County portion of its project, possibly because the company expects a more lenient review process in Klickitat County than in Skamania County. Changing the name of the project from Saddleback to Whistling Ridge has only added confusion to the review process. Regardless of what the project is called, or whether all of the turbines within the project are erected simultaneously, it is clear that SDS plans a large wind project that spans Klickitat and Skamania Counties, and includes 80 or more wind turbines. That is the full scope of the project that should be evaluated in the Environmental Impacts Statement (EIS).

Avian Impacts

All of the DNR land proposed for lease within the Klickitat County portion of the 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 DNR’s Habitat Conservation Plan. Even as the HCP is failing miserably, SDS is proposing to undermine the plan by allowing commercial-scale energy development within known spotted owl circles and a Spotted Owl Special Emphasis Area.

It should be obvious to all concerned that 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. It is within EFSEC’s and BPA’s power to forestall a tremendous amount of unnecessary work by the project proponent, Klickitat County, the U.S. Fish and Wildlife Service, the Washington Department of Fish and Wildlife, local residents and a host of other stakeholders by evaluating the impacts of the DNR portion of the

Whistling Ridge wind project within the scope of its SEPA review. To do otherwise is irresponsible, and has already resulted in the construction of wind projects on state-owned lands where they are completely inappropriate (for example, golden eagle nesting territory within the Windy Point project in Klickitat County).

The EIS 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.” Despite this recommendation and acknowledgement that spotted owl habitat is not appropriate for wind power development, Klickitat County erroneously included some of this habitat within the Energy Overlay Zone—paving the way for companies such as SDS to gain access to these lands for wind development.

As stated in the SEPA checklist for DNR’s Whistling Ridge lease, “the entire area of this proposal is environmentally sensitive.” The state’s Habitat Conservation Plan for the area, which includes protections for northern spotted owls, must be considered as part of your scoping. 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. We cannot afford to lose two or three active nests, even for the laudable goal of providing renewable energy.

Spotted owls are not the only species likely to be significantly impacted by the proposal. Klickitat County’s Energy Overlay Zone 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.

There are also reports of bald eagle nests at the proposed wind site. Your scoping should include an aerial nest survey to ascertain whether raptor nests are present and active.

Scoping must include avian and bat studies to find out what species are present at the site, and in what numbers. However, please bear in mind that all of the previous studies done in the local area have grossly underestimated the impacts on raptors and bats. For example, the SEPA Environmental Checklist done for Big Horn—Klickitat County’s first major wind project—estimated that the project would kill three raptors per year. Post-construction monitoring has found that the project kills at least 10 times as many raptors, and twice as many bats, as predicted. Monitoring at the White Creek project is not yet completed, but the preliminary results there show much higher raptor fatalities than expected. These projects were constructed in areas that were considered relatively “safe” for raptors, not in prime raptor habitat such as the Whistling Ridge site.

Wind projects in our region have already killed at least three ferruginous hawks, a state threatened species. The Goodnoe Hills project recently killed a golden eagle, a federally

protected species. Multiply these impacts across dozens of projects up and down both sides of the Gorge, and you have population-level impacts.

Impacts on Fish and Other Wildlife

Birds are not the only animals likely to be impacted by the proposal. Bats and other mammals, insects and fish will also be affected. Bat populations in the Whistling Ridge area have not been carefully studied, but scientists have learned that turbines cause bat deaths through air-pressure effects on the animals' lungs, as well as direct strikes.

The creeks within the DNR portion of the project contain several drainages to the White Salmon River, which has both anadromous fish and priority resident fish species, and is already listed under section 303(d) for impaired water quality. Mill Creek, within the Whistling Ridge "expansion" proposal, has priority resident fish species.

Wind projects also have indirect impacts on fish, and these too must be considered. One indirect impact comes from the backup power source. Here in the Pacific Northwest, where wind projects are typically "integrated" with hydropower, such integration is already affecting fish passage in the Columbia River and its tributaries.

The hydropower system is already "oversubscribed" by multiple wind projects and further integration of these two energy resources is likely to mean that water is released from Columbia River pools at times that are not optimal for salmon and other endangered fish. We have already seen some of these impacts from nearby wind projects, which tend to produce much of their energy in the months when there is plenty of water in the river, and have at times required excessive spill that can give fish "the bends."

Impacts of Wind Integration

Wind is an intermittent power source, and wind turbines typically operate at only 30 percent of capacity. When the wind isn't blowing, power must come from another energy source capable of supplying 100 percent of that power at any given moment.

As part of your scoping, EFSEC and BPA should consider what will be the backup power source for the Whistling Ridge Energy Project. For example, if hydropower will be the backup, you must consider indirect impacts on fish, as mentioned above. 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 should be evaluated along with impacts of the infrastructure currently being proposed.

SDS does not have a good track record for energy development in our area. The company has previously proposed installing diesel generators on Bald Mountain in the Husum area. Prior to that, SDS's plans for a co-generation plant in Bingen cost BPA ratepayers

\$20 million. Before we rush into another costly venture requiring major transmission infrastructure, it's time to look at what other power sources would be required to support wind power development in our area. Again, the purpose of an EIS is to look at long-term and cumulative impacts, rather than a piecemeal approach.

Infrastructure Impacts

Much of the focus of environmental impact assessment has been on the wind turbines. The impacts from roads, power lines, substations, meteorological towers, quarries and other infrastructure may be even more significant. Any development that removes vegetation, such as a road or transmission line, impedes the migration of many animals, and some animals will not cross these barriers at all. This creates fragmentation of forest habitat, which is one of the biggest risks to biodiversity and species survival.

A study done at the Foote Creek Rim wind project in Wyoming suggests that meteorological (met) towers may be even more dangerous for birds than turbines, although this study has not been replicated elsewhere. Although met towers are not as large as wind turbines, some have guy wires that are difficult for birds and bats to detect. If EFSEC is going to allow development of met towers, it should require fatality monitoring at these towers.

Viewshed

Aesthetics are not my primary concern but certainly they are a value that was meant to be protected by the National Scenic Area (NSA) regulations in this area. While some people may not be bothered by the sight of 400-plus-foot-tall spinning machines, they are definitely not "natural" and not in keeping with the NSA's definition of scenic values.

Those of us who live here have worked long and hard, and many have made personal sacrifices, in order to preserve the scenic value of these lands for all to enjoy. It would not be right for one company to destroy those values purely for its own commercial benefit.

The view at night may be even more altered than the daytime view. Anyone who lives next to a large wind project in a rural area can tell you that the FAA lighting required for towers of this size forever alters the view of the night sky.

Public Safety and Transportation

The public and private roads in the Underwood area are not well suited for the heavy equipment and traffic required to construct and service wind turbines. The Cook-Underwood Road is narrow, winding and located on steep slopes in places. SR-14 is one of the most dangerous of state highways, with the river on one side and cliffs on the other. Rock falls are common and many people are afraid to drive this road even without the possibility of meeting a huge truck carrying an oversize load. The Hood River Bridge is also narrow and outdated, and cannot accommodate oversize loads without closing

traffic from one direction. In Klickitat County we have seen road closures and heavy damage to public roads from wind project construction. These impacts on public safety and traffic must be evaluated as part of the EIS.

Noise

Already people in this area hear the noise from the interstate, state highway, and two railroad lines. Noise carries up some canyons in the area. I live 10 miles, as the crow flies, from the railroad but I can often hear the whistle blow.

The decibel level is not the only measure of the impacts of noise. Wind turbines create low-frequency noise that can travel long distances and may have unanticipated health impacts.

Your review should include a noise modeling study that looks at the micro-siting of the turbines and the topography of the area. Please bear in mind that noise downwind from turbines is different than upwind so measurements need to be made accordingly.

Recreational Impacts

Hikers, bikers, horseback riders, hunters, campers, birdwatchers, and other recreational interests use both public and private lands in the vicinity of the Whistling Ridge project. SDS recently closed its lands to public access, citing concerns about safety and vandalism. It is probably no coincidence that, around the same time, a trail kiosk for the Whistling Ridge trail was removed from the adjacent DNR land. The trail and campsite on this public land is now obscured, although the trail is still marked on a sign near Northwestern Lake.

The Whistling Ridge trail follows the ridgeline all the way from Underwood to Mt. Adams. The closure of SDS lands has made this public trail more important than ever for local recreation. If the DNR leases land to SDS as part of the Whistling Ridge "expansion," the lease would allow SDS "to restrict access to wind farm projects to protect the capital investments or to ensure public safety," according to DNR. In other words, the wind project could mean the end of public access to the Whistling Ridge trail and other recreational opportunities in the area.

Compatibility and Zoning

Please consider compatibility with surrounding land uses and county zoning when conducting your environmental assessment. Within the Skamania County portion of the proposed Whistling Ridge project, for example, industrial-scale wind projects are not allowed under the current zoning.

Alternatives

Any SEPA/NEPA analysis must look at the full range of alternatives to the proposed project, including the no-action alternative. SDS owns huge tracts of land within Skamania and Klickitat Counties, some of which may be better suited for wind development than these lands containing spotted owl circles.

Cumulative Impacts

Your analysis should include a look at the cumulative impacts of wind projects in our region. The BPA's own interconnection queue shows dozens of projects that are either permitted or awaiting permits. There are many other projects that are in the works but not yet in the queue. From Whistling Ridge all the way to Walla Walla, wind developers are erecting a wall of turbines along the hills on both sides of the river. BPA and EFSEC have a much better understanding of the scope of planned development than other agencies, and I hope you will consider these cumulative impacts as part of your review.

The current gold rush to construct wind projects is reminiscent of last century's love affair with hydropower. We now know that dams provide clean energy but also take a heavy toll on salmon and other species. This time around, we cannot afford to rush headlong into "green" energy development with a full consideration of the consequences.

Thank you for considering my comments.

Sincerely,

Dawn Stover
1208 Snowden Rd.
White Salmon, WA 98672
(509) 493-3652
dstover@hughes.net

cc: Governor Christine Gregoire
Commissioner of Public Lands Peter Goldmark
Harkenrider?
Washington Audubon?

Dawn Stover
1208 Snowden Rd.
White Salmon, WA 98672
tel: 509 493 3652
email: dstover@hughes.net

Montano, Andrew M - KEC-4

From: Rick [rick@aramburu-eustis.com]
Sent: Monday, May 18, 2009 4:33 PM
To: AllenF@cted.wa.gov; Montano, Andrew M - KEC-4
Cc: brucem1@atg.wa.gov; nathan@gorgefriends.org
Subject: SOSA Letter re Whistling Ridge Energy Project

Attachments: 5-18-09 Att F - Hearing Examiner Decision (SEP-08-35).pdf; 5-18-09 Att A - SOSA letter to EFSEC.pdf; 5-18-09 Att B - SOSA to BPA 4-24-09.pdf; 5-18-09 Att C - APPLICATION.cypdf.pdf; 5-18-09 Att D - CHECKLIST SADDLEBACK-1.pdf; 5-18-09 Att E MAP SDS.pdf; 5-18-09 SOSA Letter to EFSEC and BPA.pdf



5-18-09 Att F -
Hearing Examin...



5-18-09 Att A -
SOSA letter to...



5-18-09 Att B -
SOSA to BPA 4-...



5-18-09 Att C -
APPLICATION.cp...



5-18-09 Att D -
CHECKLIST SADD...



5-18-09 Att E MAP
SDS.pdf (246...



5-18-09 SOSA
Letter to EFSEC a...

Gentlemen:

Please see attached SOSA SEPA Comment Letter.

Rick Aramburu
ARAMBURU & EUSTIS, LLP
720 Third Avenue, Suite 2112
Seattle, WA 98104-1860
(206) 625-9515
Facsimile (206) 682-1376

This message may contain material covered by the attorney-client and/or work product privilege. If you received this message in error, please notify us and destroy the message. Thank you.

ARAMBURU & EUSTIS LLP
ATTORNEYS AT LAW
720 THIRD AVENUE, SUITE 2112
SEATTLE, WASHINGTON 98104
(206) 625-9515 • FAX (206) 682-1376

May 18, 2009

Allen Fiksdal, Manager
Energy Site Facility Site Evaluation Council
905 Plum Street SE, 3rd Floor
PO Box 43712
Olympia WA 98504-3172

Andrew M. Montano
Environmental Project Manager
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208

Re: Whistling Ridge Energy Project: Scoping Comments

Dear Mr. Fiksdal:

As you know, this office represents Save Our Scenic Area (SOSA) a non profit corporation interested in the preservation and protection of scenic, environmental and residential resources in the Columbia Gorge.

I write today for SOSA to provide comments on the scope and content of the environmental impact statement (EIS) to be prepared for the Whistling Ridge Energy Project (WREP). The document to be prepared is intended to meet the requirements of both the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA). Accordingly, the environmental impact statement prepared must be compliant with both acts and the administrative rules and regulations applicable to each. We understand from statements made at the hearing, a single comment letter will suffice for both SEPA and NEPA purposes.

- 1. EFSEC AND BPA SHOULD PREPARE THE ENVIRONMENTAL IMPACT STATEMENT FOR THIS PROJECT, NOT THE APPLICANT.**

On April 22, 2009, SOSA wrote to the Council, questioning the apparent decision

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of the Council to allow the applicant for this project to prepare the EIS for this project. A copy of that letter is attached as Attachment A. In that letter we addressed the appropriateness of allowing this applicant to prepare the EIS for use by the Council. We pointed out in a separate letter to Mr. Montano of the BPA that federal law and regulation does not permit federal agencies to rely on applicant prepared environmental impact statements. See Attachment B. We have not received the courtesy of a reply to either letter.

Based on the foregoing, we again urge that the Council and BPA be directly responsible for the preparation of the EIS and abandon the procedure that allows this applicant to prepare the EIS.

2. THE ENVIRONMENTAL IMPACT STATEMENT SHOULD INCLUDE IMPACTS FROM THE SECOND PHASE OF THIS PROJECT ON ADJACENT DNR LAND.

The application filed by the WREP proponent describes a project located entirely on private land in Skamania County with approximately 50 turbines in "arrays" generally running along north-south trending ridge tops. However, the applicant did not describe, or disclose, an accompanying proposal made by it to lease adjacent Department of Natural Resources (DNR) property for an extension of the current proposal.

In fact, on December 4, 2008, SDS Lumber submitted its "Application to Lease State Land for Wind Power" with the Department of Natural Resources (DNR). The application was signed by Jason Spadero, the president of the organization behind the WREP proposal. Mr. Spadero appeared before the Council during the scoping and land use consistency hearings. A copy of SDS's application is Attachment C hereto. SDS referred to its proposal as the "Saddleback Wind Project" ("SWP").

On December 15, 2008, an Environmental Checklist was prepared for the SWP project. See Attachment D. Under Section 11 of the checklist at page 3, the project was described as follows:

The DNR has received an application from SDS Timber Company to lease for wind power purposes. The area addressed and evaluated for leasing is comprised of DNR managed (Common School Trust) parcels totaling approximately 2600 acres for Wind Power development. It is anticipated that these parcels might be incorporated into a larger wind power project that would also include adjacent land owners. SDS is one of the most likely adjacent landowners that might play a large role in possible future wind power proposals in this area. See the project proposal maps for the DNR parcels topography and ownership.

SDS prepared a map showing the tower locations on the DNR property, which ties in

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with the WREP at the Skamania County/Klickitat County line. See Attachment E. The total proposal is for 82 turbines, 30 more than are proposed for the WREP. The overall project now includes a nearly continuous line of turbines about four miles long. As shown, the SWP on DNR property simply continues the turbine strings or arrays along the north-south trending ridge lines to the north of the WREP project. To date, DNR has not made a final threshold determination on the SDS proposal.

SDS confirms these expansion plans on its new website, "Whistling Ridge Energy Project." That website under the news section provides an article from the local newspaper "The Enterprise" entitled *SDS Eyes Expanded Wind Power Project, 30 Additional Turbines Possible on DNR Land*. This article was published on February 16, 2009. Mr. Spadero is quoted in the article:

Spadero added that the larger project makes it more viable economically. "It also gives us more flexibility. If we have more flexibility, we can use that to optimize the site and minimize impacts."

The DNR/SWP proposal shares a common interconnection location with the WREP proposal as both will connect to the southerly BPA transmission line at the substation location found on the WREP proposal. See Attachment E. There is no connection or intertie available to any transmission facility on the DNR land. See Attachment E.

Because the applicant for approval under EFSEC is already seeking to expand its project to the north to add 32 more turbines, the scope of the EIS should include the environmental impacts of the expansion onto DNR property. This conclusion is based on the following:

- a) The same applicant seeks approval from both DNR and from EFSEC for wind turbine projects;
- b) The DNR/SWP project and the WREP project are located on adjacent properties
- c) The wind turbines on the DNR property are, for the most part, a continuation of the turbine arrays in the WREP project;
- d) The projects are linked because the necessary connection for DNR/SWP to the BPA transmission line will be installed on the WREP land as part of the WREP proposal;
- e) The road connection for the DNR/SWP will likely be on the same road to be improved for the WREP project.

The SEPA regulations require that all parts of a proposal be considered together. As stated in *Indian Trail Property Owner's Ass'n v. City of Spokane*, 76 Wash.App. 430, 886 P.2d 209 (1994):

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Parts of proposals which are "related to each other closely enough to be, in effect, a single course of action shall be evaluated in the same environmental document." WAC 197-11-060(3)(b). Here, a phased review of the project was clearly inappropriate because it would serve only to avoid discussion of cumulative impacts. WAC 197-11-060(5)(d)(ii). See also WAC 197-11-060(3)(b).

76 Wn.App. at 443.

It is clear that the overall plan of the applicant is construct a larger proposal that depends on approval of the development currently before EFSEC. Under the SEPA rules:

In assessing the significance of an impact, a lead agency shall not limit its consideration of a proposal's impacts only to those aspects within its jurisdiction, including local or state boundaries.

WAC 197-11-060(4)(b). Thus for SEPA purposes, it makes no difference that the DNR proposal is located in a different county and on property that is publicly owned.

Similarly, the SEPA rules require that indirect impacts also be considered:

A proposal's effect includes direct and indirect impacts caused by a proposal. Impacts include those effects resulting from growth caused by a proposal, as well as the likelihood that the present proposal will serve as a precedent for future actions.

WAC 197-11-060(4)(d). The construction of a substation and intertie into the existing BPA transmission line clearly encourages additional nearby projects since such interties are necessary for any wind farm or other electrical generation project.¹

In summary, all relevant factors demonstrate that the current applicant before EFSEC has proposed an expansion of its project even before it applied for the pending project. As such, the environmental impact statement must consider the entire scope of the proposal and include consideration of the 30 turbine expansion onto the DNR property as a part of the present proposal.

¹SOSA comment in Paragraph 1 above (that the applicant should not be permitted to control the environmental impact statement preparation process) applies particularly here. The applicant should not be permitted to decide whether its new proposal on DNR property should be part of the current environmental impact statement, given the obvious self interest involved.

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The failure to include the expansion on to the DNR property in the EIS presents a serious legal defect in EFSEC's review of this project. It is far more consistent with the public interest to review the entire proposal now rather than risk future litigation that can only result in delays and a waste of resources for all interested parties.

3. ISSUES FOR WREP EIS SCOPING ARE DISCLOSED IN THE HEARING EXAMINER DECISION ON APPEAL FROM THE NEW ZONING CODE APPEAL.

As EFSEC knows by now, a quasi-judicial hearing before the Skamania County Hearing Examiner was held in January, 2009 contesting the County's issuance of a DNS for the proposed new Skamania County zoning ordinance adopted for its 2007 comprehensive plan. Both Friends of the Columbia Gorge and SOSA were appellants in that appeal. The principal issue in the appeal was the environmental impact of zoning code provisions that would have authorized new wind turbines in Skamania County. Much of the testimony centered on the WREP, then known as the Saddleback proposal.

The Hearing Examiner ruled for the appellants in a lengthy, detailed and well reasoned decision. A copy of that decision is Attachment F to this letter. That decision identifies the nature of environmental impacts that may result from the establishment of wind turbines. SOSA also requests that EFSEC also review the actual tape recordings of the Hearing Examiner hearings and any available transcripts of the hearings, including all exhibits considered by the Hearing Examiner. These materials provide detail concerning the environmental impacts of wind turbine proposals in several areas.

4. PARTICULAR ATTENTION SHOULD BE PAID TO ALTERNATIVES TO THE PRESENT PROPOSAL.

One of the key features of an environmental impact statement is the consideration of alternatives. Alternatives analysis should focus on alternative methods to accomplish the objective of proposal. Here several alternatives must be considered.

One is a reduction of the scope of the proposal to mitigate environmental impacts. Since one of the most serious of these impacts is to the scenic, aesthetic and environmental values of the Columbia Gorge, alternatives should be carefully explored which reduce those impacts, including the elimination of those turbines that impact the view from areas within the Gorge.

BPA's environmental review under NEPA likely may have particular alternatives. One issue is the capacity of the transmission line to receive new generation from the WREP. Recent studies should be reviewed that indicate some lines, including those

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which the WREP project wishes to access, may not have the capacity to receive the additional load. Given the serious impacts of this proposal, especially to scenic resources in the Columbia River Gorge, the environmental impact statement should explore the potential of using the limited available transmission line capacity for projects that have less environmental impact.

Further, though the DNR proposal should be included in the environmental impact statement itself as a part of the pending proposal, it is certainly an alternative that should be considered to the establishment of turbines in the Gorge itself.

Specific alternatives should also be considered regarding the specific WREP project. One is access to the site. The current proposal uses a combination of public and private roads to access the turbine locations, part of which is in the National Scenic Area. Alternatives need to be reviewed that provide access that does not include road alteration/construction through the Scenic Area.

5. THE CURRENT PROPOSAL IS UNIQUE BECAUSE IT IS THE FIRST PROPOSAL IN A FORESTED ENVIRONMENT.

As noted by the applicant during the scoping hearings, this is the first substantial wind turbine project proposed in a forested setting and an area of long term commercial significance for forestry. Other wind farm projects have located in open country, which has less impact on natural systems and wildlife.

6. CONSISTENCY WITH LAND USE PLANS AND ZONING.

One of the elements of the environment that requires particular attention is the consistency of this proposal with local comprehensive plans and zoning. SOSA has provided detailed correspondence to EFSEC regarding the inconsistencies between the 2007 Skamania County Comprehensive Plan and the present proposal and incorporates those comments by reference herein.

7. ANALYSIS OF WIND CAPACITY.

Meteorological information is being developed regarding the suitability of this site for wind generation. Detailed information should be available for the various turbine locations to provide information as to which individual turbine sites provide the highest potential for energy, allowing the decision maker to review detailed siting issues.

8. SUITABILITY OF WIND ENERGY AS A LONG TERM POWER SOURCE.

As noted by various sources, wind energy is only available during times when the wind is blowing at the turbine sites. The environmental impact statement should

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develop information and analysis as to whether wind energy is available to meet loads during time of high electric demand (peak loads). Existing information indicates that wind energy has not been available to meet loads during either diurnal or seasonal load fluctuations. Similarly, questions of whether transmission capacity should be reserved for wind energy, given its random occurrence, should be discussed in the environmental impact statement, especially for the federal NEPA/BPA decision.

9. NOISE INFORMATION AND ANALYSIS SHOULD INCLUDE RECENT INFORMATION REGARDING EFFECTS OF NOISE.

Noise is an important element of wind turbine development. Recent studies and reports have indicated the need to consider noise impacts from low frequency noise generated from wind turbines. These reports also indicate increasing scientific and medical information that such noise creates nuisance and physical impacts to those living within range of the noise from these facilities. Particular attention needs to be paid to setting minimum distances from wind turbines to receivers of noise.

10. CAREFUL ATTENTION SHOULD BE GIVEN TO VISUAL AND AESTHETIC IMPACTS OF WIND TURBINES.

As EFSEC is aware, wind turbines are well known for creating adverse visual impacts. Detailed analysis of the impacts of the present proposal should include impacts from key viewing areas and other locations in the Columbia River Gorge. Particular attention should be given the alternatives that will reduce or eliminate visual impacts including, but not limited to, the elimination of those wind turbines that are found in the viewshed.

Thank you for your attention to our comments.

Sincerely yours,

ARAMBURU & EUSTIS, LLP



J. Richard Aramburu

JRA/cc

cc: Friends of the Columbia Gorge
Bruce Marvin, EFSEC Counsel for the Environment
SOSA

ARAMBURU & EUSTIS LLP

ATTORNEYS AT LAW
720 THIRD AVENUE, SUITE 2112
SEATTLE, WASHINGTON 98104
(206) 625-9515 • FAX (206) 682-1376

April 22, 2009

Andrew M. Montano
Environmental Project Manager
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208

Allen Fiksdal, Manager
Washington State Energy Facility
Site Evaluation Council
PO Box 43172
Olympia, WA 98504-3172

Re: Whistling Ridge Energy Project, Skamania/Klickitat
Counties, Washington

Dear Messrs Montano and Fiksdal:

This office represents Save Our Scenic Area (SOSA) regarding the proposed Whistling Ridge Energy Project. SOSA is committed to the preservation and protection of scenic, residential and environmental values within the Columbia Gorge area. To date, SOSA has been an active participant in public processes related to wind turbine proposals in the Gorge, including in Skamania County.

SOSA was pleased to receive the scoping notice from EFSEC (dated April 6, 2009) that indicated that EFSEC and BPA "will jointly issue the EIS" for the proposed Whistling Ridge Energy (WRE) project. The EIS will be an important element in project review.

We have also reviewed a "Request for Proposals" issued by EFSEC for consulting work in review of the WRE proposal. This Request calls for responses by April 24, 2009.

In our review of this Request, we discovered that the scope of work for the consultant under SEPA is very narrow. At Section 2.3, the Request calls for the consultant to:

d. Assist with the review of applicant prepared Draft Environmental Impact Statement (DEIS). Prepare report on the adequacy of the DEIS prior to agency issuance as required by SEPA and possibly NEPA.

(Emphasis supplied). This apparently means that the applicant will be the sole preparer of the draft EIS on his own project. Significantly, there is no review called for regarding the adequacy of the Final EIS.

We do note that EFSEC has adopted a regulation as to responsibility for "EIS Preparation" in WAC 463-47-090. This regulation sets forth three options for preparation of the draft and final environmental impact statement: a) preparation by EFSEC itself; b) an independent consultant prepares the EIS, under the supervision of the responsible official; or c) the council allows the applicant to prepare the draft and final EIS. It appears that EFSEC has chosen the latter course of action.

We believe that EFSEC and BPA should modify their submission to call for the preparation of the draft and final EIS by either the EFSEC or BPA or by hiring an independent consultant responsible to them. Our request is based on the following.

1) The EIS is a key document in the review process. The utmost care must be taken to assure that the EIS is objective, fair and unbiased. Preparation of these documents by an applicant, with obvious self interest, is inappropriate in these circumstances. Public confidence in the EFSEC/BPA review process is significantly diminished by allowing the applicant to control a significant part of the review process.

2) We find no provisions of federal law or regulation that permit turning over BPA's EIS responsibilities to an applicant for a federal permit. See CEQ Regulations 40 CFR Part 1502.

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3) There is no basis found in the record as to why EFSEC decided that the applicant could prepare the draft and final EIS under SEPA instead of doing the document itself or through its own consultant. At a bare minimum, EFSEC should consider the views of the public in making this very important decision.

4) The process outlined in the Request for Proposal apparently leaves to the applicant the selection of the author of the draft and final environmental impact statements and there is no review until a draft of the draft EIS is submitted. This is plainly contrary to the duties of a responsible official under WAC 197-11-420(2) which states that:

The responsible official shall direct the areas of research and examination to be undertaken as a result of the scoping process, as well as the organization of the resulting document.

5) There are no provisions for the consultant to review the final EIS at all. The preparer of the final EIS must respond to comments received on the draft EIS from agencies and the public. Leaving that important job entirely in the hands of the applicant is inappropriate in this difficult case and plainly contrary to law.

Based on the foregoing, SOSA requests that the current Request for Proposals be withdrawn and replaced by one which calls for EFSEC and BPA to prepare the draft and final environmental impact statement through a consultant hired by the agencies.

Sincerely yours,

ARAMBURU & EUSTIS LLP



J. Richard Aramburu

JRA/py
cc: SOSA
Nathan Baker

ARAMBURU & EUSTIS LLP
ATTORNEYS AT LAW
720 THIRD AVENUE, SUITE 2112
SEATTLE, WASHINGTON 98104
(206) 625-9515 • FAX (206) 682-1376

April 24, 2009

Andrew M. Montano
Environmental Project Manager
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208

Re: Whistling Ridge Energy Project, Skamania/Klickitat Counties, Washington

Dear Mr. Montano:

As you know, this office represents Save Our Scenic Area (SOSA) in regard to the aforementioned project.

On Wednesday, April 22, 2009, I wrote you regarding procedures for preparation of an EIS for the federal action in this matter. Notice from the BPA dated April 17, 2009, states that an EIS will be required in these circumstances. My letter pointed out that there are no provisions in federal laws or regulations which allow for BPA, as a federal agency, to put an applicant in charge of preparing an EIS for this action, as apparently contemplated by EFSEC. We do not know if this contractor will also be representing BPA interests.

I am writing today to supplement my prior letter with additional authority.

Generally federal agencies are not permitted to let applicants prepare the EISs:

The Federal Power Commission has abdicated a significant part of its responsibility by substituting the statement of PASNY for its own. The Commission appears to be content to collate the comments of other federal agencies, its own staff and the intervenors and once again to act as an umpire. FN18 The danger of this procedure, and one obvious shortcoming, is the potential, if not likelihood, that the applicant's statement will be based upon self-serving assumptions. FN19 In fact, PASNY's statement begins: "Neither the construction nor the operation of the Gilboa-Leeds transmission line will have any significant adverse impact on the environment." But, the Gilboa-Leeds line, if constructed as proposed, will cut a swath approximately 35 miles long and 150 feet wide across the face of Greene and Schoharie Counties. It is

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small consolation that the line will not scar either existing historical sites or designated park land.

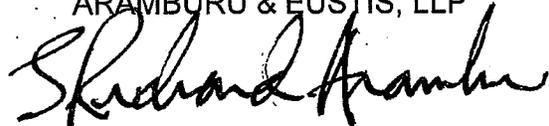
Greene County Planning Bd. v. Federal Power Com'n, 455 F.2d 412, 420 (2nd Cir.1972). *Green County* was an electric transmission line case. The general federal rule is that an agency must select and retain the contractor that prepares the EIS, not the applicant; the agency must also participate in the preparation of the EIS. See 40 C.F.R. 1506.5(c) and 40 Most Asked Questions Concerning CEQ's NEPA Regulations (#16).

As described in my April 22, 2009 letter, relying on an "applicant prepared" draft EIS, with no oversight over the final EIS, as apparently contemplated by EFSEC, is not consistent with NEPA, its regulations or caselaw. BPA should insist on consistency with applicable federal regulations in the preparation of Whistling Ridge draft and final environmental impact statements. To not do so is to invite delay, additional expense and litigation, none of which serves the public interest or that of the applicant.

Thank you in advance for your consideration of our views.

Sincerely yours,

ARAMBURU & EUSTIS, LLP



J. Richard Aramburu

cc: Allen Fiksdal, EFSEC
Bruce Marvin, EFSEC Counsel for the Environment
Nathan Baker
SOSA

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

APPLICATION TO LEASE STATE LAND FOR WIND POWER

NOTE TO APPLICANT: The Department of Natural Resources' consideration of the application includes a field inspection and an administrative review to determine the impact the request will have on the management of the lands involved and to determine if the request is in accordance with the statutes of the State of Washington.

To the Commissioner of Public Lands, Olympia, Washington 98504:

- 1. The undersigned, SDS Company, LLC, hereby apply to lease land at the following legal description Section 29, 30, 31, 32, Township 4N, Range 10, East in Skamania County, Washington.

List any additional sections, or more specific legal description:

Name of Proposed Wind Power Development: Saddleback Wind Project

- 2. Enclose a \$25.00 application fee. Applications from public agencies do not require an application fee. All remittances are made to the Department of Natural Resources.
- 3. General description of the proposed development including number and general location of turbines and met towers (use separate sheet if necessary).
This development is intended to be an expansion of a project to be built entirely on land controlled by SDS Lumber Company. The proposed development on the DNR land will consist of approximately 35 turbine locations (this is subject to change depending on the turbine model selected for the project) and two met towers. The met towers will be erected first and will be used to determine the final turbine placement and help select the turbine choice for the project. Attached is a drawing of the proposed project area.

Are there trees to be removed in the lease area? Yes No

Trees that are to be removed must be physically marked or otherwise identified on the ground.

- 4. Access Road:
Use existing road? Yes No

Construct new road? Yes No Attach map Shown on attached page

The width of the proposed road will be 45 feet during construction and reduced to 20 feet after construction.
The centerline of the proposed road must be physically marked on the ground.

Are there trees in the new access road? Yes No

- 5. Do you have any other leases with the Department of Natural Resources? Yes No
If Yes, please list project name & lease number? _____

- 6. This lease is requested for 30 years. (30 years is standard)

Dated at Bingen, Washington, this 4 day of December, 2008.

FOR DEPARTMENT USE
Amount received: \$ _____
Refer to Application No. _____

Signature [Signature]

Print Name SDS LBR Co
JASON SPARARO

Address PO BOX 266
BINGEN, WA 98605

Phone No. 509 493-2155

UBI No. _____

ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring the preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the question from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply". Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe the proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or to provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (Part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Saddleback Wind Power Leasing Action

This checklist addresses a proposed wind power leasing action covering lands managed by the Washington State Department of Natural Resources (DNR) in Klickitat County.

2. Name of applicant:

Washington State Department of Natural Resources (DNR).

3. Address and phone number of applicant and contact person:

*713 E. Bowers Road
Ellensburg, WA 98926
Contact: Pete Stocks
Phone: (509) 925-8510*

4. Date checklist prepared:

December 15, 2008

5. Agency requesting checklist:

Washington State Department of Natural Resources (DNR).

6. Proposed timing or schedule (including phasing, if applicable):

If DNR leases these properties for wind power feasibility study and possible future wind power development, it is anticipated the project(s) would be planned in four segments: (1) site assessment and feasibility studies (wind monitoring, environmental and cultural resources studies, or other project feasibility determinations associated with proposal development for permitting), (2) construction of wind power project(s), (3) operation of the project(s), and (4) Site Restoration and Decommissioning when or if project ends. If any of these parcels are leased and the subsequent exploration and meteorological studies indicate that wind power generation at any site is feasible, development of wind power project(s) would be pursued. Assuming financing and power purchase agreements are arranged, construction could commence beginning in 2010 with operation starting in 2011 or later. The estimated operational life of the wind power project(s) is 40 years or more.

A second phase of SEPA review (Phase II) will occur prior to any permits that are required for constructing or operating a wind power facility. It is too early and speculative to know the specific design elements and exact location of any future proposal(s) for detailed environmental analysis at this phase of SEPA review. DNR also will require rare plant and archeological surveys on any leased parcels prior to any ground disturbance or improvements on the ground.

The DNR lease authorization and development approval will be conditioned to ensure that it is not in violation of the HCP agreement. This authorization will be based in part on the outcome of the second phase of SEPA review and separate consultation with the USFWS, if and when an actual wind power proposal is submitted.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No other future expansion is likely on these parcels.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The DNR Habitat Conservation Plan dated September 1997 and the October 1996 Final EIS for the DNR HCP. For eastern Washington the northern spotted owl is the only federally listed species covered under this plan.

DNR HCP Amendment No. 1 Administrative Amendment to the Northern Spotted Owl Conservation Strategy for the Klickitat Planning Unit April 2004. This document requires the creation and maintenance of suitable spotted owl habitat in designated areas to promote the conservation of the northern spotted owl over a 70 to 100 year period. This proposal is located within the Husum Sub-landscape which is designated as a Nesting, Roosting and Foraging (NRF) Management Area for the northern spotted owl.

Policy for Sustainable Forests December 2006. This document guides management and stewardship of 2.1 million acres of forested state trust lands (including this proposed lease area), and replaces the 1992 Forest Resource Plan.

Environmental information regarding the DNR parcels, including archaeological sites and protected or sensitive plant or animal species needing special consideration is available through DNR's TRAX system. A review of this information revealed one parcel that has an archaeological site (reviewed in question B13),

and 4 parcels with special animal concerns (reviewed in question B5).

Four of these parcels lie within the Klickitat County Energy Overlay Zone (EOZ) for which a Final Environmental Impact Statement was completed (Klickitat County Energy Overlay, September 2004 FEIS, Klickitat County and Anchor Environmental L.L.C.). A conditional use permit for wind power is not required in this zone now, but EOZ and building permits and a SEPA review are still required by Klickitat County. If leases are executed and before the project(s) advance to construction of wind turbines, a field investigation of plants and wildlife in the site area would be conducted. The EOZ requires each applicant to study and provide technical reports on avian resources and bats. The sites would also be surveyed for archeological and cultural resources. Klickitat County (possibly EFSEC or other SEPA lead agency) still must conduct a SEPA review of the entire project (including any DNR sections that would be included) prior to permitting for wind power projects, to analyze impacts associated with the specific location and design elements.

All of the above documents are available for review at the DNR SE Region office in Ellensburg from 8:00 AM to 4:30 PM Monday through Friday.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No other pending proposed projects that would affect the subject property are known.

10. List any government approvals or permits that will be needed for your proposal, if known.

The potential lease property is located within an area of Klickitat County that has been included in the Energy Overlay zone. Wind power projects are allowed in accordance with the land use and planning ordinances of the County. It's likely that the following permits would need to be secured for a project:

*Energy Facility Permit – Klickitat County
Building Permit – Klickitat County (Meteorological “wind-measuring” towers)
Construction Storm water NPDES – Department of Ecology
Industrial Storm water NPDES – Department of Ecology
Water Permits – Department of Ecology
Wind Power Development Lease – Department of Natural Resources
Plan of Development Approvals- Department of Natural Resources
Interconnection Agreement – Bonneville Power Administration
Hydraulic Project Approval – Department of Fish and Wildlife
Notice of Construction or Alteration – Federal Aviation Administration
Energy Overlay Zone Application Approval – Klickitat County
Surface Mining Permit – Department of Natural Resources*

Wind turbine projects were not analyzed in the state trust lands HCP EIS, nor were they assessed in the USFWS Biological Opinion, and are not a covered activity of the HCP incidental take permit... Hence, DNR can not approve a wind energy facility and expect to receive ESA coverage with the existing HCP.

It will be the proponent's responsibility to gather the necessary information and develop the best available science in relation to the impact this proposal may have on threatened or endangered wildlife species. It is also the proponent's responsibility to gain written agreement from U.S. Fish and Wildlife Service that this proposal will not have a negative environmental impact to any threatened or endangered species.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agency may modify this form to include additional specific information on project description.)

The DNR has received an application from SDS Timber Company to lease for wind power purposes. The area addressed and evaluated for leasing under this checklist is comprised of DNR managed (Common School Trust) parcels totaling approximately 2600 acres, for Wind Power development. It is anticipated that

a portion of these parcels might be incorporated into a larger wind power project that would also include adjacent landowners. SDS is one of the most likely adjacent landowners that might play a large role in possible future wind power development proposals in this area. See the proposal area maps for the DNR parcels topography and ownership. If any state parcels are included in a larger project, the amount of state ownership involved will depend on the total project size and the number of turbines placed on state ownership within the projects. If DNR parcels are leased, not all leased parcels may be developed.

This SEPA review is the first phase in a phased review. Additional surveys, impact studies, access and feasibility studies will be required and conducted by the lessee to determine the feasibility of a wind power project. If the lessee decides to proceed with a wind power project, (Klickitat County) will require a (second SEPA phase) prior to permitting the construction phase of the project. If the DNR parcels are leased, the lessee will apply to Klickitat County for a building permit to install up to (4) four temporary (60 meter tall with guy-wires) meteorological wind sensing towers for the purpose of gathering wind speed data. These towers would not require new road construction or timber harvest to access the monitoring location(s). Site exploration and feasibility studies or surveys would be conducted on foot or with four-wheel drive vehicles and would not result in ground disturbance or timber removal. DNR leases require plan-of-development approvals for all activities or project improvements on DNR land, including road design and management plans and weed management plans, as well as rare plant, animal and archeological surveys prior to ground disturbance.

This SEPA review (phase one) addresses only the impacts of leasing, exploration, wind monitoring, and feasibility studies on these DNR properties. If and when a wind power project is proposed, a second SEPA review would be required prior to any permitting for the development of the private wind power project on multiple ownerships. The Klickitat County Planning Department would be the lead agency for the second SEPA review. The second, project-specific and detailed SEPA review would address all components of the entire wind power proposal. Should a wind power project be proposed that includes one or more of the DNR parcels, then road construction, wind turbine installation, substation construction, and specific locations, impacts, mitigation and alternatives (if any) for the entire project area (not just DNR land) would be considered during the second (permit phase) SEPA review.

There are additional mitigation measures specific to wind turbine impacts that would need to be considered in any location when, and if a project is proposed to the County for actual construction. These are associated with tower siting, design specifications, construction, road location or other components specific to particular locations. Some of these measures are discussed in this checklist and some are not known until a specific project is proposed and must await the next phase of SEPA review by the appropriate lead agency (probably Klickitat County) to determine appropriate mitigation for a specific private wind power proposal. Wind towers could be in excess of 420 feet tall, including blade length. They require a concrete foundation of 18 to 20 feet diameter. Wind towers are usually constructed along ridge-top locations or other locations where the wind is favorable. Electric lines are buried along access roads and connect to the power grid through a substation.

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographical map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any applications related to this checklist.

The potential lease would be on Washington Department of Natural Resources land in Klickitat County, Washington. The legal descriptions for the properties considered for lease are:

All of Section 29, Township 4 North, Range 10 East, W.M. Klickitat County Washington, containing 640 acres more or less.

All of Section 30, Township 4 North, Range 10 East, W.M. Klickitat County Washington, containing 640 acres more or less.

All of Section 31, Township 4 North, Range 10 East, W.M. Klickitat County Washington, containing 640 acres more or less.

All of Section 32, Township 4 North, Range 10 East, W.M. Klickitat County Washington, containing 640 acres more or less.

The general locations and topography of the parcels are shown in the attached maps.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountains, other _____.

The proposed lease sites vary from flat to steep. The likely location of the wind turbines would be 0% to 15% slopes.

- b. What is the steepest slope on the site (approximate percent slope)?

Estimated to be 75% +/-.

- c. What general types of soils (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Timberhead gravelly loam, 1,000 acres.
Kingtain cobbly loam, 535 acres.
McElroy gravelly loam, 373 acres.
Kingtain-Rock outcrop complex, 185 acres.
Dystroxerepts, 165 acres.
McElroy-Rock outcrop complex, 156 acres.
Chemawa gravelly loam, 34 acres.
Chemawa loam, 14 acres.

** acreages are based off of NRCS Data layer and GIS acres rounding to the nearest acre.*

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There is no indication of unstable soil in the immediate vicinity of the parcels.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Leasing, Exploration and Survey Work:

It is not anticipated that any filling or grading would be required following leasing and as part of the exploration or survey phase, prior to an actual proposal submittal for permit review by the County.

General Wind Farm Information (unknown if there will be a wind power proposal):

Filling and grading would be required to improve existing dirt access roads, construction of new roads, electrical buried cables, turbine foundations and crane pads for erecting the wind turbine towers if the lease(s) are actually developed. These activities would require a second phase of SEPA review prior to agency permit decisions. Gravel, crushed rock and other fill materials would come from new or existing surface mining sites (may or may not be on DNR land).

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Leasing, Exploration and Survey Work:

No. No clearing, construction or facilities will be authorized during this phase of the project.

General Wind Farm Information (unknown if there will be a wind power proposal):

Activities such as clearing the turbine corridor, excavation and stock piling of the rock material, construction of the roads trenching for buried cables, and excavation for tower foundations could create potential for minor soil erosion from water runoff and wind erosion. During the construction phase, the applicant would be required to mitigate such erosion through their construction permits with the county and DNR plan of development approvals. Existing roads would be used as much as possible. The width of an existing road grade would have to be expanded to accommodate larger trucks, especially on corners, and electrical cables may be buried in some of the right of ways. If and where new roads are constructed, the road footprint is fairly large to accommodate very large trucks and very wide radius turns to transport large wind turbine blades. This will be the primary source of possible soil erosion.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Leasing, Exploration and Survey Work:

None.

General Wind Farm Information (unknown if there will be a wind power proposal):

Less than ½%.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Leasing, Exploration and Survey Work:

Not applicable unless the very small area of earth around a possible temporary met tower(s) foundation is disturbed. Any such disturbance would be on relatively flat ground at great distance from any water body, but would be seeded with native plant species.

General Wind Farm Information (unknown if there will be a wind power proposal):

A DNR lease would limit the disturbance of vegetation and soil to the minimum necessary for project construction. Construction vehicle traffic would be limited to finished road surfaces as much as possible. Excavations would be backfilled and compacted as soon as practicable to minimize exposure. DNR lease(s) would require any disturbed areas not used for operation to be graded and seeded with appropriate native grasses and weed control measures if the lease is developed. During construction of roads and turbine pads the period of operation would be limited to the months of May through October. Mitigation measures could include the use of sediment cloth, straw bales, sediment traps in ditch lines as well as directing the flow of water onto the forest floor to filter the surface water.

2. Air

- a. What types of emissions to the air would result from this proposal (i.e. dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Leasing, Exploration and Survey Work:

Air emissions during the exploration and survey work would be very minimal and largely consist of some 4-Wheel drive traffic on dirt roads raising some dust and a bit of fossil fuel exhaust.

General Wind Farm Information (unknown if there will be a wind power proposal):

Air emissions during construction would be minor and would consist of vehicle emissions and fugitive dust from construction. There should be no emissions during project operations except those attributable to infrequent vehicular maintenance traffic. If the site(s) are developed, it would be an alternative energy facility and should not increase greenhouse gas emissions. Abatement of unwanted vegetation would be conducted in accordance with the DOE recommendations.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Leasing, Exploration and Survey Work:

There are no off-site sources of emissions or odor known that may affect the proposal.

General Wind Farm Information (unknown if there will be a wind power proposal):

There are no off-site sources of emissions or odor known that may affect the proposal.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Leasing, Exploration and Survey Work:

None needed during exploration work.

General Wind Farm Information (unknown if there will be a wind power proposal):

The primary method that will be employed to control fugitive dust will be the application of water or lignin to areas vulnerable to wind erosion during the construction phase. The lignin sulfate application reduces the use of water needed for dust control. Wind power reduces the reliance on fossil-fuel generated electricity and the global impacts to air from greenhouse gas emissions.

3. Water

a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Mill Creek flows through section 29 and 30. Mill Creek Flows into the White Salmon River.

Little Buck Creek Flows through sections 31 and 32. Little Buck Creek flows into the White Salmon River.

Lapham Creek Flows through Section 29. Lapham Creek flows into the Little White Salmon River.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Leasing, Exploration and Survey Work:

None

General Wind Farm Information (unknown if there will be a wind power proposal):

Unknown. If any work is to be completed within 200 feet of the described waters all permits must be obtained prior to any work being started.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of the fill material.

Leasing, Exploration and Survey Work:

None.

General Wind Farm Information (unknown if there will be a wind power proposal):

None known.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Leasing, Exploration and Survey Work:

None.

General Wind Farm Information (unknown if there will be a wind power proposal):

Water for construction purposes, (concrete footings, road watering, etc.), will be required. Water withdrawals by the applicant will require DOE permits prior to use. Quantities and locations at this time are unknown.

- 5) Does the proposal lie within a 100 year floodplain? If so, note location on the site plan.

No

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground:

- 1) Will groundwater be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Leasing, Exploration and Survey Work:

No.

General Wind Farm Information (unknown if there will be a wind power proposal):

Ground water from either new or existing wells is likely to be used during construction for dust control and concrete for turbine foundations. The withdrawal source will not be known unless or until after a lease is awarded and the applicant receives approval to construct from Klickitat and Skamania Counties. Water withdrawals by the applicant will require DOE permits prior to use. Quantities and locations at this time are unknown.

There will be no discharge to groundwater.

If water is used for any purpose on the project, the lessee would be responsible to ensure that the use(s) are within the limitations of their water rights.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals . . .; agricultural; etc.). Describe the general size of the system, the number such systems, the number of houses to be served (if applicable), or the number animals or humans the system(s) are expected to serve.

Leasing, Exploration and Survey Work:

None.

General Wind Farm Information (unknown if there will be a wind power proposal):

Sanitary wastes during construction will likely be managed through portable toilets serviced by an offsite

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Leasing, Exploration and Survey Work:

These survey activities are not expected to increase water runoff levels beyond current and existing levels.

General Wind Farm Information (unknown if there will be a wind power proposal):

Rainfall and snow melt are the only sources of runoff from the project site(s). Water will flow into existing or constructed road ditch lines then transported to the forest floor where it will be filtered prior to flowing into a stream if any are near the proposal.

- 2) Could waste material enter ground or surface waters? If so, generally describe.

Leasing, Exploration and Survey Work:

No waste material will be generated during survey work.

General Wind Farm Information (unknown if there will be a wind power proposal):

The nature of the project(s) makes it unlikely that waste materials would enter either ground or surface water.

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Leasing, Exploration and Survey Work:

None.

General Wind Farm Information (unknown if there will be a wind power proposal):

A storm water management plan and a storm water pollution prevention plan will likely be required by the county as part of the project's permitting process. The plan will be prepared in compliance with the Department of Ecology construction storm water general permit and the storm water manual for eastern Washington. Road design, construction, and maintenance standards on DNR land must comply with Washington Forest Practice Rules, and DNR Policy for Sustainable Forests and DNR HCP plan. DNR also requires approval of a road management plan of development as part of leasing requirements which helps ensure that the best road construction design, location, and methods are used and that road maintenance and storm water runoff are properly monitored and enforced.

4. Plants

- a. Check or circle types of vegetation found on the site:

deciduous tree: alder, maple, aspen, other

evergreen tree: fir, cedar, pine, other

shrubs

grass

pasture

crop or grain

wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other

water plants: water lily, eelgrass, milfoil, other

other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

Leasing, Exploration and Survey Work:

None.

Wind Farm Information (unknown if there will be a wind power proposal):

The DNR properties currently contain forest trees, harvested areas, and meadows. In those areas where wind turbines, access roads and electrical lines would be located, the current vegetation would be removed, but not before conducting rare plant surveys to protect any Threatened or Endangered plants and sensitive plant communities where feasible. Any disturbed areas not used for road and turbine operations would be graded and seeded with appropriate vegetation to reduce the possibility of erosion.

- c. List threatened or endangered species known to be on or near the site.

The DNR TRAX records were reviewed and none were identified.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Leasing, Exploration and Survey Work:

None.

Wind Farm Information (unknown if there will be a wind power proposal):

Lessee will be required to control all noxious weeds within 100 feet of any disturbed area by following approved mechanical, biological, or chemical management practices. All construction equipment will be thoroughly washed to reduce the likelihood of bringing noxious weed seed into the area. In those areas cleared or disturbed but not used for wind towers, roads or buried cable operations, native conifers trees, associated hardwood species, native shrubs, forbs and grasses will be artificially and naturally planted.

5. Animals

- a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, eagle, songbird, crow, northern spotted owl, other.

mammals: deer, elk, coyote, bat, raccoon, squirrel, rabbit, mice, other: black bear, cougar, bobcat

fish: native trout in Lapham and Little Buck Creek.

- b. List any threatened or endangered species known to be on or near the site.

The DNR TRAX records were reviewed. Four of the parcels have TRAX-hits for a federal endangered or threatened animal. Two of the DNR parcels fall within a Northern Spotted Owl Circle. Another Northern spotted owl site center is located in the general vicinity (within a mile of the proposal area) of the DNR parcels proposed for leasing. The proposal area contains field verified suitable northern spotted owl habitat, and is located within two Status 1 Reproductive northern spotted owl circles.

This proposal is located within a Northern Spotted Owl NRF Management Area as designated by the DNR state lands Habitat Conservation Plan. Specifically, it is located in the Klickitat HCP Planning Unit, within the Husum Sub-landscape. As stated in the HCP Amendment No. 1 Administrative Amendment to the Northern Spotted Owl Conservation Strategy for the Klickitat Planning Unit, the conservation goal of the Husum Sub-landscape is to increase the NRF commitment on those lands better suited to grow and sustain NRF habitat. This Sub-landscape has historically supported viable populations of reproductive northern spotted owls on DNR and adjoining federal land. A large portion of this Sub-landscape contains areas of mature forests that were not consumed or severely altered by fire.

This proposal is also located within the White Salmon Spotted Owl Special Emphasis Area (SOSEA) as designated by WA State Forest Practice Rules.

- c. Is the site part of a migration route? If so, explain.

Unknown. Most of Washington is part of the Pacific Flyway. The proponent may be required to conduct comprehensive field surveys prior to DNR plan of operation approvals for any tower site locations or new road construction on DNR land and prior to completion of the second phase SEPA review and any other permitting decisions, to identify any migration routes or turbine impacts. If migratory routes are identified appropriate mitigation measures will be developed.

- d. Proposed measures to preserve or enhance wildlife, if any:

Leasing, Exploration and Survey Work:

Animals are not likely to be disturbed by activities during the exploratory site assessment phase. The project proponent will consult with U.S. Fish and Wildlife Service and WA Dept. Of Fish and Wildlife prior to installation of any meteorological towers for wind monitoring. Any meteorological tower location(s) (possibly up to four) would be adjusted if it is determined that there would be possible wildlife sensitivity.

Wind Farm Information (unknown if there will be a wind power proposal):

It is the proponent's responsibility to conduct additional environmental analysis and consult with US Fish and Wildlife and WA Dept. Of Fish and Wildlife prior to any plan of development approvals that are required by the DNR lease. The DNR lease will also require written approval from the USFWS that this project does not have a negative environmental impact on threatened or endangered species. The proposal will need to include its own mitigation approved by the USFWS if there are any potentially negative affects to threatened or endangered species.

An additional project-phase SEPA review (phase II, Klickitat County as the likely SEPA lead agency), including any appropriate surveys or studies will be conducted by the proponent as required by state or local regulations prior to any agency permitting decisions should any of these parcels be proposed as part of a wind-power project. Pre-project assessment studies such as habitat mapping and wildlife surveys will help design a project to avoid, reduce and minimize impacts to habitat and wildlife. Operational monitoring and habitat mitigation may also be considered where appropriate, before proposal approvals. The WDFW August 2003 WindPower Guidelines (which can be found at <http://wdfw.wa.gov/hab/engineer/windpower/index.htm>) provide examples of such measures. The project-phase SEPA review could help ensure that appropriate avoidance or protection and monitoring measures can be considered and or incorporated into proposal approvals on a site by site basis to address specific issues.

Impacts to wildlife will be minimized by using existing roads when possible and reseeding disturbed areas to maintain native shrubs, forbs, and grasses. Lessees will be required to control all noxious weeds within 100 feet of any disturbed area by following mechanical, biological, or chemical best management practices. The cleared or disturbed areas not used for wind towers, roads or buried cables will be reseeded and maintained in native shrubs, forbs, and grasses.

6. **Energy and Natural Resources**

- a. What kinds of energy (electrical, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Leasing, Exploration and Survey Work:

Vehicles used for exploration and survey work would use gasoline.

Wind Farm Information (unknown if there will be a wind power proposal):

This project will be a net generator of alternative electrical energy; however, during construction, equipment would use gasoline and diesel fuel. These projects usually have a back feed capability (slight energy consumption) to maintain the towers when they are not producing electricity.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

There would be no effect on solar energy to neighboring properties.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Wind Power Projects are considered to be renewable energy facilities which produce far fewer greenhouse gas emissions than most other energy production facilities.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

- 1) Describe any emergency services that might be required.

Leasing, Exploration and Survey Work:
None are anticipated.

Wind Farm Information (unknown if there will be a wind power proposal):
None are anticipated.

- 2) Propose measures to reduce or control environmental health hazards, if any:

Leasing, Exploration and Survey Work:
None are anticipated.

Wind Farm Information (unknown if there will be a wind power proposal):
Project operating procedures could include spill response plans and materials management, if required by Klickitat. DNR lessees will be required to notify the state immediately of any spills of hazardous substances to help insure an appropriate and immediate response. Hazardous materials (e.g., paints, lubricants) will be controlled in closed containers; residuals will be disposed of offsite. Lights would be required on any tower to meet federal Aviation Administration standards for aircraft safety.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Leasing, Exploration and Survey Work:
The project(s) sites are generally in rural areas. The DNR knows of no ambient noises that affect the project(s).

Wind Farm Information (unknown if there will be a wind power proposal):
The project(s) sites are generally in rural areas. The DNR knows of no ambient noises that affect the

- 2) What types and levels of noise would be created by or associated with the project on a short-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Leasing, Exploration and Survey Work:
No noise is anticipated

Wind Farm Information (unknown if there will be a wind power proposal):
Construction activities would result in short-term noise impacts due to construction equipment (e.g. trucks, dozers, graders, cranes, portable generators). The hours of construction would likely be 5 am to 6 pm. The duration of the project would correspond directly to the size of the overall project(s) which is not known at this time.

The operation of wind turbines produces some noise as turbine blades rotate through the air. Advances in turbine technology, including more efficient blade airfoils, have resulted in more of the wind energy being converted into rotational torque and less into acoustical noise than was the case with earlier designs. Turbine noise would be most noticeable at relatively low wind speeds because the noise associated with higher winds will mask the noise of the turbines.

- 3) Proposed measures to reduce or control noise impacts, if any:

Leasing, Exploration and Survey Work:
None anticipated.

Wind Farm Information (unknown if there will be a wind power proposal):
The project(s) will be designed and operated to comply with state noise regulations found at WAC chapter 173-60. In the event of excessive noise attributable to a turbine's mechanical failure (e/g/ faulty gears, worn blade brakes, out of balance rotor), the turbine(s) will be removed from service and repaired.

8. **Land and Shoreline Use**

- a. What is the current use of the site and adjacent properties?

The properties are currently used for timber production, timber stand management and dispersed recreation.

- b. Has the site been used for agriculture? If so, describe.

The site has not been used for agriculture production.

- c. Describe any structures on the site.

There are no structures known to be on the site.

- d. Will any structures be demolished? if so, what?

No

- e. What is the current zoning classification of the site?

The current zoning classification of the sites in Klickitat County is Forest Resource.

- f. What is the current comprehensive plan designation of the site?

Klickitat County has zoned these parcels for Wind Power under the Energy Overlay for the Comprehensive Plan.

- g. If applicable, what is the current shoreline master program designation of the site?

Not Applicable.

- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

The entire area of this proposal is environmentally sensitive. Washington State Forest Practices Rules has designated Spotted Owl Special Emphasis Areas across the State, this proposal is within the White Salmon SOSEA. The DNR HCP Amendment #1 has designated the State Trust lands in this proposal to be managed for nesting, roosting and foraging (NRF) habitat for the northern spotted owl. Additional surveys and studies may be required by the proponent through the County SEPA process, prior to permitting the project(s). The DNR lease will also require written assurance and approval from the U.S. Fish and Wildlife Service stating there are no unmitigated adverse environmental impacts to threatened or endangered wildlife species associated with this proposal.

- i. Approximately how many people would reside or work in the completed project?

No one will live or reside on state property as a result of this project. People will work on site to complete maintenance activities.

- j. Approximately how many people would the completed project displace?

None.

- k. Proposed measures to avoid or reduce displacement impacts, if any:

N/A

- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

A wind energy facility would be compatible with current and projected land uses.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Leasing, Exploration and Survey Work:

Up to four temporary wind monitoring towers may be installed on DNR lands during the exploratory phase of the proposal. If measuring towers are installed their heights will be 60 meters.

The Policy for Sustainable Forests recognizes visual impacts as a public concern. The department will generally mitigate local visual impacts through the design and application of strategies that can be beneficial to the trust(s).

Wind Farm Information (unknown if there will be a wind power proposal):

Structure heights will be determined by the wind turbine design, which is to be selected by the project developer. The towers could be 420 feet tall, including blade lengths.

- b. What views in the immediate vicinity would be altered or obstructed?

Leasing, Exploration and Survey Work:

The installation of temporary 60-meter high meteorological wind measuring tower(s) (possibly up to four) could alter the ridge view.

Wind Farm Information (unknown if there will be a wind power proposal):

The wind turbines will likely not block any views from any vantage point; however they will likely alter the view of the ridges. Views and impacts are generally simulated in the County's EOZ application.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

Leasing, Exploration and Survey Work:
None anticipated.

Wind Farm Information (unknown if there will be a wind power proposal):
All of the turbines towers will be of uniform design with smooth tubular steel structures that are painted off-white to blend with the sky. Lighting will be limited to aircraft warning lights.

11. Light and Glare

- a. What kind of light or glare will the proposal produce? What time of day would it mainly occur?

Leasing, Exploration and Survey Work:
None.

Wind Farm Information (unknown if there will be a wind power proposal):
No daylight glare is expected from the tower and turbine rotor structures. It is anticipated that aircraft avoidance lighting will be required. This will likely consist of one or more strobe lights in the daytime and one or more red flashing lights at night on each tower string in compliance with FAA regulations.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

Leasing, Exploration and Survey Work:
None.

Wind Farm Information (unknown if there will be a wind power proposal):
Any glare would likely be minimal. The only lights will be those required to minimize aircraft safety hazards.

- c. What existing off-site sources of light or glare may affect your proposal?

Leasing, Exploration and Survey Work:
None.

Wind Farm Information (unknown if there will be a wind power proposal):
None.

- d. Proposed measures to reduce or control light and glare impacts, if any:

Leasing, Exploration and Survey Work:
None.

Wind Farm Information (unknown if there will be a wind power proposal):
None known at this point.

12. Recreation

- a. What designated and informal recreation opportunities are in the immediate vicinity?

Dispersed bird watching, hiking and hunting occurs in the area.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

Leasing, Exploration and Survey Work:
None.

Wind Farm Information (unknown if there will be a wind power proposal):

Unknown. The DNR lease allows the lessee to restrict access to wind farm projects to protect the capital investments or to ensure public safety. Prior permission can sometimes be an option to enable some level of public access. Conditions vary between lessees as to what might be possible. DNR attempts to make state lands available for public recreation to the extent such access does not interfere with DNR's fiduciary or environmental trust mandates, or with public safety concerns. In some cases all public access would be removed.

- c. Proposed measures to reduce or control impacts on recreation, including recreational opportunities to be provided by the project or applicant, if any:

Leasing, Exploration and Survey Work:

None.

Wind Farm Information (unknown if there will be a wind power proposal):

Unknown at this time. Recreational uses will be addressed in the second phased County SEPA review.

13. **Historic and Cultural Preservation**

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

Yes, a search of DNR TRAX did show one possible cultural resource area.

- b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site? If so, generally describe.

There is no known evidence of any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on the site except that identified above. Information regarding the site must be obtained from DAHP.

- c. Proposed measures to reduce or control impacts, if any:

Impacts will be addressed on a case by case basis. The proponent must conduct an archaeological survey prior to any ground disturbance if any if these parcels are leased for wind-power use. Results will be distributed to affected tribes and or DAHP for review. Mitigation or avoidance will be designed as appropriate based on survey results and tribal, archaeologist, and or DAHP consultations depending on survey results. Should archaeological materials or human remains be observed during project activities, all work in the immediate vicinity will stop until DNR, the State Department of Archaeology and Historic Preservation (360-586-3065), the County/City planning office, the affected Tribe(s) are contacted. This will help assess the situation and how to preserve the resource(s).

14. **Transportation**

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans if any.

Access roads are shown on the attached maps.

- b. Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Not applicable.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

There would be no prescribed parking spaces. Construction and maintenance workers would park in roadway pullouts and turnaround areas.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Leasing, Exploration and Survey Work:
No.

Wind Farm Information (unknown if there will be a wind power proposal):
Yes. Existing roads will be utilized to the extent possible. It is anticipated that at least some new road construction will be required if a wind project is proposed and one or more of these parcels is included in the project for access to the wind turbine sites. Road locations will be proposed by applicant. DNR's lease would require a plan of development that must be submitted and approved by the Department of Natural Resources prior to any construction. This will help ensure proper road design, location, and maintenance.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Leasing, Exploration and Survey Work:
Not Likely.

Wind Farm Information (unknown if there will be a wind power proposal):
Unknown, but due to the large size, it is unlikely these transportation modes would be used to deliver wind turbine components to the site(s).

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Leasing, Exploration and Survey Work:
Unknown, estimate one to two trips per week

Wind Farm Information (unknown if there will be a wind power proposal):
Unknown, however it is expected that transportation impacts would be greatest during the construction phase of the project. Construction equipment and materials will need to be transported to the site(s) over a six to eight month period. The types of heavy equipment using the site roads during construction includes gravel trucks, concrete trucks, water trucks, and tractor trailers hauling earth moving equipment, cranes, electrical equipment, and turbine/tower components.

g. Proposed measures to reduce or control transportation impacts, if any:

Leasing, Exploration and Survey Work:
None.

Wind Farm Information (unknown if there will be a wind power proposal):
None known, subsequent transportation studies completed by the County for this proposal(s), will review impacts and develop alternatives if needed.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Leasing, Exploration and Survey Work:
No.

Wind Farm Information (unknown if there will be a wind power proposal):
The project should not result in increased demands for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

N/A

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Leasing, Exploration and Survey Work:

None.

Wind Farm Information (unknown if there will be a wind power proposal):

Unknown. If a lease is awarded, the applicant would propose the utilities to be used. A wind power facility typically installs transmission cables and connects to the existing power grid through a sub-station.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Pat - Stocess

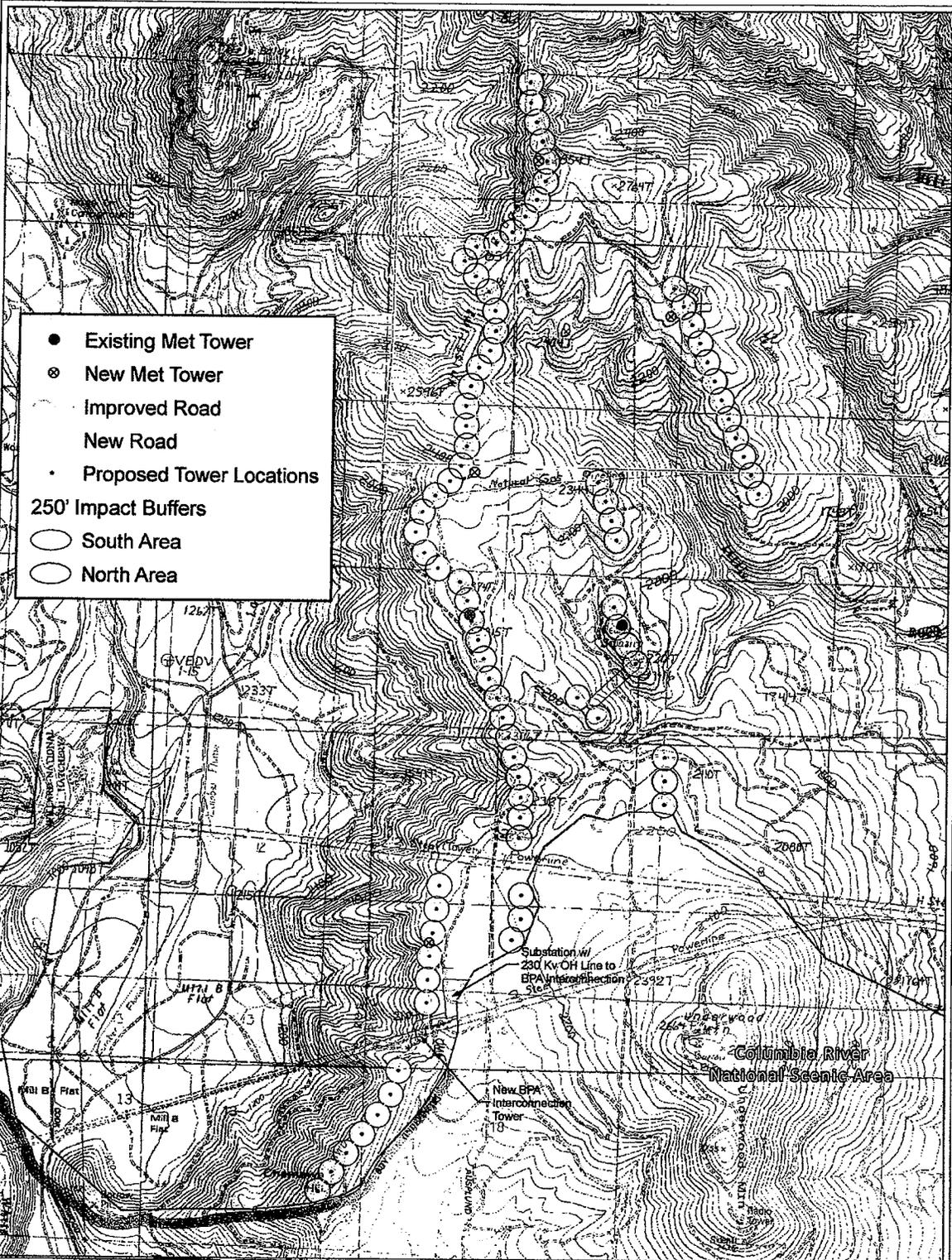
Review by: Mitchell D. Solanta

Title: Assistant Regional Mgr

Date: 1-12-09

See Also:

Location Map:



- Existing Met Tower
- ⊗ New Met Tower
- Improved Road
- New Road
- Proposed Tower Locations
- 250' Impact Buffers
- South Area
- North Area

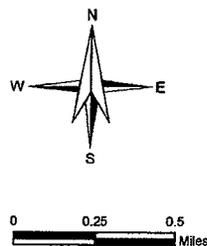
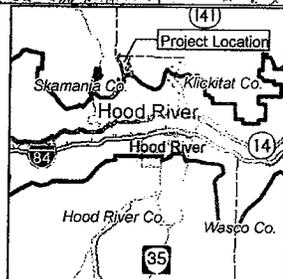


FIGURE TBD
Tower Locations
Saddleback Windfarm



SDS Lumber

Nov 2008



File Path: E:\Projects\SDSLumber\MapDocs\Tower Locations North Area.mxd, Date: November 28, 2008 10:47:03 AM

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FEB 19 2009

BEFORE THE HEARING EXAMINER
FOR SKAMANIA COUNTY

COMMUNITY DEVELOPMENT
DEPARTMENT

In the Matter of the Appeals of)

Friends of the Columbia Gorge,)
Save our Scenic Area, Gifford Pinchot Task)
Force, and Columbia Riverkeeper)

Of a SEPA DNS.)

NO. SEP-08-35

FINDINGS, CONCLUSIONS, AND
DECISION

SUMMARY OF DECISION

The appeals of the October 8, 2008 Determination of Nonsignificance issued for the County's proposed zoning text and map amendments are **GRANTED**.

SUMMARY OF RECORD

Background

Skamania County seeks to amend the text and maps of its zoning code (Title 21 Skamania County Code) consistent with its adopted Comprehensive Plan and subarea plans. The County issued a Determination of Nonsignificance for the proposed amendments (known as the Planning Commission Recommended Draft) on October 8, 2008. Save our Scenic Area, and a group of organizations including Friends of the Columbia Gorge, Gifford Pinchot Task Force, and Columbia Riverkeeper filed appeals of the Determination of Nonsignificance on October 22, 2008.

Hearing Date

The Hearing Examiner for Skamania County held an open record hearing on the appeals on January 21 and 22, 2009.

Testimony

The following individuals presented testimony under oath at the open record appeal hearing:

1. Karen Witherspoon, Director of Community Development, Skamania County
2. Heather Watson, Assistant Planner, Skamania County
3. Dean Apostol, Landscape Architect¹
4. K. Shawn Smallwood, Ph.D., Ecologist²
5. Richard James, E-Coustic Solutions, Acoustical Engineer³
6. Nina Pierpont, M.D., Ph.D., Physician⁴
7. Nathan Baker, Staff Attorney, Friends of the Columbia Gorge

¹ Please refer to Exhibit G.1 for Mr. Apostol's qualifications.

² Please refer to Exhibits G.4 and C.21 for Mr. Smallwood's qualifications.

³ Please refer to Exhibit 7.1 for Mr. James' qualifications.

⁴ Please refer to Exhibit 1.1 for Dr. Pierpont's qualifications.

Legal Counsel

- Attorney J. Richard Aramburu represented Appellant Save our Scenic Area
- Attorney Richard A. Poulin represented Appellants Friends of the Columbia Gorge, Gifford Pinchot Task Force, and Columbia Riverkeeper
- Attorney Peter Banks, Skamania County Prosecutor, represented Skamania County

Exhibits

The documents listed on Appendix A to this Decision (Exhibit List) were admitted into the record. Additional documents were filed on January 26, 2009, after the Hearing Examiner had closed the record to new evidence. The Hearing Examiner did not consider the January 26 documents and they are not admitted into the record.

In addition to the documents identified in Appendix A, the Hearing Examiner considered the following legal memoranda:

- Pre-Hearing Brief of Appellants Friends of the Columbia Gorge, Inc.; Gifford Pinchot Task Force; and Columbia Riverkeeper (December 9, 2008)
- Opening Brief of Save our Scenic Area (December 9, 2008)
- Response Brief of Skamania County (January 2, 2009)
- Reply Brief of Appellants Friends of the Columbia Gorge, Inc.; Gifford Pinchot Task Force; and Columbia Riverkeeper (January 15, 2009)
- Citations to Exhibits of Appellants Friends of the Columbia Gorge, Inc.; Gifford Pinchot Task Force; and Columbia Riverkeeper (January 29, 2009)
- SOSA's Exhibits Citations and References (January 29, 2009)

The Hearing Examiner also considered the 2007 Comprehensive Plan, the Carson Community Subarea Plan, the Swift Subarea Plan, the West End Community Comprehensive Subarea Plan, and the Skamania County Code.

Upon consideration of the testimony and exhibits admitted at the open record hearing, the Hearing Examiner enters the following Findings and Conclusions:

FINDINGS

General

1. Skamania County seeks to amend the text and maps of its zoning code (Title 21 Skamania County Code) consistent with its adopted Comprehensive Plan and subarea plans. The amendments would apply to all lands within unincorporated Skamania County that are not designated as Columbia River Gorge National Scenic Area (hereafter, "National Scenic Area" or "Scenic Area").⁵ The Scenic Area generally includes the southern portion of Skamania County, although there are "islands" of urban area (including unincorporated land) that are not within the Scenic Area. Thus, the proposed

⁵ Land uses within the National Scenic Area are governed by Title 22 of the Skamania County Code (Columbia River Gorge National Scenic Area Ordinance).

amendments would apply to some parcels that, while not designated as Scenic Area, are surrounded by Scenic Area lands. *AR-50; Testimony of Ms. Witherspoon; County Exhibit 2.*

2. In the testimony and written materials there are references to two proposed drafts of Title 21 – the (1) Board-Initiated Draft and the (2) Planning Commission Recommended Draft. The Board-Initiated Draft was the first draft of the proposed amendments. The Planning Commission Recommended Draft contains the changes to the first draft that were recommended by the Planning Commission after considering public comment. The changes are substantial. The draft of Title 21 that is under review is the Planning Commission Recommended Draft, found in the record at AR-72 to 226.⁶ *AR-51.*
3. According to the 2007 Comprehensive Plan, Skamania County is approximately 1,070,080 acres in area. It is the only county in Washington State that spans the crest of the Cascade Mountains. Approximately 80 percent of the County (855,000 acres) is within the Gifford Pinchot National Forest. Approximately five percent of the County (59,876 acres) is owned by the State of Washington.⁷ Approximately 85,000 acres of the remaining land is within the National Scenic Area. *2007 Comprehensive Plan, pages 17-18.*
4. The planning documents in effect for the portions of Skamania County outside of the National Scenic Area include the 2007 Comprehensive Plan, the Swift Subarea Plan, the West End Community Subarea Plan, and the Carson Community Subarea Plan. With respect to those lands governed only by the 2007 Comprehensive Plan (i.e., not within a subarea), there are three land use designations: Rural I (2,758 acres), Rural II (13,440 acres), and Conservancy (817,826 acres). *AR-57.* The zoning classifications currently in effect for those designations include the following: Residential 1, 2, 5, and 10, Rural Estate, Community Commercial, Commercial Recreation, Industrial, Resource Production 10 and 20, Natural, and Unmapped. *SCC 21.24.021.* In addition, there are two zoning classifications applicable to the Northwestern Lake area – Residential 2 and Residential 5. *SCC 21.55.*
5. The Swift Subarea includes approximately 92,191 acres, and the Comprehensive Plan indicates that approximately 34,000 of the acres are privately owned.⁸ There are six land use designations within the Swift Subarea, including Swift Recreational, Swift Commercial Resource Lands, Swift Forest Lands 20, Mountain Recreational 20,

⁶ The proposed zoning map is found at AR-232.

⁷ The County provided slightly different numbers in its brief – a total land area of 1,073,370 acres, with 932,034 acres consisting of state or federal public lands and the remaining 141,336 acres (13 percent) privately owned. *Response Brief of Skamania County, page 1.* These numbers do not affect the outcome of the decision.

⁸ There is some discrepancy between the total acreage reported in the Environmental Checklist and the total acreage reported in the Comprehensive Plan. The total acreage in this finding is based on the Environmental Checklist. It is not clear whether the acreage of privately owned land has also changed from what is reported in the Comprehensive Plan.

Mountain Recreational 10, and Mountain Recreational 5. *2007 Comprehensive Plan, page 18; Swift Subarea Plan, pages 14 – 21; AR-57.*

6. The West End Subarea includes approximately 60,000 acres, and the Comprehensive Plan indicates that approximately 31,000 of the acres are privately owned.⁹ There are seven land use designations within the West End Subarea, including Rural Lands 2, Rural Lands 5, Rural Lands 10, Forest Lands 20, Commercial Resource Lands, Neighborhood Commercial, and Community Commercial. *2007 Comprehensive Plan, page 18; West End Subarea Plan, Figure 3-1; AR-57.*
7. The Carson Subarea includes approximately 2,000 acres. There are four land use designations within the Carson Subarea, including High Density Residential, Rural Residential, Rural Estate, and Business Center. *AR-57; Carson Subarea Plan, pages 2 – 5.*
8. Much of Skamania County is classified as “Unmapped”, meaning that no zoning has been assigned.¹⁰ Within unmapped areas, “all uses which have not been declared a nuisance by statute, resolution, ordinance, or court of jurisdiction are allowable.” *SCC 21.64.020.* Land uses within unmapped areas are not subject to the standards or conditions of the zoning code. *Id.*
9. The unmapped lands in Skamania County are mostly commercial forestland or Gifford Pinchot National Forest. According to County Ordinance No. 2008-01, at least 15,000 acres of the unmapped lands are privately owned. *Exhibit H.4; Testimony of Ms. Witherspoon.*
10. Skamania County has had a moratorium in effect since July 10, 2007 (date of adoption of most recent Comprehensive Plan) on the following development activities on unmapped lands:
 - The acceptance and processing of any building, mechanical or plumbing permits on any parcel of land that is 20 acres or larger that was created by deed since January 1, 2006
 - The acceptance and processing of land divisions
 - The acceptance and processing of SEPA checklists related to forest practice conversions

⁹ There is some discrepancy between the total acreage reported in the Environmental Checklist and the total acreage reported in the Comprehensive Plan. The total acreage in this finding is based on the Environmental Checklist. It is not clear whether the acreage of privately owned land has also changed from what is reported in the Comprehensive Plan.

¹⁰ Prior to 2007, the County’s Comprehensive Plan only addressed the southern portion of Skamania County. *2007 Comprehensive Plan, pages 10 and 21.*

Exhibit H.4. The reasons for the moratorium include that much of the unmapped land is on rugged terrain that is not served by County roads or electricity, and that many areas are prime habitat for federal or state listed species of fish and wildlife. *Exhibit H.4.*

11. The Planning Commission Recommended Draft (and associated zoning map) would accomplish the following:
- Zone all previously unmapped land, including the land under federal ownership.
 - For the land outside of the subareas, eliminate the Resource Production 10 and 20 zones and add Business Park, Forest Lands 20, and Commercial Resource Lands 40 zones.
 - Zone the Swift Subarea consistent with the Swift Subarea Plan (zoning designations: Mountain Recreational 5, 10, and 10, Swift Forest Lands 20, Swift Commercial Resource Lands 40, and Swift Recreation).
 - Zone the West End Subarea consistent with the West End Subarea Plan (zoning designations: Rural Lands 2, 5, and 10, West End Forest Lands 20, West End Commercial Resource Lands 40, and Neighborhood Commercial).
 - Add a new section to the zoning code (SCC 21.70.170) on alternate energy systems, which would apply to the installation of any alternate energy facility located within unincorporated Skamania County, except for the General and Special Management Areas of the National Scenic Area (AR-203).

A list of all of the proposed zoning designations and the acreage allocated to each is set forth in the Environmental Checklist at AR-56 to 57. AR-50, 51, 56, and 57; County Exhibit 2.

12. The proposed Alternate Energy Systems section contains standards relating to the following facilities:
- Rooftop Wind Energy Systems¹¹
Key provisions:
 - One per structure
 - Maximum height: 15 feet above maximum for structure
 - Small-Scale Wind Energy Facilities¹²
Key provisions:
 - No limit on number
 - Maximum height: 65 to 80 feet
 - Minimum property line setback: 1.1 times the height
 - Large-Scale Wind Energy Facilities¹³

¹¹ The proposed definition for rooftop wind energy system is "a small wind energy system that is installed onto a structure supplying power directly to that structure." AR-82.

¹² The proposed definition for small-scale wind energy facilities is "Wind turbines which will be used primarily to reduce on-site consumption of utility power to farms, homes, or businesses." AR-83 (SCC 21.08.010).

Key provisions:

- No limit on number
- Maximum height: 500 feet
- Minimum property line setback (exterior): 50 feet plus height of structure
- Minimum setback from residential structures or zones: one-half mile
- Large-Scale Solar Facilities¹⁴
- Geothermal Resources¹⁵
- Bio-Energy Facilities¹⁶

Key provision:

- Minimum setback from residential structures or zones: one-half mile

AR-203 to 214 (SCC 21.70.170).

13. The current zoning ordinance does not contain any standards relating to alternate energy systems, although geothermal energy facilities are identified as conditional uses in the R-1, R-2, R-5, R-10, Rural Estate, and Resource Production zones. *SCC 21.28.030, 21.32.031, 21.36.031, 21.40.030, 21.44.030, and 21.56.030.* The County would regulate wind power facilities as “utilities” under the existing code. *Testimony of Ms. Witherspoon.* Public Facilities and Utilities¹⁷ are allowed in the residential and Rural Estate zones. Semi-Public Facilities¹⁸ are conditionally allowed in the residential and Rural Estate zones, and Semi-Public Facilities and Utilities are conditionally allowed in the Resource Production zones. *SCC 21.28.020 and -.030, 21.32.020 and -.031, 21.36.020 and -.031, 21.40.020 and .030, 21.44.020 and -.030, and 21.56.030.* The Hearing Examiner was not able to locate any use classification relating to private utility systems.
14. Under the Planning Commission Recommended Draft, rooftop wind turbines would be allowed outright in the residential zones, and small-scale wind energy facilities would be

¹³ The proposed definition for large-scale wind energy facility is “An electricity-generating facility consisting of wind turbines or other such devices and their related or supporting facilities that produce electric power from wind to be sold and used off-site.” *AR-79 (SCC 21.08.010).*

¹⁴ The proposed definition for large-scale solar facilities is “photovoltaic energy systems and/or solar thermal technology energy systems that use reflective materials that concentrate the sun’s heat energy to drive a generator that produces electricity.” *AR-79 (SCC 21.08.010).*

¹⁵ The proposed definition of geothermal energy facilities is “A facility used to produce electricity by extracting and converting the natural thermal energy from the earth.” *AR-78 (SCC 21.08.010).* There are no standards for Geothermal Resources other than compliance with RCW 78.60.

¹⁶ The proposed definition for bio-energy is “Includes a range of biomass feedstock and technologies for conversion of these materials into useful energy.” *AR-76 (SCC 21.08.010).*

¹⁷ “Facilities which are owned, operated, and maintained by public entities which provide a public service required by local governing bodies and state laws.” *SCC 21.08.010 (70).*

¹⁸ “Facilities intended for public use which may be owned and operated by a private entity.” *SCC 21.08.010 (73).*

allowed in the residential zones with administrative review.¹⁹ In addition, “public, semi-public and/or private facilities and/or utility systems” would be allowed outright in the residential zones. Although the proposed definitions for “public facilities and utility systems” and “semi-public facilities and utility systems” include “electrical transmission, distribution and generation facilities”, the electrical generation facilities that fall under more restrictive definitions (such as wind turbines) would not be regulated as a “public, semi-public and/or private facilities and/or utility systems.” Thus, a large-scale wind energy facility would *not* be allowed outright in a residential zone.²⁰ *AR-81, 82, 99, 100, 102, 103, 105, 106, 108, 109; Testimony of Ms. Witherspoon.*

15. Although alternative energy systems would be regulated under the Alternative Energy Systems section of the zoning code, it is not clear how certain traditional electricity generating facilities, such as coal-fired plants, would be regulated. The Planning Commission Recommended Draft does not contain use categories or specific standards for such facilities. If categorized as “public, semi-public and/or private facilities and/or utilities” they would be allowed outright in most zones. *See generally AR-76-84; Opening Brief of Save our Scenic Area, page 10.*
16. Under the Planning Commission Recommended Draft, large-scale wind energy facilities and bio-energy facilities (the most controversial uses) would not be allowed outright in any zone.²¹ Instead, they would be conditional uses in the following zones:
 - Industrial
 - Forest Lands 20 (large-scale wind energy only)
 - Commercial Resource Lands 40
 - Carson Industrial Zone (large-scale wind energy only)
 - West End Forest Lands 20 (large-scale wind energy only)
 - West End Commercial Resource Lands 40
 - Swift Forest Lands 20 (large-scale wind energy only)
 - Swift Commercial Resource Lands 40

¹⁹ Small-scale wind energy facilities would not be allowed within the High Density Residential Zone of the Carson subarea. *AR-139.*

²⁰ To avoid confusion, the Hearing Examiner urges the County to clarify this issue in the final version of the zoning code. Appellant SOSA made much of the fact that the language “electrical transmission, distribution and generation facilities” could be read as including wind-energy and other alternative energy facilities. However, the Hearing Examiner considers this to be a language problem (albeit a significant language problem) rather than an environmental review problem. It is clear that the County intends to regulate wind-energy and other alternative energy facilities in accordance with the stricter standards established for those facilities, and it is the Hearing Examiner’s opinion that no reviewing official looking at the larger statutory scheme could reasonably interpret otherwise. Consequently, the Hearing Examiner will not evaluate the environmental impacts of the proposed zoning code on the false assumption that large-scale wind energy facilities would be allowed outright in the residential zones.

²¹ Under the prior Board-Initiated Draft, large-scale wind energy facilities would have been administrative review uses in some zones, and allowed outright in others. *See e.g., AR-121, 128, and 148.*

AR-122, 125, 128, 148, 161, 163, 179, 182. None of the zones identified above would allow residential uses.

17. Although the 2007 Comprehensive Plan specifies that the Hearing Examiner “may deny a conditional use permit if he or she finds the use is inappropriate for the area” (2007 Comprehensive Plan, Policy LU.6.1, page 31), the proposed criteria for conditional use permit approval do not appear to give the Hearing Examiner discretion to deny a conditional use permit. Proposed SCC 21.16.070(A) states, “If the Hearing Examiner determines that the use is *not compatible* with permitted or existing uses in the specific area of the proposed use then the proposed use may be approved or approved with conditions to make it compatible with the area.” AR-88 (*emphasis added*). The quoted language is a change from the current SCC 21.16.070, which states, “If the Hearing Examiner determines that the use is not compatible with permitted or existing uses in the specific area of the proposed use then the proposed use shall be denied.” SCC 21.16.070(A).
18. The 2007 Comprehensive Plan does not contemplate the type of energy facilities described in the Planning Commission Recommended Draft. With respect to the Conservancy designation, which includes the majority of the County and which could be implemented by the Residential 10, Forest Lands 20, Commercial Resource Lands 40, and Natural zones (see 2007 Comprehensive Plan, Figure 2-2, and AR-97 to 98), the Comprehensive Plan lists only the following utility uses as being appropriate within the designation: “Public facilities and utilities, such as parks, public water access, libraries, schools, utility substations, and telecommunication facilities.” 2007 Comprehensive Plan, page 26.
19. Ms. Karen Witherspoon, Director of Community Development for Skamania County, was the Responsible Official for State Environmental Policy Act (SEPA) review of the code amendments. Ms. Witherspoon issued a Determination of Nonsignificance (DNS) for the Planning Commission Recommended Draft on October 8, 2008.²² AR 47-48.
20. On October 7, 2008, the County mailed notice of the DNS to numerous agencies, tribes, and interested parties, including the Washington Department of Fish and Wildlife, the Washington Department of Natural Resources, the United States Forest Service, the Washington Department of Ecology, and the Columbia River Gorge Commission. AR-64-68. The County published the DNS in the Skamania County Pioneer on October 8, 2008. AR-69-70.
21. No agency submitted comments directly in response to the October 8, 2008 DNS. *Testimony of Ms. Witherspoon.* However, on June 5, 2008 the Washington Department of

²² Ms. Witherspoon had issued a DNS for the Board-Initiated Draft also, and the DNS was appealed by some of the Appellants in this case. Ms. Witherspoon withdrew the DNS in response to the changes recommended by the Planning Commission. See AR-50.

Fish and Wildlife (WDFW) submitted a comment letter on the original Board-Initiated Draft that contained the following language:

WDFW would like to re-iterate our calls for a cumulative effects analysis of regional wind power development in the Columbia River Gorge. Such an analysis is typically not possible or required during permitting and siting of an individual wind power development. The County zoning update process is the best opportunity we have to conduct this analysis of potential adverse environmental impacts from development of wind power sites, as well as associated power lines, roads, and other infrastructure. Such an analysis would evaluate the number, location, and type of turbines; the number and type of species in an area; species behavior; topography; and weather factors influencing direct and indirect mortality factors.

Exhibit C.12. No cumulative effects analysis has been conducted for the proposed zoning code amendments, although some of the specific language changes requested by WDFW (i.e., not allowing large-scale energy uses outright on commercial resource lands) have been incorporated into the Planning Commission Recommended Draft. *Exhibit C.12; AR-128.*

22. The County did not consider the June 5, 2008 WDFW letter in the environmental review of the Planning Commission Recommended Draft because of the timing of the submittal. In compiling its environmental review record the County made a distinction between those comments submitted in response to the October 8, 2008 DNS, the comments submitted in response to the DNS for the prior Board-Initiated Draft, and the comments submitted to the Planning Commission on the ordinance itself. Ms. Witherspoon testified that WDFW submitted a later letter (also not included in the environmental review record) that did not include a request for a cumulative effects analysis. *Testimony of Ms. Witherspoon.*
23. Save our Scenic Area filed an appeal of the DNS on October 22, 2008. *AR-30 through 40.* The appeal was timely under the 14-day deadline specified in the DNS. *AR-47 to 48.* The appeal alleged that the proposal (mainly, the portions relating to wind turbines) would have probable, significant, adverse impacts on the following:
 - Birds and animals,
 - Noise,
 - Geology, soils, and topography,
 - Fire and hazard,
 - Relationship to existing land use plans,
 - Land use and housing,
 - Light and glare,
 - Aesthetics and scenic resources,
 - Special areas (i.e., Columbia Gorge National Scenic Area),

- Recreation,
- Transportation,
- Water Supply and Aquifers, and
- Human health.

In addition, Save our Scenic Area alleged that the County did not actually consider environmental factors prior to issuing the DNS, that the proposal would result in cumulative impacts, and that the proposal would set a precedent for further actions with significant environmental effects. Save our Scenic Area requested that the Hearing Examiner reverse the issuance of the DNS and order the County to prepare an Environmental Impact Statement (EIS). *AR-35 through 40.*

24. The organizations Friends of the Columbia Gorge, Gifford Pinchot Task Force, and Columbia Riverkeeper jointly filed an appeal of the Determination of Nonsignificance on October 22, 2008. *AR-3 through 24.* The appeal was timely under the 14-day deadline specified in the DNS. *AR-47 to 48.* The appeal alleged the following (paraphrased):

- An EIS must be prepared for non-project actions that may lead to significant adverse impacts.
- The County improperly relied on the Klickitat County FEIS.
- The County failed to consider cumulative impacts, and the precedent set by the proposal.
- The County failed to consult with other agencies.
- The County failed to consider impacts to special and sensitive areas, wildlife, rare plants, native plant communities, and water resources.
- The County failed to ensure consistency with the Comprehensive Plan, Critical Areas Ordinance, and federal wildlife laws.
- The County did not analyze the impacts of the Northwestern Lake Recreational zones, or the impacts of increased residential development.
- The County did not consider or adequately protect against impacts to cultural resources and recreation, noise impacts, fire risk, transportation impacts, and impacts associated with new energy transmission infrastructure.

AR-6 through 23.

25. The County stipulated to all Appellants' standing to challenge the DNS. There are declarations in the record from members and/or staff of Friends of the Columbia Gorge, Columbia Riverkeeper, and Gifford Pinchot Task Force, some of whom reside in Skamania County, that their interests would be adversely affected by the proposed zoning code amendments. According to the declarations, members of the Appellant organizations pursue recreational and wildlife viewing activities in or near the areas that would be affected by the zoning ordinance. *Argument of Mr. Banks; Exhibits F.4 through F.9.*

26. In response to the appeals, the County argued that the scope and impact of the zoning amendments is smaller than argued by the Appellants because most of Skamania County consists of public land, that the court decision *King County v. Boundary Review Board*, 122 Wn.2d 648 (1993) is not applicable, that the State of Washington has preempted local control over wind power projects, and that the proposed amendments would be an improvement over the existing regulatory scheme. *Response Brief of Skamania County*.
27. In the Environmental Checklist for the Planning Commission Recommended Draft, the County discloses, in general terms, the presence of mountainous terrain, water features, threatened and endangered species, bird migration routes, and unstable soils within the County, but claims that the proposal would have no impact on those and other elements of the environment because it is a non-project action. In the supplemental sheet for non-project actions, the County does not identify or analyze the impacts associated with the type of development that might result from the proposed amendments, but indicates that the impacts of future development would be determined and mitigated on a project-specific basis based on County regulations. *AR-50 to 62*.
28. Assistant Planner Heather Watson prepared the September 30, 2008 Environmental Checklist, in consultation with Ms. Witherspoon and other County staff. As background research, Ms. Watson reviewed the Planning Commission Recommended Draft of the zoning code amendments, a Final Environmental Impact Statement (FEIS) issued by Klickitat County for its Energy Overlay Zone (AR-71),²³ the August 2003 Wind Power Guidelines promulgated by the Washington Department of Fish and Wildlife (AR 351-359), and some SEPA checklists and threshold determinations issued by other jurisdictions for legislative actions. Although Ms. Watson was aware that the County had been approached regarding a possible wind energy development, she did not consider the project in preparing the Environmental Checklist because no application had been filed. *Testimony of Ms. Watson*.
29. Although both Ms. Witherspoon and Ms. Watson reviewed the Klickitat County FEIS prior to issuance of the DNS, neither provided testimony or other evidence identifying which specific portions of the FEIS or supporting studies were persuasive in making the determination. In addition, neither provided evidence suggesting that Skamania County and Klickitat County have similar environmental conditions. *See generally, Testimony of Ms. Witherspoon and Ms. Watson*. Although the checklist notes, "The Eastern portion of Skamania County that abuts Klickitat County was included in studies prepared for this [the Klickitat County] EIS" (AR-50), no specific references to the studies, or conclusions drawn from the studies, were provided.²⁴ In addition, the assumptions used by Klickitat

²³ Klickitat County is immediately east of Skamania County.

²⁴ By chance, the Hearing Examiner found a reference to eastern Skamania County in the Avian Study Report attached to the Klickitat County FEIS (AR-71, Appendix B). The study indicates that two avian sampling points were in southeast Skamania County, in the general vicinity of the panhandle that extends south of the Klickitat County line. The area represented by the sampling points is an extremely small fraction of Skamania County as a whole. *AR-71, Appendix B, Figure 1*.

County in evaluating the environmental impacts of the Energy Overlay Zone are not reflected in the proposed zoning text. For example, the Planning Commission Recommended Draft would allow a maximum wind turbine height of 500 feet, whereas the visual impact analysis conducted by Klickitat County was based on a height of 100 feet. *AR-205; AR-71, page 3-108*. The 500-foot height limit was not based on environmental factors; its purpose was to ensure that the type of turbines currently in existence would be conforming. *Testimony of Ms. Witherspoon*.

30. Prior to adoption of its Energy Overlay Zone, Klickitat County, like Skamania County, did not have ordinances that specifically addressed energy development. Energy facilities were reviewed on a case-by-case basis through the conditional use permit process, which, the FEIS notes, “has led to a lack of consistent policy for energy facility siting.” *AR-71, page 1-3 to 1-4*. Klickitat County issued a Determination of Significance (DS) for the non-project action on June 6, 2002, and issued the FEIS in September of 2004. *Exhibit H.2; AR-71*.
31. In the FEIS, Klickitat County predicted that the Energy Overlay Zone might encourage greater energy development within the Overlay boundaries, and discourage energy development outside of the Overlay boundaries “because of the greater uncertainty in the permitting process”. *AR-71, page 1-6*. The prediction turned out to be accurate. The development of wind power facilities in Klickitat County has far exceeded the projections contained in the FEIS. Whereas the FEIS assumed that four wind power projects (1,000 MW generating capacity total) would be developed in Klickitat County between 2004 and 2024, as of January 30, 2008 there were 12 wind power facilities in Klickitat County (1500+ MW) that were permitted and/or constructed or had permits pending.²⁵ These facilities are depicted on a Klickitat County Wind Projects Map. *Exhibit E.2*. During the past year, applications for two wind facilities in addition to those depicted on the map have been filed.²⁶ *Exhibits E.3, E.4, and E.5; AR-71, page 1-2*.
32. Skamania County is a member of the Mid-Columbia Economic Development District (MCEDD), and Skamania County Commissioner Paul Pearce serves on the MCEDD Board of Directors as the Chair of the Executive Committee. The counties that constitute MCEDD, in addition to Skamania County, include Klickitat County (WA), Sherman County (OR), Wasco County (OR), and Hood River County (OR). *Exhibit H.10, page 1; Exhibit H.13*.
33. The mission of MCEDD is “to promote the creation of family-wage jobs, the diversification of the economic base, and the growth, development and retention of business and industry within the five-county district.” *Exhibit H.10, page 2*. One of

County line. The area represented by the sampling points is an extremely small fraction of Skamania County as a whole. *AR-71, Appendix B, Figure 1*.

²⁵ Although the map depicting the wind power facilities is dated January 30, 2008, it includes some projects that did not receive SEPA threshold determinations until April of 2008. *Exhibit E.2, Exhibit 6.3, Exhibit 6.4*.

²⁶ It should be noted that one of those projects – the Goodnoe II Project – included approximately 320 acres of land owned by the Washington Department of Natural Resources. *Exhibit E.5*.

MCEDD's projects has been to establish the Columbia Gorge Bi-State Renewable Energy Zone (CGBREZ). "This self-declared zone was created to reduce the region's dependency on federal subsidies, bring economic vitality to the region, establish a national model for energy self-sufficiency, and provide a model of self-reliance for other rural economies in the 21st Century. *Exhibit H.10, page 9; see also Exhibit D.6.*

34. Skamania County has demonstrated its support of the CGBREZ, and its interest in wind power in particular, in several ways. On December 18, 2007, the Skamania County Board of Commissioners passed Resolution 2007-59, which "endorses the creation of the Columbia Gorge Bi-State Renewable Energy Zone." *Exhibit H.9.* In the preamble to the resolution, the Commissioners identify the counties within the zone as possessing "world class renewable energy assets including wind, sun, biomass, water and geothermal" and as desiring to develop renewable energy projects. *Exhibit H.9.* On September 30, 2008, the Skamania County Board of Commissioners passed Resolution 2008-51, which endorses several policies and actions relating to the CGBREZ, such as streamlining government permitting, encouraging investment in new energy technologies, and expanding regional transmission capacity for renewable energy projects. *Exhibit H.12; Exhibit H.11.* On December 23, 2008, the Board "discussed the need for the County to pay for Skamania County Economic Development Director to attend an upcoming conference of the American Wind Energy Association". *Exhibit H.14.*
35. Skamania County contains areas that have been mapped by the U.S. Department of Energy National Renewable Energy Laboratory as Wind Power Class 4 ("good") or better. The wind power classifications range from Class 1 to Class 7, with Class 1 referring to "poor" resource potential (wind speeds not exceeding 12.5 miles per hour at 50 meters), and Class 7 referring to "superb" resource potential (wind speeds of 19.7 miles per hour or greater). *Exhibits D.1 and D.2.*
36. To facilitate potential wind energy projects, there are existing high-voltage Bonneville Power Administration electric transmission lines in the southern portion of Skamania County and on the west side of Swift Reservoir. *Exhibits H.1, D.1, and D.2.*
37. Skamania County has not yet received an application to develop a large-scale wind energy facility. However, SDS Lumber has approached Skamania County on multiple occasions over the past several years to discuss a possible large-scale wind energy project (Saddleback Project) on its property within the County. Ms. Witherspoon met with representatives of SDS and entities such as the Bonneville Power Administration on two or three occasions for "pre-application meetings" to discuss the permitting requirements for the project. Multiple pre-application meetings have been held because of changes in the development team. The project, if developed, would consist of at least 40 wind turbines. Although the last formal pre-application meeting was approximately two years ago, individuals associated with the project have been involved in the County's code update process and the president of SDS was present at the subject appeal hearing. *Testimony of Ms. Witherspoon.*

38. The Bonneville Power Administration (BPA) has produced a map entitled "Current and Proposed Wind Project Interconnections to BPA Transmission Facilities" (Exhibit D.4). This map depicts the SDS Saddleback project as a proposed wind generation facility of 70 megawatts (MW). The project location is in the southeast corner of Skamania County. *Exhibit D.4.*
39. Although no party was able to identify any specific wind power projects located or proposed on National Forest land, United States Forest Service regulations do not preclude the development of wind energy facilities. Wind energy uses are governed by the Forest Service's special use regulations set forth in 36 CFR 251, subpart B. Applications for wind energy facilities are processed in accordance with 36 CFR 251.54, Forest Service Manual 2726 ("Energy Generation and Transmission"), and Forest Service Handbook 2709.11 ("Special Use Administration"). In September of 2007, the Forest Service proposed amendments to the manual and handbook to specifically address wind energy uses. *72 Federal Register 184; Exhibit D-9, page 4-29; see also Testimony of Mr. Apostol.*
40. Although under SEPA each project is reviewed on an individual basis, there appears to be a general consensus among reviewing officials that large-scale wind energy facilities generate the type of impacts that are appropriately reviewed through an environmental impact statement. *Exhibits E.3, E.5, 6.1, 6.2, 6.3, and 6.4; Testimony of Ms. Witherspoon.* A typical large-scale wind energy facility includes numerous turbines that are arranged in "strings", electrical collector and/or transmission lines connecting the turbines to each other and to the electrical grid, access roads to each of the turbines, electrical substations, and support structures. The following examples of wind energy proposals in the region illustrate the scale of development associated with large-scale wind energy facilities:

Lakeview Light & Power Project (Harvest Wind) in Klickitat County (as described in DS issued April 25, 2008):

- 55 turbines with a maximum height of 410 feet each
- New 3.1-mile long electrical transmission line
- New substation occupying two acres
- An operations building
- Approximately 20 miles of new access roads
- 98.6 acres of land impacted (46.6 acres of temporary construction impact and 52 acres of long-term impact)

Exhibit 6.3.

Pacific Wind Development Project (Juniper Canyon) in Klickitat County (as described in DS issued April 11, 2008):

- 167 turbines with a maximum height of 492 feet each
- Two new substations occupying a total of 15 acres
- Unpaved access roads connecting the turbines and other facilities

Exhibit 6.4.

Windy Point Partners, LLC Project (Windy Point II) in Klickitat County (as described in DS issued July 9, 2008):

- 61 turbines
- Possible new substation
- Approximately 17 miles of new access roads
- 76 acres of land permanently disturbed

Exhibit 6.1.

Northwest Wind Partners, LLC Project (Goodnoe II) in Klickitat County on private and DNR land (as described in DS issued July 11, 2008):

- 17 turbines (added to an existing facility)
- Electrical transmission lines
- 15 acres of land permanently disturbed

Exhibit 6.2.

Stateline Wind Project in Walla Walla County, Washington and Umatilla County, Oregon (as described in Federal Register, June 5, 2000):

- 250 to 450 245-foot-tall turbines, arranged in several strings and spaced 200 to 300 feet apart
- New substation occupying one to two acres
- Eight to ten miles of new overhead transmission lines
- New access roads
- Operations building
- Water tank

Exhibit 5.4.

41. The National Academy of Sciences prepared a report, Environmental Impacts of Wind-Energy Projects, which “provides analyses to help to understand and evaluate the positive and negative environmental effects of wind-energy facilities.” *Exhibit 4.4, Executive Summary, page 1.* The study addresses both the ecological and the human impacts of wind energy. *Exhibit 4.4, Chapters 3 and 4.* The study also includes recommendations for improving wind-energy planning and regulation. *Exhibit 4.4, Chapter 5, page 181.* With respect to planning, the recommendations of the National Academy of Sciences include the following:

- Standardized studies should be conducted before siting and construction and after construction of wind-energy facilities to evaluate the potential and realized ecological impacts of wind development. Pre-siting studies should evaluate the potential for impacts to occur and the possible cumulative impacts in the context of other sites being developed or proposed. *Exhibit 4.4, Executive Summary, page 9.*
- Regulatory reviews of individual wind-energy projects should be preceded by coordinated, anticipatory planning whenever possible.... This planning could be

implemented at scales ranging from state and regional levels to local levels. *Exhibit 4.4, Executive Summary, pages 12-13.*

Visual impacts

42. Skamania County contains unique and exceptional scenic resources, including the National Scenic Area in the southern portion of the County, Mt. St. Helens National Monument in the northwest corner of the County, and the base of Mt. Adams near the northeast corner of the County. Photographs depicting some of Skamania County's scenic resources are provided in Exhibit B.5 and Exhibit B.1 (see page 1-6). 2007 *Comprehensive Plan, pages 13 and 35; Exhibits H.3, B.5 and B.1.*
43. The Swift Subarea is one of the areas that, under the Planning Commission Recommended Draft, could be developed with large-scale wind energy facilities. The Swift Subarea Plan describes the area as "mountainous with sweeping vistas", and as being one of the gateways into the Mt. St. Helens National Volcanic Monument, "which is a popular recreation and sightseeing location bringing thousands of tourists through the Swift Subarea every year." *Swift Subarea Plan, pages 7 and 9.*
44. Based on U.S. Department of Energy National Renewable Energy Laboratory mapping, Skamania County's best wind resources are found on ridgelines that lie transect to the Columbia River Gorge. The ridges may be visible from key viewpoints. Some are near the National Scenic Area boundary. *Exhibits D.1 and D.2; Exhibit B.5; Testimony of Mr. Apostol.*
45. Wind turbines of the maximum height permitted under the Planning Commission Recommended Draft (500 feet) have the potential to dramatically alter the landscape. To put the massive scale in perspective, the tallest building in Portland is 546 feet tall. Even a turbine that is only 300 feet tall could have a blade sweep diameter comparable to the length of a Boeing 747 Jumbo Jet. *Exhibit B.5; Testimony of Mr. Apostol.*
46. The visual impact associated with wind turbines is based not only on the scale of the structures, but on the amount of land that must be cleared to accommodate them. In a forested area, the clearing required for a string of turbines can be substantial (in the example provided in Exhibit B.5, four acres per turbine). With respect to aesthetic impacts, complex, ecologically fragile, and scenic landscapes are the poorest locations for large wind turbines, and open, level, simple landscapes (such as might be found in established agricultural areas) are the best locations for large wind turbines. *Exhibit B.5; Exhibit B.4; Testimony of Mr. Apostol.*
47. Landscape aesthetics have measurable, objective standards. It is possible to map aesthetically sensitive areas and use such information when making zoning decisions. Mr. Dean Apostol, the Appellants' landscape architect, recommended mapping as one means for the County to minimize aesthetic impacts. He also recommended that the County adopt aesthetic standards. *Testimony of Mr. Apostol; Exhibit B.5.*

48. The National Forest Service (NFS) has developed a Scenery Management System for the inventory and analysis of the aesthetic values of national forests. The Scenery Management System is described in an NFS publication entitled "Landscape Aesthetics – A Handbook for Scenery Management" (Exhibit B.1). The Handbook provides a multi-step process for mapping scenic resources. The concepts and processes contained in the Handbook are not limited to national forests; some jurisdictions use the Handbook to evaluate scenic impacts. *Exhibit B.1; Testimony of Mr. Apostol.*
49. The American Wind Energy Association (AWEA) has prepared a Wind Energy Siting Handbook that provides information regarding the regulatory and environmental issues associated with the development of wind energy facilities. In its handbook, the AWEA notes that government agencies with approval authority over wind farms often require a formal assessment of the visual compatibility of a wind farm, such as the extent to which the wind farm adversely affects the aesthetics of vistas known to be important to the community. According to the AWEA, a visual impact assessment should include a characterization of baseline conditions, photo simulations, and specific investigation of the potential visual impacts based on identified changes from the baseline condition. *Exhibit D.9, pages 5-28 to 5-31; see also Exhibit B.4.*
50. The use of aesthetic criteria to control land uses is not new to Skamania County; the Columbia Gorge National Scenic Area Ordinance (Title 22 of the Skamania County Code) contains aesthetic criteria. All development applications for the National Scenic Area must include "a list of all key viewing areas from which the proposal would be visible." *SCC 22.06.060(A)(1)(e)*. The key viewing areas, which are defined by ordinance, include Cook-Underwood Road, I-84, the Columbia River, the Pacific Crest Trail, and numerous other locations. *SCC 22.04.010(91)*. Those developments visible from key viewing areas must comply with certain standards, including that the development must be "visually subordinate"²⁷ to its setting as seen from the viewing areas. *SCC 22.18.030; see also Exhibit B.4.*
51. With respect to large-scale wind energy facilities, the Planning Commission Recommended Draft does not contain standards or criteria relating to aesthetic impacts, nor does it require a visibility analysis as an application requirement. *AR- 205 to 212.*
52. Based on Geographic Information System (GIS) mapping prepared by a consultant with significant prior experience with the National Scenic Area (see Exhibit B.2), 415-foot-tall wind turbines in the southeast portion of Skamania County, but outside of the National Scenic Area, would be visible to a six-foot-tall observer from Cook-Underwood Road within the National Scenic Area and from Interstate 84 (I-84) on the Oregon side of the Gorge.²⁸ With respect to the western portion of the study area, the visibility would be

²⁷ "Visually subordinate means a description of the relative visibility of a structure or use where that structure or use does not noticeably contrast with the surrounding landscape, as viewed from a specified vantage point, generally a key viewing area. As opposed to structures that are fully screened, structures that are visually subordinate may be partially visible. They are not visually dominant in relation to their surroundings...." *SCC 22.04.010(181)*.

²⁸ Within the study area, I-84 passes through the Hood River Urban Area. *Exhibit B.3.*

greatest significant from Cook-Underwood Road (i.e., only in the northernmost portion of the study area would turbines not be visible), but not as significant from I-84 (i.e., only in the southernmost portion of the study area, adjacent to the NSA boundary, would turbines be visible). With respect to the eastern portion of the study area, which generally corresponds to the panhandle lying south of Klickitat County, turbines would be visible from I-84 at nearly all locations, and would be visible from Cook-Underwood Road at locations near the NSA boundary. *Exhibit B.3.*

53. A viewshed analysis was prepared specifically for the Saddleback project, which, if developed, would be located in the southeast portion of Skamania County. According to the submitted site plan, 44 wind turbines would be located along some north-south ridgelines located immediately north of the Scenic Area boundary.²⁹ The turbines would be visible for several miles, and would be particularly visible from areas to the west and north of the project and from the south side of the Columbia River Gorge (I-84 and environs). Views from Cook-Underwood Road would also be affected. *Exhibits 2.2a, 2.2b, and 2.2c.*

Wildlife Impacts

54. Wind turbines typically kill at least some birds and bats. Bird fatalities are generally caused by collision with the turbines or associated infrastructure. Bat fatalities can be caused by collision or by "barotrauma" from air pressure changes near the turbines.³⁰ The extent of the impact depends on factors such as the type of species present and how they use the landscape, the type of habitat that is provided (forested areas are more sensitive), and design features such as the height of the turbines. *Testimony of Mr. Smallwood; Exhibit C.14; see generally, Exhibit 4.4, Chapter 3.*
55. Klickitat County had an Avian Study Report (WEST, 2003) prepared as part of its FEIS. The purpose of this study was to "provide data on avian use of potential wind power development areas in Klickitat County." *AR-71, Appendix B, page 1.* In addition to data on avian use, the study included predictions of the number of collisions per turbine by avian group for each of six study regions. *AR-71, Appendix B, page 3.* Two of the avian sampling points were in southeast Skamania County, in the general vicinity of the panhandle that extends south of the Klickitat County line. *AR-71, Appendix B, Figure 1.* However, the study did not include collision predictions with respect to the Skamania County sites. *AR-71, Appendix B, page 3 and Figure 1.*
56. Overall, the WEST study predicted relatively low avian fatality rates throughout Klickitat County, with the highest rate of raptor fatalities west of U.S. 97 and within 1.5 miles of the Columbia River (0.058 per year per turbine), the lowest rate of raptor fatalities east of

²⁹ It should be noted that because no formal application has been submitted to the County, the site plan submitted by the Appellants might not represent the layout ultimately reviewed.

³⁰ Pulmonary barotrauma is lung damage due to the expansion of air in the lungs that is not accommodated by exhalation. In a study of bat fatalities from a wind energy facility in Alberta, Canada, more than 90 percent of the bats exhibited internal hemorrhaging and pulmonary lesions consistent with barotrauma, and approximately half showed no sign of external injury such as would be caused by direct collision. *Exhibit C.14.*

Rock Creek and greater than 1.5 miles from the Columbia River. The prediction for passerines was the same for all study areas, at 1.6 fatalities per year per turbine. The prediction for all birds combined was similar for the study areas, with annual fatalities per turbine ranging from 1.624 east of Rock Creek and more than 1.5 miles from the Columbia River and 1.725 east of Rock Creek and less than 1.5 miles from the Columbia River. *AR-71, Appendix B, Table 32.*

57. The Appellant's wildlife expert, Dr. Kenneth Smallwood, is uniquely qualified to testify on the issue of the effects of wind turbines and other types of infrastructure on wildlife. He has a Ph.D in ecology, and has served as a consultant to the California Energy Commission, conducting research on bird behavior in the Altamont Pass Wind Resources Area. He has published 56 peer-reviewed articles, including three specifically relating to Altamont Pass. *Exhibit G.4.* Mr. Smallwood submitted that the Klickitat County FEIS underestimates the potential impact of wind turbines on birds. Mr. Smallwood reviewed the avian and bat fatality rates of the Big Horn Wind Energy Project, a 133-turbine facility that was recently constructed in Klickitat County. During the environmental review process, the developer of the Big Horn facility predicted low fatality rates for birds and bats, based in part on the results of the Klickitat County FEIS.³¹ The project was then constructed and avian and bat mortality was monitored for a year. Mr. Smallwood evaluated the monitoring results, and developed estimates of actual bird and bat mortality. With respect to raptors, he found that the number of deaths was 12 to 16 times higher than the number predicted in the preliminary studies. With respect to bats, he found that the number of deaths was more than two times higher than originally predicted. *Exhibits C.19 and C.22.*
58. Although the WEST study underestimated the avian mortality associated wind power facilities, it provided some general conclusions that are relevant to the appeals:
- Avian mortality would be reduced by siting turbines where lowest avian use occurs
 - Avian mortality would be reduced by siting turbines away from riparian areas
 - Avian mortality would be reduced by siting turbines in agricultural areas rather than in native landscapes
 - Impacts to raptors would be reduced by avoiding siting turbines at the crests and edges of hilltops, where raptors use the uplift created by the cliff face. "A requirement to consider avoiding wind turbine placement within 50 meters of hilltop rim edges is recommended to be included in the Energy Overlay Comprehensive Plan."

AR-71, page 3-64.

³¹ The estimates associated with the Big Horn facility correlate fairly closely with the estimates contained in the Klickitat County FEIS. In the Avian Study Report, WEST estimated that the number of raptor deaths per turbine per year would range from 0.022 to 0.058 depending on geographic location. The preliminary Big Horn studies estimated that the number of raptors killed per year by the entire project would be three to four, or 0.022 to 0.03 raptors per turbine. *AR-71, Appendix B, Table 32; Exhibit C-19.*

59. Skamania County is predominately forested. Forested areas support more special-status species that would be vulnerable to turbine collision. *Exhibit C.21, page 15; Testimony of Mr. Smallwood.*
60. Skamania County's planning documents acknowledge that at least portions of the County provide habitat for protected species. For example, according to the Swift Subarea Plan, the Swift area may contain or provide habitat for the following bird and bat species that are federally listed as Endangered, Threatened, or Species of Concern: Bald Eagle, Northern Spotted Owl, Pacific Townsend's Big-Eared Bat, and Peregrine Falcon. *Swift Subarea Plan, page 8.* No evidence was presented that the County considered the presence of protected species when determining which zones should allow large-scale wind energy development.
61. Turbine collision is not the only impact to wildlife associated with large-scale wind energy facilities. The infrastructure associated with wind turbine development (roads, transmission lines) has potential to adversely affect wildlife by fragmenting habitat. *Exhibit 4.4, Chapter 3, pages 105-108.* The Planning Commission Recommended Draft and proposed zoning map do not restrict energy uses to areas where infrastructure is available or could be developed with minimal environmental impact. Although energy uses such as large-scale wind energy facilities would be conditionally allowed in substantial portions of the County, the existing road and electricity infrastructure is extremely limited or nonexistent in some areas. *Exhibit H.4; County Exhibit 2.*
62. Pine Creek, located within the Swift Subarea, provides spawning grounds for bull trout, a federally listed species. The U.S. Fish and Wildlife Service considers the Pine Creek bull trout population to be "especially important in achieving recovery for this species." *Exhibit C.17; Swift Subarea Plan, page 8.* Pine Creek is "especially vulnerable to land management activities on account of its steep slopes and highly erosive volcanic soils." *Exhibit C.17, page 2; see also Exhibit C.16.*
63. There are map-based tools that can be used on a countywide level to determine where energy facilities and other development would minimize impacts to wildlife. For example, Mr. Smallwood has developed an indicators approach for assessing the impacts of wind power development on bird species at any location in California. *Exhibit C-21, pages 4-5.*
64. The Planning Commission Recommended Draft contains measures to protect wildlife from impacts associated with large-scale wind energy development. These include the following (paraphrased):
- Take "reasonable efforts" to preserve existing trees, vegetation, and water resources
 - Flag construction limits
 - Design wind energy structures to discourage bird nesting, by using tubular rather than lattice supports, avoiding use of external ladders and platforms, avoiding use of guy wires, and using bird deterrent devices on guy wires

- Control weeds to avoid creating raptor habitat
- Use anti-perching devices on transmission lines
- Set back turbines at least 2,500 feet from known nesting sites of state and/or federally threatened or endangered raptor species and at least 1,500 feet from wetlands identified on the National Wetlands Inventory maps
- Monitor raptor nest activity prior to commencing construction
- Survey avian use of the site prior to finalizing site design
- Remove animal carcasses to avoid attracting foragers
- Should consult with WDFW before making final siting decisions
- Restore temporarily disturbed areas

AR-209 to 210. The measures do not include minimum setbacks from ridgelines.³²

65. Although all development within the County would be subject to the critical areas code, the County did not present any evidence that it evaluated the presence of critical areas prior to establishing zoning districts or allowed uses within the zones. *Testimony of Ms. Witherspoon.*
66. The 2007 Comprehensive Plan contains policies that support protecting wildlife on a planning level rather than on a project-specific basis. These include the following:

Policy E.4.2: Develop strategies for preserving, protecting or restoring important habitats and corridors, particularly if they are at risk of significant degradation. Some strategies may include ... promoting land use plans and development that avoid impacts on habitat....

Policy E.4.4: Coordinate with other jurisdictions and agencies to protect environmentally critical habitats, particularly ecosystems and watersheds that span jurisdictional boundaries.

2007 Comprehensive Plan, page 46.

Air quality

67. According to the Klickitat County FEIS, biomass involves combustion of an organic fuel (such as wood), and consequently the emissions from such facilities include nitrogen oxides, carbon monoxide, particulate matter, sulfur dioxide, greenhouse gases, and toxic air pollutants (i.e., toluene, formaldehyde, etc.). *AR-71, page 3-9.* The FEIS notes that both biomass and natural gas-fired plants could affect visibility within the National Scenic Area, even though the Scenic Area is not within the overlay, and recommends the use of state-of-the-art air pollution technologies to mitigate impacts. *AR-71, page 1-7.*

³² The County Critical Areas Ordinance would also not require a minimum setback from the edge of a bluff or mountain ridge. Development on slopes steep enough to be classified as a Landslide Hazard Area requires preparation of a geotechnical report. No minimum setback is specified. *SCC 21A.06.020.*

68. The United States Forest Service (USFS) monitors air quality within the Scenic Area, as well as within national forests in the Pacific Northwest region, through chemical analysis of lichen tissue. Based on study conducted between 1993 and 2001, the USFS found that mean concentrations of sulfur, nitrogen, lead, cadmium, copper, and zinc within the Scenic Area were significantly higher than means within the national forests, and were comparable to levels found within urban areas. *Exhibit A.3*. Cultural resources such as rock art might be adversely affected by the air pollution. *Exhibits A.1 and A.5*. Other ecological effects associated with nitrogen deposition are described in *Exhibit A.4*. *Exhibit A.4*.
69. The visibility within the Columbia Gorge National Scenic Area is poor compared to the conditions within many national parks and scenic areas in the western U.S., and is comparable to conditions within locations in California and in northwest Washington. *Exhibit A.1, pages 3 and 4*.
70. The Planning Commission Recommended Draft includes the following air quality/pollution control standard relating to bio-energy facilities: "All applicable air emission permits shall be obtained and all conditions complied with." *AR-214*.

Noise/Health

71. The Planning Commission Recommended Draft contains the following standards with respect to the noise generated by large-scale wind energy facilities:
- i. The owner/operator shall operate the project in compliance with applicable Washington State Environmental Noise Levels, Chapter 173-60 WAC.
 - ii. Applicants shall provide documentation of expected noise generation levels.

AR-207. The Washington noise standards are based on the land use classification of both the noise source and the noise receiver. When the receiver is a residential property, the daytime noise limit ranges from 55 to 60 dBA³³ depending on the classification of the noise source. At night, the maximum ranges from 45 to 50 dBA. *WAC 173-60-040*.

72. Mr. Richard James, an acoustical engineer, provided credible testimony that wind turbines generate a type of noise that is not adequately measured by the dBA scale used in the Washington noise standards. The dBA scale is designed to detect noises audible to humans. Wind turbines generate low-frequency noise (20 Hz 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). *Testimony of Mr. James*.
73. Wind turbines have unique sound characteristics due to the interaction of the blades with the air around the towers. As described in one of the articles submitted by the Appellants:

³³ "dBA" means the sound pressure level in decibels measured using the "A" weighting network on a sound level meter." *WAC 173-60-020*.

“The interaction of the blades with air turbulences around the towers create low frequency and infrasound components, which modulate the broadband noise³⁴ and create fluctuations of sound level. The low frequency fluctuations of the noise is described as ‘swishing’ or ‘whooshing’ sound, creating an additional disturbance due to the periodic and rhythmic characteristic.” *Exhibit 1.12, page 11*. Mountainous conditions can exacerbate the noise effects of wind turbines. *Testimony of Mr. James*.

74. Mr. James recommended a minimum distance of 1.2 miles between turbines and residences, based on health effects research conducted by Dr. Nina Pierpont. *Testimony of Mr. James*.
75. Dr. Pierpont, a pediatrician, interviewed by telephone 23 members of ten families, and through those interviews obtained information on a total of 37 people (she obtained information on young children from their parents). The ten families were not from the same town or situated around the same wind farm; some families lived in Canada and others lived in various Western European countries. Only one family lived in the United States. The families lived distances ranging from 0.19 mile to 0.93 mile from minimum 328-foot-tall, modern (i.e., constructed 2004 or later) wind turbines. Six of the ten families lived less than one-half mile from the turbines. Based on the interviews, Dr. Pierpont found that most study members experienced sleep disturbance, and at least half experienced a variety of other systems such as headaches, dizziness, and memory problems, which symptoms improved when the member was away from the turbines.³⁵ Dr. Pierpont calls the constellation of symptoms “Wind Turbine Syndrome.” Her theory is that the low-frequency noise or vibration associated with wind turbines stimulates receptors for the balance system in a discordant fashion. Dr. Pierpont recommends that wind turbines be set back a distance of at least 1.2 miles from residences.³⁶ *Exhibit 8.3 (see in particular, pages 8, 12, 20, 22, 23, 26, 60, and 61)*.
76. Dr. Pierpont’s research has several limitations. The study was based on an extremely small number of families, and the only families that were included in the study were those in which a member reported severe effects and the family considered the problem to be serious enough to take action to reduce turbine exposure (such as moving to a new location). Dr. Pierpont did not physically examine any of the participants; the information obtained was based on medical histories taken by telephone. *Exhibit 8.3, page 18; Testimony of Dr. Pierpont*. The study was not epidemiological in nature; it does not show how prevalent any of the symptoms were within the larger community. Individuals outside of the selected families who lived near turbines but did not experience symptoms were not interviewed. *Testimony of Dr. Pierpont; Exhibit 8.3, page 51*. Wind Turbine

³⁴ “Broadband noise is characterized by a continuous distribution of sound pressure with frequencies greater than 100 Hz.” *Exhibit 1.12, page 4*.

³⁵ Mr. Banks objected to the hearsay nature of Dr. Pierpont’s testimony on this issue.

³⁶ All of Dr. Pierpont’s subjects lived less than a mile from wind turbines. The recommendation of 1.2 miles is based on surveys conducted by Robyn Phipps of New Zealand. *Exhibit 8.3, page 8*. Robyn Phipps is not a medical doctor. *Exhibit 8.1, page 2*.

Syndrome (or the same group of symptoms) is not described in any medical journal or other professional literature.³⁷ *Exhibit 8.3, page 15; Testimony of Dr. Pierpont.*

77. The National Academy of Sciences does not consider noise produced by wind turbines to be a “major concern” for people living more than a half-mile from the turbines. *Exhibit 4.4, Chapter 4, page 159.* However, it notes that “industry standards ... for assessing and documenting noise levels emitted may not be adequate for nighttime conditions and projects in mountainous terrain. This work on understanding the effect of atmospheric stability conditions and on site-specific terrain conditions and their effects on noise needs to be accounted for in noise standards. In addition, studies on human sensitivity to very low frequencies are recommended.” *Exhibit 4.4, Chapter 4, page 176.*

Shadow Flicker

78. Shadow flicker is the phenomenon in which the blades of a wind turbine, as they rotate in sunny conditions, “cast moving shadows on the ground resulting in alternating changes in light intensity.” *Exhibit 4.4, Chapter 4, page 160.*
79. According to one article, for individuals with photosensitive epilepsy (one in 4,000 people), “flicker from turbines that interrupt or reflect sunlight at frequencies greater than 3 Hz poses a substantial risk of inducing photosensitive seizures.” *Exhibit 2.1, page 4.* However, modern large wind turbines do not generate shadow flicker at frequencies greater than 3 Hz. *Exhibit 4.4, Chapter 4, page 161 (“Flicker frequency due to a turbine is on the order of the rotor frequency (i.e., 0.6 – 1.0 Hz)”); see also Exhibit 2.1, page 4.*
80. Although shadow flicker might still be considered annoying even if not an actual health hazard, shadow flicker only occurs during a limited portion of the day, and only during certain conditions. As described in the National Academy of Sciences publication on wind-energy projects, “Even in the worst situations, shadow flicker only lasts for a short time each day – rarely more than half an hour. Moreover, flicker is observed only for a few weeks in the winter season.” *Exhibit 4.4, Chapter 4, page 161.*
81. Shadow Flicker can be easily modeled on a project-specific basis, and shadow flicker modeling was performed for the Wild Horse Wind Power Project in Kittitas County. *Exhibit 4.4, Chapter 4, page 161.* As described in the FEIS for the project, the shadow flicker frequency for each turbine would be less than one-fifth the frequency reported to trigger seizures, and the project would not have a shadow flicker impact on residences due to distance and intervening terrain. *Exhibit 5.2, page 3.15-1.* With respect to an off-site alternative location with potential shadow flicker impacts (potential exposure ranging from six minutes to two hours), micro-siting of some of the turbines was identified as a potential mitigation measure. *Exhibit 5.2, page 3.15-2.*

³⁷ “Other than articles on the internet, there is currently no published research on wind turbine associated symptoms.” *Exhibit 8.3, page 15.*

CONCLUSIONS

Jurisdiction:

The Hearing Examiner is granted authority to conduct hearings and make decisions on appeals of State Environmental Policy Act (SEPA) threshold determinations pursuant to Skamania County Code (SCC) 2.80.060(A)(13).

Standards for Review of a SEPA Threshold Determination:

SEPA requires an Environmental Impact Statement (EIS) to be prepared "on proposals for legislation and other major actions having a probable significant, adverse environmental impact." RCW 43.21C.031.

- "Significant" as used in SEPA means a reasonable likelihood of more than a moderate adverse impact on environmental policy. Significance involves context and intensity and does not lend itself to a formula or a quantifiable test. *WAC 197-11-794*. Several marginal impacts when considered together may result in a significant adverse impact. *WAC 197-11-330(3)(c)*.
- "Probable" as used in SEPA means likely or reasonably likely to occur. Probable is used to distinguish likely impacts from those that merely have a possibility of occurring, but are remote or speculative. *WAC 197-111-782*.

In *King County v. Boundary Review Board*, 122 Wn.2d 648 (1993), the Washington Supreme Court clarified that the term "probable" does not mean that an impact must be "inevitable" before an EIS may be required. In that case, the City of Black Diamond had issued a DNS for a proposed annexation of unincorporated King County land. The land was "largely uninhabited" (*Id.* at 656), and while some of the owners identified preferred future land uses, none presented a formal development proposal to the City. In response to argument that any future development of the property is too speculative to warrant full environmental review, the Court held, "a proposed action is not insulated from full environmental review simply because there are no existing specific proposals to develop the land in question or because there are no immediate land use changes which will flow from the proposed action. Instead, an EIS should be prepared where the responsible agency determines that significant adverse environmental impacts are probable following the government action." *Id.* at 664. The Court explained its reasoning as follows:

One of SEPA's purposes is to provide consideration of environmental factors at the earliest possible stage to allow decisions to be based on complete disclosure of environmental consequences. Decision-making based on complete disclosure would be thwarted if full environmental review could be evaded simply because no land-use changes would occur as a direct result of a proposed government action. Even a boundary change, like the one in this case, may begin a process of government action which can "snowball" and acquire virtually unstoppable administrative inertia.

Id.

In determining an impact's significance, the responsible official must take into account that:

- (a). The same proposal may have a significant adverse impact in one location but not in another location;
- (b). The absolute quantitative effects of a proposal are also important, and may result in a significant adverse impact regardless of the nature of the existing environment;
- (c). Several marginal impacts when considered together may result in a significant adverse impact; For some proposals, it may be impossible to forecast the environmental impacts with precision, often because some variables cannot be predicted or values cannot be quantified.
- (d). A proposal may to a significant degree:
 - i. Adversely 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;
 - ii. Adversely affect endangered or threatened species or their habitat;
 - iii. Conflict with local, state, or federal laws or requirements for the protection of the environment; and
 - iv. Establish a precedent for future actions with significant effects, involves unique and unknown risks to the environment, or may affect public health or safety.

WAC 197-11-330(3).

A threshold determination “shall not balance whether the beneficial aspects of a proposal outweigh its adverse impacts, but rather, shall consider whether a proposal has any probable significant adverse environmental impacts.” *WAC 197-11-330(5)*. Thus, in *King County v. Boundary Review Board*, the Court rejected the argument that an EIS need not be prepared for the annexation proposal because development could also take place under county jurisdiction, stating, “The specter of adverse environmental effects in the absence of government action ... is itself not a justification for evading full environmental review.” *King County v. Boundary Review Board*, 122 Wn.2d at 666. Even proposals designed to improve the environment might have significant adverse environmental impacts. *WAC 197-11-330(5)*.

The lead agency must make its threshold determination “based upon information reasonably sufficient to evaluate the environmental impact of a proposal.” *WAC 197-11-335*.

If a DNS is issued, the agency has the burden of demonstrating “that environmental factors were considered in a manner sufficient to be a prima facie compliance with the procedural dictates of SEPA.” *Lassila v. City of Wenatchee*, 89 Wn.2d 804, 814 (1978). To uphold the DNS, the reviewing body “must be presented with a record sufficient to demonstrate that ACTUAL consideration was given to the environmental impact of the proposed action or recommendation.” *Id.* (*emphasis in original*).

Clear error is the standard of review applicable to substantive decisions under SEPA.

Cougar Mt. Assocs. v. King County, 111 Wn.2d 742, 747, 765 P.2d 264 (1988). The determination by the governmental agency is clearly erroneous only if the reviewing tribunal is left with "the definite and firm conviction that a mistake has been committed." *Id.* at 747 (quoting *Polygon Corp. v. Seattle*, 90 Wn.2d 59, 69, 578 P.2d 1309 (1978)). In deciding this appeal, the Hearing Examiner must accord the County's SEPA determination "substantial weight." *RCW 43.21C.090*. The burden of proof is on the Appellants to show that the threshold determination was clearly erroneous.

Conclusions Based on Findings:

1. The County has not demonstrated that it has considered environmental factors to the extent required by SEPA. Most significantly, the County did not consider County-specific environmental studies prior to developing the zoning text and map amendments and did not consider the types of development that might result from the amendments. The County was not able to articulate a strong rationale for some the proposed alternative energy development standards, even though such standards have the potential to create environmental impacts. *Findings 12, 27, 28, 29, and 65.*
2. The Appellants have demonstrated, consistent with *King County v. Boundary Review Board*, that development with significant adverse environmental impacts is probable after adoption of the proposed zoning amendments.
 - A. The zoning amendments would facilitate the development of large-scale wind energy and other alternative energy facilities on or near lands known for their unique scenic resources and habitat value. Some of the alternative energy uses are not identified in the Comprehensive Plan or the existing zoning code. *Findings 3, 11, 12, 13, 14, 16, 18, 42, and 43.*
 - B. The potential significant, adverse environmental impacts of large-scale wind energy facilities are many and well documented. The Hearing Examiner finds most compelling the evidence regarding aesthetic and wildlife impacts. These impacts can and should be evaluated on a planning level rather than when individual projects are proposed. With full environmental analysis, the County might decide to refine the zoning map or development regulations to avoid environmental impacts. *Findings 40 – 66.*
 - C. Although based on the evidence submitted the Hearing Examiner is not convinced that an adverse impact to public health is probable if wind turbines are allowed to be sited less than 1.2 miles from residences, wind turbines do generate noise and the impact should be evaluated prior to adopting a setback standard. *Findings 71-77.*
 - D. The significant, adverse environmental impacts associated with wind energy facilities are not ameliorated by the conditional use permit requirement. Under the proposed zoning amendments, a conditional use cannot be denied. *Finding 17.*

- E. The significant, adverse environmental impacts associated with wind energy facilities would not be fully addressed by project-specific environmental impact statements. Because project proposals are tied to specific parcels of land, the ability to consider alternative locations that might reduce environmental impacts is limited.
- F. Development of wind energy facilities is probable after the zoning action due to the County's unique wind resources, the County Commissioners' expressed interest in and support of alternative energy development, and the fact that a developer has already approached the County with a potential wind power project. *Findings 31-38.*
3. The significance of the County action is not diminished by the fact that only a small fraction of the County located outside of the scenic area and the incorporated areas is privately owned. Even five percent of the County's total acreage (an amount less than the actual private ownership) is a significant amount of land.³⁸ Further, no evidence or legal authority was presented to suggest that the County's regulations would not apply to the 60,000 acres of land owned by the State of Washington. Klickitat County, for example, is processing permit applications for wind energy facilities located on Washington DNR land. *Finding 40.* Finally, even if the County does not have jurisdiction to regulate public lands within its boundaries³⁹, the County's regulations might be influential to state and federal decision makers when evaluating requests for alternative energy facilities. For example, 36 CFR 251.56 states that special use approvals on National Forest land "may be conditioned to require State, county, or other Federal agency licenses, permits, certificates, or other approval documents, such as a Federal Communication Commission license, a Federal Energy Regulatory Commission license, a State water right, or a county building permit." 36 CFR 251.56(a)(2).
4. Contrary to the County's assertion, the proposed wind energy regulations would not be preempted by the Washington Energy Facilities Site Locations Act (EFSLA) (Chapter 80.50 RCW) automatically. The EFSLA establishes a certification process that is mandatory for development of certain types of energy facilities (e.g., natural gas transmission pipelines in excess of 14 inches in diameter and 15 miles in length; stationary thermal power plants with generating capacity of 350,000 KW or more; facilities capable of processing more than 25,000 barrels per day of petroleum into refined products) but that is voluntary for the development of energy facilities that exclusively use alternative energy resources, such as wind, solar, geothermal, and biomass energy. *RCW 80.50.060; RCW 80.50.020(7), (11), (15), and (18).* When certification under the EFSLA is sought, the Energy Facility Site Evaluation Council holds a public hearing "to determine whether or not the proposed site is consistent and in compliance with city, county, or regional land use plans or zoning ordinances." *RCW*

³⁸ In *Ullock v. Bremerton*, 17 Wn. App. 573 (1977) the court reviewed an EIS prepared for a rezone of five acres.

³⁹ In *South Dakota Mining Assoc. v. Lawrence Co.*, 155 F.3d 1005 (1998), the court determined that federal laws allowing mining on National Forest land preempted a county ordinance prohibiting mining.

80.50.090. If the site is not consistent with the local ordinances, then the Council must determine whether to recommend to the governor that the state preempt the local ordinances. *WAC 463-28-060*. Even if the Council recommends preemption, it must include conditions in the draft certification agreement that considers local interests and the purposes of the ordinances that are preempted. *WAC 463-28-070*. The governor ultimately decides whether to approve the certification agreement. *RCW 80.50.100*. Because state preemption must be applied for, is discretionary, and is granted only after consideration of local ordinances, RCW 80.50 does not provide a rationale for avoiding full environmental review of the County's alternative energy regulations.

5. The Appellants have met their burden of proving that the County's issuance of a DNS was in error.

DECISION

Based upon the preceding Findings and Conclusions, the appeals of the October 8, 2008 Determination of Nonsignificance issued for the County's proposed zoning text and map amendments are granted. The Determination of Nonsignificance is reversed, and remanded to the County for preparation of an Environmental Impact Statement for the zoning text and map amendments.

Dated February 19, 2009.

Towell Rice Taylor
Hearing Examiners for Skamania County

By:


LeAnna C. Towell

**Appendix A
Exhibit List**

County Exhibits

Note: Citations to County Exhibit 1 items are to the "Administrative Record" (AR) page number only.

1. Record for Skamania County SEPA on Planning Commission Recommended Draft Zoning Text and Map Revisions and Minor Comprehensive Plan Map Amendments, File No. SEP-08-35 (April, 2008 to November 3, 2008), which includes the following:

Date	Description	Pages
11/3/08	Pre-Hearing Order from LeAnna Towell, Hearing Examiner	1-2
10/22/08	Notice Administrative Appeal for SEP-08-35 from Reeves, Kahn, & Hennessy, Attorneys for Friends of the Gorge	3-23
10/22/08	Certificate of Mailing from Nathan J. Baker, Staff Attorney for Friends of the Gorge	24-28
10/22/08	Notice of Administrative Appeal and Certificate of Mailing for SEP-08-35 from Save Our Scenic Area, Richard Aramburu, Attorney	29-42
10/20/08	Email from Bonnie Anderson, Skamania County Planning Department - Administrative Assistant, to Nathan Baker	43-44
10/14/08	Affidavit of Publication for the Determination of Non-Significance SEP-08-35, Skamania County Pioneer	45
10/8/08	Determination of Non-Significance with no Checklist	46-46A
10/8/08	Determination of Non-Significance with Checklist	47
10/7/08	Certificate of Mailing for SEP-08-35 by Bonnie Anderson	64-68
10/2/08	Publication notice for SEP-08-35 to Skamania County Pioneer	69-70
	Compact Disc - Klickitat County Energy Overlay Zone Draft EIS and Final EIS; Klickitat County Energy Overlay Zone - FEIS Documents Incorporated by Reference 1 of 2; Klickitat County Energy Overlay Zone - FEIS Documents Incorporated by Reference 2 of 2	71
9/2/08	Skamania County Code Title 21 - Zoning - Planning Commissions Recommended Draft and Minor Comprehensive Plan Map Amendments	72-232
8/2008	Research for SEPA Determination and Zoning Ordinance (WA EFSEC Order on Remand, No. 831)	233-237
5/2008	Research for SEPA Determination Zoning Ordinance (SEPA checklists from other jurisdictions)	238-333
4/2008	Research for SEPA Determination Zoning Ordinance (checklists, WA noise standards, WDFW Windpower Guidelines)	334-359

2. Full-size color map entitled "PC Recommended Draft Skamania County Zoning Map"

Appellant Save our Scenic Area Exhibits

Note: Citations to SOSA Exhibits are to the numbers as listed. Exhibits 8.1, 8.2 and 8.3 were admitted into the record but not assigned exhibit numbers at the hearing. Numbers are assigned for the first time here.

1.1 NINA PIERPONT, M.D., Ph.D., FAAP
Curriculum Vitae

Author: Nina Pierpont, M.D., Ph.D., FAAP
Dated July 5, 2006

1.2 PIERPONT LETTER TO SCHWARTZ, GENOUILLE, FRANCE

Author: Nina Pierpont, M.D., Ph.D., FAAP
Dated February 23, 2008

1.3 NOISY WIND AND HOT AIR

Author: Nina Pierpont, M.D., Ph.D., FAAP
Dated May 7, 2005
Malone Telegram (New York)

1.4 HEALTH EFFECTS OF WIND TURBINE NOISE

Author: Nina Pierpont, M.D., Ph.D., FAAP
Dated March 2, 2006
www.ninapierpont.com

1.5 WIND TURBINE SYNDROME

Testimony before the New York State Legislature Energy Committee explaining Wind Turbine Syndrome and wind turbine siting.

Author: Nina Pierpont, M.D., Ph.D., FAAP
Dated March 7, 2006

1.6 LOCATION, LOCATION, LOCATION

Author: The Noise Association, UK Noise Association, 2nd Floor, Broken Wharf House, 2 Broken Wharf, London EC4V 3DT, U.K.

Dated July 2006
www.ukna.org.uk

1.7 NOISE RADIATION FROM WIND TURBINES INSTALLED NEAR HOMES: EFFECTS ON HEALTH

Authors: Barbara J. Frey, BA, MA, and Peter J. Hadden, BSc, FRICS

Dated February 2007
www.windturbinenoisehealthhumanrights.com

1.8 EFFECTS OF THE WIND PROFILE AT NIGHT ON WIND TURBINE SOUND

Author: G.P. van den Berg

Dated 2003 (Submitted to Elsevier Ltd Jan 2003, accepted Sept 2003)

www.elsevier.com/locate/jsvi (Journal of Sound and Vibration); www.sciencedirect.com,
g.p.van.den.berg@phys.rug.nl

1.9 INDUSTRIAL WIND TURBINES, INFRASOUND AND VIBRO-ACOUSTIC DISEASE (VAD)

Authors: Professor Mariana Alves-Pereira, School of Health Sciences, Lusofona University, Portugal and Dept. of Environmental Sciences and Engineering, New University of Lisbon, Portugal; Nuno Castelo Branco, MD, Surgical Pathologist and President, Scientific Board, Center for Human Performance.

Dated May 31, 2007
vibroacoustic.disease@gmail.com

1.10 INFRASOUND AND LOW FREQUENCY NOISE DOSE RESPONSES: CONTRIBUTIONS

Authors: Professor Mariana Alves-Pereira, School of Health Sciences, Lusofona University, Portugal and Dept. of Environmental Sciences and Engineering, New University of Lisbon, Portugal; Nuno Castelo Branco, MD, Surgical Pathologist and President, Scientific Board, Center for Human Performance.

Dated 28-31 August 2007
INTER-NOISE 2007, Istanbul, Turkey (International conference)

1.11 WHO HAS HEARD THE WIND

Author: Jules Smith
Dated 2006 (Copyright LightningStrike Studios)
www.lightningstrikestudios.com

1.12 WIND FARM NOISE AND REGULATIONS IN THE EASTERN UNITED STATES from the
Second International Meeting on Wind Turbine Noise, Lyon, France, 2007

Author(s): Hilkat Soysal and Oguz Soysal, Department of Physics and Engineering, Frostburg State
University, Frostburg MD
Dated September 20-21, 2007
renewable@frostburg.edu

1.13 WIND TURBINES, NOISE AND HEALTH

Author(s): Dr. Amanda Harry, M.B., Ch.B, P.G.Dip.E.N.T.
Dated February 2007

2.1 WIND TURBINES, FLICKER, AND PHOTOSENSITIVE EPILEPSY: CHARACTERIZING THE
FLASHING THAT MAY PRECIPITATE SEIZURES AND OPTIMIZING GUIDELINES TO PREVENT
THEM

Author(s): Graham Harding, Neurosciences Institute Aston University, Birmingham, U.K.; Pamela
Harding, Neurosciences Institute Aston University; and Arnold Wilkins, Department of Psychology,
University of Essex, Colchester, U.K.
Dated February 2008
Blackwell Publishing, Inc. International League Against Epilepsy.

2.2 Scenic Analysis

- a. Diagram showing wind turbine placement.
- b. Color diagram showing wind turbine placement and visibility from the National Scenic Area.
- c. Visual simulation based on the turbine location map provided by SDS Lumber and the actual
turbine height specification, demonstrating the visual impacts and providing help in understanding
the visibility of project.

2.3 Topographical Map of Skamania County area

3.1 FRANCE'S NATIONAL ACADEMY OF MEDICINE CALLS FOR 1.5 KM SETBACK FOR ALL
INDUSTRIAL WIND TURBINES FROM RESIDENCES

Translation of publication notice for "Repercussions of wind turbine operations on human health"
Author: Dr. Chantal Gueniot
Dated March 29, 2006

3.2 HEALTH, HAZARD AND QUALITY OF LIFE NEAR WIND POWER INSTALLATIONS; HOW
CLOSE IS TOO CLOSE?

Author: Nina Pierpont, MD, PhD
Dated March 2, 2005
Malone Telegram, New York

4.1 WIND TURBINE SYNDROME: NOISE, SHADOW, FLICKER AND HEALTH

Author: Nina Pierpont, M.D., Ph.D., FAAP
Dated August 1, 2006

4.2 SUMMARY REPORT: LITERATURE SEARCH ON THE POTENTIAL HEALTH IMPACTS
ASSOCIATED WITH WIND-TO-ENERGY TURBINE OPERATIONS

Author: Robert C. Frey, Ph.D, Chief, Health Assessment Section; John R. Kollman, R.S., Toxicologist,
Health Assessment Section, Ohio Health Department.

Dated March, 2008

Health Assessment Section, Bureau of Environmental Health, Ohio Department of Health

4.3 IMPACT OF WIND FARMS ON PUBLIC HEALTH

Author: Kansas Legislative Research Department

Dated July 18, 2007 (Revised)

kslegres@klrd.state.ks.us, <http://www.kslegislature.org/klrd>

4.4 ENVIRONMENTAL IMPACTS OF WIND-ENERGY PROJECTS

Author: The National Academy of Sciences Committee on Environmental Impacts of Wind-Energy Projects (Board on Environmental Studies and Toxicology).

Dated 2007

National Academies Press, 500 Fifth Street, NW, Washington, D.C. 20001; www.nap.edu,
http://books.nap.edu/catalog.php?record_id=11935

4.5 PROVISIONS OF THE PROPOSED STATE ENERGY PLAN ON INDUSTRIAL WIND-ENERGY DEVELOPMENT

Letter from Congressman Alan B. Mollohan, 1st Dist., WV, to the director of the West Virginia Division of Energy.

Author: Congressman Alan B. Mollohan, First District, West Virginia

Dated October 31, 2007

Alan B. Mollohan, Congress of the United States, House of Representatives, 2302 Rayburn HOB, Washington DC 20515-4801

5.1 KITTITAS VALLEY WIND POWER PROJECT – FEIS Table of Contents¹ at

<http://www.efsec.wa.gov/kittitaswind/FEIS/kvfeis.shtml>

5.2 WILD HORSE WIND POWER PROJECT - EIS at

<http://www.efsec.wa.gov/wildhorse/feis/whfeis.shtml>

5.3 DESERT CLAIM WIND POWER PROJECT - FEIS Table of Contents at

<http://www.efsec.wa.gov/Desert%20Claim/FEIS/FEIS.shtml>²

5.4 STATELINE WIND ENERGY PROJECT – Federal Register: June 5, 2000 (Volume 65, Number 108)

5.5 KLUCKITAT COUNTY ENERGY OVERLAY ZONE - FEIS available at

<http://www.klickitatcounty.org/planning/ContentROne.asp?fContentIdSelected=2119658607&fCategoryIdSelected=948111261>

6.1 WINDY POINT II WIND PROJECT - DS within scoping notice of 7/9/08 at

<http://www.klickitatcounty.org/planning/FilesHtml/WPSN.pdf>

6.2 GOODNOE II WIND PROJECT - DS within scoping notice at

<http://www.klickitatcounty.org/planning/FilesHtml/Goodnoe%20II%20Wind%20Project%20Scoping%20Notice.pdf>

6.3 HARVEST WIND - DS within scoping notice of 4/24/08 at

<http://www.klickitatcounty.org/Planning/ContentROne.asp?fContentIdSelected=549483787&fCategoryIdSelected=948111261>

¹ Appellant SOSA offered the entire EIS but only provided the Table of Contents at the hearing. The Hearing Examiner did not visit the website and did not consider the remainder of the document.

² See Footnote 1.

6.4 JUNIPER CANYON - DS within scoping notice at
<http://www.klickitatcounty.org/planning/FilesHtml/Juniper%20Canyon%20Scoping%20Notice.pdf>

7.1 Resume of Rick James, E-Coustics Solutions

8.1 Evidence of Dr. Robyn Phipps, In the Matter of the Moturimu Wind Farm, March 2007
<http://www.wind-watch.org/documents/writ of prohibition-content/uploads/hipps-moturimutestimony.pdf>

8.2 Visual and Noise Effects Reported by Residents Living Close to Manawatu Wind Farms: Preliminary Survey Results, by Dr. Robyn Phipps et al.

8.3 Wind Turbine Syndrom, A Report on a Natural Experiment, by Nina Pierpont, MD, PhD (10-17-08 draft)

Appellants Friends of the Columbia Gorge et al. Exhibits

Note: Citations to these exhibits are to the letter/number combinations as listed. The "F" series documents are admitted for standing purposes only.

Ex.	Document Description	Date
A.1	Air Quality Issues in the Columbia River Gorge National Scenic Area, USDA Forest Service, Pacific Northwest Region, Air Resource Management Program, available at http://www.fs.fed.us/r6/qa/gorgis.pdf	Apr. 1999
A.2	Excerpts from the Management Plan for the Columbia River Gorge National Scenic Area pertaining to the protection and enhancement of air quality, available at http://www.gorgecommission.org/managementplan.cfm	Adopted May 2000
A.3	Air Quality Biomonitoring in the Columbia River Gorge National Scenic Area by the US Forest Service, 1993-2001, Geiser, L. H. and B. Bachman, USDA Forest Service, Pacific Northwest Region, Air Resource Management Program, available at http://ocid.nacse.org/airlichenPDF/AQ_CRGNSA.pdf	Sep. 27, 2001
A.4	Ecological effects of nitrogen deposition in the western United States, Fenn, M.E., Baron, J.S., Allen, E.B., et al. <i>BioScience</i> , vol. 53, no. 4, pp. 404-20, available at http://www.cdphe.state.co.us/ap/rmnp/exhibith.pdf	Apr. 2003
A.5	Winter Deposition of Nitrogen and Sulfur in the Eastern Columbia River Gorge National Scenic Area, Mark E. Fenn and Timothy J. Blubaugh, USDA Forest Service, Pacific Southwest Research Station, available at http://www.fs.fed.us/psw/programs/atdep/col_river/crgnsa_final_report.pdf	Feb. 3, 2005
B.1	Landscape Aesthetics: A Handbook for Scenery Management, Forest Service, USDA (appendices omitted from exhibit), available at http://www.urbanforestrysouth.org/resources/library/landscape-aesthetics-ah-701-complete-document/at_download/file_name	Dec. 1995
B.2	Declaration of Margo Blosser	Sep. 2, 2008
B.3	Maps of wind turbine locations in southeast Skamania County visible from I-84 and Cook Underwood Road, Gorge GIS	Sep. 2, 2008
B.4	Declaration of Dean Apostol	Jan. 14, 2009
B.5	"Skamania County Alternative Energy Code Project" PowerPoint Presentation, Dean Apostol	Jan. 14, 2009
C.1	Development of a practical modeling framework for estimating the impact of wind technology on bird populations, Morrison, M.L. and K.H. Pollock, National Renewable Energy Laboratory, Golden, Colorado, available at http://www.nrel.gov/wind/pdfs/23088.pdf	Nov. 1997
C.2	Avian risk and fatality protocol, Morrison, M.L. and K.H. Pollock, National Renewable Energy Laboratory, Golden, Colorado, available at	1998

	http://www.nrel.gov/docs/fy99osti/24997.pdf	
C.3	Sample map of designated critical wildlife habitat circles surrounding Northern spotted owl site centers in a portion of Skamania County (Township 3N, Range 9E), Washington Department of Natural Resources	May, 2000
C.4	Excerpts from Chapter 22-16 of the Washington Administrative Code relevant to the protection of Northern spotted owls (<i>Strix occidentalis caurina</i>) in Skamania County	July 2001
C.5	The Butterflies of Cascadia: A Field Guide to All the Species of Washington, Oregon and Surrounding Territories, Robert Michael Pyle	2002
C.6	Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines, U.S. Fish and Wildlife Service, available at http://www.fws.gov/habitatconservation/wind.pdf	May 13, 2003
C.7	Wind Turbine Interactions with Birds and Bats: A Summary of Research Results and Remaining Questions, National Wind Coordinating Committee, available at http://www.nationalwind.org/publications/wildlife/wildlife_factsheet.pdf	Nov. 2004
C.8	Relationships between Bats and Wind Turbines in Pennsylvania and West Virginia, An Assessment of Fatality Search Protocols, Patterns of Fatality, and Behavioral Interactions with Wind Turbines: A Summary of Findings from the Bats and Wind Energy Cooperative's 2004 Field Season, Bats and Wind Energy Cooperative, available at http://www.batcon.org/wind/BWEC2004Reportsummary.pdf	2005
C.9	Memo to Wind Energy Production and Wildlife Conservation Planners, Tuttle, M.D., available at http://www.protectpendleton.com/nbw_batmemo.htm	Jan. 2005
C.10	Wind Power: Impacts on Wildlife and Government Responsibilities for Regulating Development and Protecting Wildlife, US Government Accountability Office, available at http://www.gao.gov/new.items/d05906.pdf	Sep. 2005
C.11	Assessing Impacts of Wind-Energy Development on Nocturnally Active Birds and Bats: A Guidance Document, Kunz, T.H., Arnett, E.A., Cooper, B.M., et al. <i>Journal of Wildlife Management</i> , 71(8):2449-2486, available at http://www.nationalwind.org/pdf/Nocturnal_MM_Final-JWM.pdf	Nov. 2007
C.12	Letter from Ted Labbe and Michael Ritter, Washington Department of Fish and Wildlife, to Karen Witherspoon, Skamania County Planning Department, regarding comments on 2008 draft Skamania County zoning update	June 5, 2008
C.13	American Society of Mammalogists unanimous resolution: Effects of wind-energy facilities on bats and other wildlife, available at http://www.wind-watch.org/documents/wp-content/uploads/asm-windenergyresolution.pdf	June 21-25, 2008
C.14	Barotrauma is a Significant Cause of Bat Fatalities at Wind Turbines, Baerwald, E.F., D'Amours, G.H., Klug, B.J, Barclay, R.M.R., <i>Current Biology</i> , Vol 18, R695-R696.	Aug. 26, 2008
C.15	Declaration of K. Shawn Smallwood	Sep. 2, 2008
C.16	Review of Habitat Assessment Report for Forest Road 25 and Loowit Lane, Steve Manlow, Washington Department of Fish and Wildlife	May 5, 2005
C.17	Potential development north of Swift Reservoir in Skamania County, known as the North County Area, Ken S. Berg, U.S. Fish and Wildlife Service	Dec. 8, 2005
C.18	Oregon Columbia Plateau Ecoregion Wind Energy Siting and Permitting Guidelines	Sept. 29, 2008
C.19	Avian and Bat Mortality at the Big Horn Wind Energy Project, Klickitat County, Washington, K. Shawn Smallwood	Oct. 18, 2008
C.20	How <i>too much</i> wind power may hurt salmon, Dan Tilkin, KATU 2 Portland, available at http://www.katu.com/outdoors/featured/33967994.html	Nov. 21, 2008
C.21	Second Declaration of K. Shawn Smallwood	Dec. 8, 2008
D.1	Washington wind power and speed maps, Northwest Sustainable Energy for Economic Development, available at http://www.windpowermaps.org/windmaps/states.asp#washington	June 2002
D.2	Washington - Wind Power Resource Estimates map, National Renewable Energy Laboratory,	June 7,

	U.S. Department of Energy, available at http://wdfw.wa.gov/hab/engineer/major_projects/graphics/wind_power_resource_estimates_map.jpg	2002
D.3	Permitting of Wind Energy Facilities: A Handbook, National Wind Coordinating Committee, available at http://www.nationalwind.org/publications/siting/permitting2002.pdf	Aug. 2002
D.4	Current and Proposed Wind Project Interconnections to BPA Transmission Facilities, Bonneville Power Administration, available at http://www.transmission.bpa.gov/PlanProj/Wind/documents/Windmap_external_03242008_8-5x11.pdf	Mar. 27, 2008
D.5	Excerpts from Klickitat County's Energy Overlay Zone Final EIS	Sep. 2004
D.6	Agenda and materials, Columbia Gorge Bi-State Renewable Energy Zone Leadership Meeting, Mid-Columbia Economic Development District	Oct. 19, 2007
D.7	<i>Rose v. Chaikin</i> , 187 N.J. Super. 210, 453 A.2d 1378 (1982).	Nov. 10, 1982
D.8	<i>Burch v. Nedpower Mt. Storm, LLC</i> , 220 W. Va. 443, 647 S.E.2d 879 (2007)	June 8, 2007
D.9	<i>Wind Energy Siting Handbook</i> , American Wind Energy Association, available at http://www.awea.org/sitinghandbook/	Feb. 2008
E.1	Memorandum regarding Cascade Wind Project Update for March 2008, Adam Bless, Oregon Department of Energy	March 13, 2008
E.2	Map of approved and proposed wind projects in Klickitat county	Apr. 30, 2008
E.3	Windy Point II Wind Farm Project EOZ Application	May 23, 2008
E.4	Notice of Community Meeting, Windy Point II Windpower Project, Klickitat County	May 27, 2008
E.5	Determination of Significance and Request for Comments on Scope of EIS, Goodnoe II project, EOZ2008-05 and SEP2008-31, Klickitat County	July 14, 2008
F.1	Declaration of Chris Lloyd	Aug. 31, 2008
F.2	Declaration of Renee Tkach	Sep. 2, 2008
F.3	Declaration of Kevin Gorman	Sep. 2, 2008
F.4	Second Declaration of Chris Lloyd	Dec. 8, 2008
F.5	Second Declaration of Kevin Gorman	Dec. 8, 2008
F.6	Second Declaration of Renee Tkach	Dec. 8, 2008
F.7	Declaration of Mary Repar	Dec. 8, 2008
F.8	Declaration of Brett VandenHeuvel	Dec. 9, 2008
F.9	Declaration of Emily Platt	Dec. 9, 2008
G.1	Resume/CV of Dean Apostol	Aug. 2008
G.2	Resume/CV of Margo Blosser	Sep. 2008
G.3	Resume/CV of Carl Dugger	Sep. 2008
G.4	Resume/CV of K. Shawn Smallwood	Sep.

		2008
H.1	BPA Transmission Lines by kV, Bonneville Power Administration, available at http://www.bpa.gov/corporate/pubs/EX_A_BPA_Service_Area.pdf	Apr. 17, 1998
H.2	Determination of Significance and Request for Comments on Scope of EIS, Klickitat Count (regarding the possible amendment of the County's comprehensive plan and development regulations to provide for the development of energy resources)	June 6, 2002
H.3	Gifford Pinchot National Forest Vicinity Map, Gifford Pinchot National Forest, USDA Forest Service, available at http://www.fs.fed.us/gpnf/04maps/documents/gpnf-forest-vicinity-map-20080730_11x17_000.pdf	July 30, 2008
H.4	Skamania County Ordinance 2008-01, available at http://www.skamaniacounty.org/Ordinances_2008/Ord%202008-01%20Moratorium%20Extension%20Unzoned%20Land.htm	Jan. 8, 2008
H.5	Comments on Skamania County Proposed Zoning Amendments, Nathan Baker, Friends of the Columbia Gorge	Oct. 22, 2008
H.6	Comments on Skamania County Proposed Title 21 Zoning Amendments, Richard F. Till, Friends of the Columbia Gorge	Oct. 22, 2008
H.7	MCEDD Rural Cluster Project: Renewable Energy Cluster, Mid-Columbia Economic Development District, available at http://www.oregonclusters.org/Docs/MCEDD%20Ren%20Energy%20cluster.doc	N/A
H.8	Minutes for the December 18, 2007 Meeting, Board of Skamania County Commissioners, available at http://www.skamaniacounty.org/Minutes_Files_2007/Minutes%2012-18-07.htm	Dec. 18, 2007
H.9	Skamania County Resolution 2007-59, available at http://www.skamaniacounty.org/Resolutions_2007/Res%20200759%20Renewable%20Energy.htm	Dec. 18, 2007
H.10	Annual Performance Report, July 1, 2007 to June 30, 2008, Mid-Columbia Economic Development District, available at http://www.mcedd.org/documents/FY2008MCEDDAnnualoReport.pdf	June 30, 2008
H.11	Minutes for the September 30, 2008 Meeting, Board of Skamania County Commissioners, available at http://www.skamaniacounty.org/Minutes_Files_2008/Minutes%2009-30-08.htm	Sep. 30, 2008
H.12	Skamania County Resolution 2008-51	Sep. 30, 2008
H.13	Skamania County Commission home page, available at http://www.skamaniacounty.org/commissioners1.htm	Jan. 5, 2009
H.14	Minutes for the week of December 23, 2008, Board of Skamania County Commissioners, available at http://www.skamaniacounty.org/Minutes_Files_2008/Minutes%2012-23-08.htm	Dec. 23, 2008