

RECEIVED

**Energy Facility Site Evaluation Council
905 Plum Street SE
P.O. Box 43172
Olympia, WA 98504-3172**

AUG 27 2010

ENERGY FACILITY SITE
EVALUATION COUNCIL

August 26, 2010

Re: Whistling Ridge DEIS

Dear EFSEC Council Members/BPA Representatives:

NOTE: This communication is organized into two parts. Part One summarizes our concern about undue political pressure applied to prevent federal agencies from commenting on this DEIS. Part Two is an analysis of the Visual Resources Section of the DEIS.

PART ONE

We had not planned on commenting on the visual impact in detail; however, we recently discovered that significant political pressure has been exercised by a member(s?) of the Skamania Board of County Commissioners (BOCC) activating, it appears, US Senate and House Representatives as well. This pressure was designed to prevent the USFS and the Department of the Interior from submitting any further comment and to retract previously submitted comments regarding the DEIS. In Skamania County Resolution 2010-51 the BOCC "demand, in the strongest possible terms, that Interior's comment be immediately retracted and removed from the public record on this matter" is, we believe, a direct attempt to undermine EFSEC's/BPA's capacities and responsibilities to examine all relevant information regarding the environmental impact of this proposed project.

We have attached the above-mentioned resolution and our letters to the BOCC and Secretary Salazar of the U.S. Department of the Interior regarding the same, dated August 23, 2010. Furthermore, we include a number of email strings below, to demonstrate some of what causes us to question the fairness of this purported "public process." These emails are copies obtained via a Public Information Request at Skamania County, WA, of Commissioner Paul Pearce's email communications in the public domain.

Attempted Suppression of Expert Comments and Visual Resource Analysis for
Whistling Ridge DEIS Keith Brown, Ph.D. and Teresa Robbins

Public Information Request data

From: Jason Spadaro [REDACTED]@sds lumber.com]
Sent: Friday, May 28, 2010 2:57 PM
To: Paul Pearce
Cc: Page Phillips
Subject: Re: e-mail from Posner re USFS

Chief of the USFS? That's good timing. It is a mission critical task to not only get the USFS to back off but to very importantly take a position like BPA dis in their EIS that the boundary is the boundary. If they don't, and they continue to muddy the public record, the USFS is giving Friends of the Gorge an appeal issue under NEPA that will delay the project for years in federal courts. They are acting contrary to the Administration and the State's renewable energy objectives and supporting greater harm to the environment. This scenic issue.....of the project next to the NSA is absolutely a project critical issue. We have not been able to find enviro groups willing to show courage to stand up and oppose friends of gorge on the general issue of scenery vs clean energy when considering the alternative of dead, oil poisoned ecosystems. I'm still trying to find such a group if any of you know of one.

What are the prospects of political engagement on this issue????

Paul i think you were going to ask if Brian might be able to attend and testify at the public hearings. Were you able to have that conversation?

Jason Spadaro
SDS Lumber Company
541-490-[REDACTED]

Sent via mobile device

On May 28, 2010, at 2:16 PM, "Paul Pearce" <[REDACTED]@co.skamania.wa.us> wrote:

I have a meeting with the Chief on the 7th.

Paul Pearce
Skamania County Commissioner
CI 360.607-[REDACTED]

Sent from my iPhone

On May 28, 2010, at 3:06 PM, "Jason Spadaro" <[REDACTED]@sds lumber.com> wrote:

Hi Page
FYI, here we go again.....below is a portion of an email from EFSEC to one of the Whistling Ridge project consultants. The USFS is already raising issues over the visual analysis and project impact to the National Scenic Area.

Jason Spadaro
SDS Lumber Company
541-490-[REDACTED]

Sent via mobile device

Attempted Suppression of Expert Comments and Visual Resource Analysis for
Whistling Ridge DEIS Keith Brown, Ph.D. and Teresa Robbins

Begin forwarded message:

Subject: e-mail from Posner re USFS

I received a call from Lynn Oliver, US Forest Service. Lynn has some questions on the visual resource analysis that was done for WR. One of his questions was whether or not a Landscape Architect was consulted during development of this section. He would also like to know who did the analysis and what their qualifications are.

Generally, he expressed concerns about the quality of the analysis and whether or not it took into account the special characteristics of the Gorge.

Stephen Posner

Energy Facility Site Evaluation Council

This e-mail and any attachments contain URS Corporation confidential information that may be proprietary or privileged. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

When information begins with a USFS (Lynn Oliver) phone call requesting information from EFSEC's project manager (Stephen Posner) and an email is sent to a project consultant supposedly now working for EFSEC (we believe this may be Katy Cheny as the URS disclaimer is below the first forwarded email and Katy is the project lead) and that is forwarded to the Applicant (SDS-Jason Spadaro) who sends it to Senator Murray's staffer (Page Phillips) and Skamania County Commissioner (Paul Pearce), and then this string of communication results in the set up of a meeting ...

Attempted Suppression of Expert Comments and Visual Resource Analysis for
Whistling Ridge DEIS Keith Brown, Ph.D. and Teresa Robbins

Public Information Request data

From: Parker (Love), Kelly [REDACTED]@mail.house.gov
Sent: Thursday, June 10, 2010 1:52 PM
To: [REDACTED]@murray.senate.gov; Pincheira, Kimberly (Cantwell)
Cc: Jason Spadaro; Paul Pearce
Subject: FW: Request for meeting with Mary Wagner

Jason and Paul,
I've reached out to Mary Wagner with Brian's encouragement to set up a meeting ASAP.
As soon as we hear back, I'll send you an update.

Kelly Parker (Love)
District Director
Congressman Brian Baird
[REDACTED] Anderson #B Vancouver, WA 98661
(360) 695-[REDACTED]

From: Kathy Anderson [mailto:kanderson03@fs.fed.us]
Sent: Thursday, June 10, 2010 1:50 PM
To: Parker (Love), Kelly
Cc: Alan J Matecko
Subject: Re: Request for meeting with Mary Wagner

Thanks Kelly, I'll try and get back to you tomorrow. It appears that the meeting would be held here in Portland, is that correct?

Kathy Anderson
Legislative Affairs Coordinator
Forest Service, Region 6
[REDACTED] S.W. First Ave
P.O. Box [REDACTED]
Portland, Oregon 97208-3623
e-mail: [REDACTED]@fs.fed.us
Phone: 503.808.2[REDACTED] Fax: 503.808.[REDACTED]

"Parker (Love), Kelly" <[REDACTED]@mail.house.gov>
06/10/2010 01:43 PM
To: [REDACTED]@fs.fed.us>
cc: [REDACTED]@murray.senate.gov>, <kimberly.blake@cantwell.senate.gov>, "Parker (Love), Kelly" <[REDACTED]@mail.house.gov>
Subject: Request for meeting with Mary Wagner

The Congressman has asked me to provide assistance to Skamania County Commissioner Paul

Attempted Suppression of Expert Comments and Visual Resource Analysis for
Whistling Ridge DEIS Keith Brown, Ph.D. and Teresa Robbins

Pearce who is requesting a meeting with Regional Forester Mary Wagner to be held as soon as possible.

The purpose of the meeting is to update Mary Wagner on the status of the Whistling Ridge Energy Project sited in Skamania County.

While the project is outside the National Scenic Area on privately held commercial timber land, the Forest Service has in the past, formally submitted concerns about the project because several of the 50 turbines would be visually seen from inside the NSA.

Commissioner Pearce would like Mary to know about the status of the project, the current review process and its economic benefit to Skamania County.

It is reasonable to expect the Commissioner would request that the USFS not write an official letter of objection as the project is reviewed by EFSEC (Energy Facility Site Evaluation Council) and BPA. Commissioner Pearce would bring Jason Spadaro to the meeting and would invite staff from Baird and Murray's office to attend (Kelly Love Parker and Page Phillips). I believe 30 minutes would be sufficient.

Could you check Mary Wagner's schedule and see if there are dates available in the next week?

I appreciate its short notice but time is critical as the public comment period begins June 16th.

I believe the Commissioner would be very flexible in his schedule to accommodate her schedule.

Best to you,

Kelly

Kelly Parker (Love)

District Director

Congressman Brian Baird

Anderson #B Vancouver, WA 98661

(360) 695-██████

This proposed meeting actually took place, on June 15, 2010, with stated agenda items designed to pressure the USFS to withhold valid comments regarding this project and its impact. We can't help but fear the deck is

being stacked against a fair and objective review of environmental impacts. Below is an email and attached Draft Meeting Agenda, as found on Skamania County Commissioner Paul Pearce's email from Jason Spadaro, dated June 14, 2010: (Please take particular notice to Agenda Items 4 & 5)

Public Information Request data

From: Jason Spadaro [redacted]@sdslumber.com]
Sent: Monday, June 14, 2010 11:10 PM
To: Paul Pearce
Subject: FW:
Attachments: USFS meeting agenda june 15, 2010.doc

Paul,
Here's a draft. I'll finalize in morning. Let me know if you have any comments. I'll bring copies for you if this meets your approval

Jason S. Spadaro
President
SDS Lumber Company
PO Box [redacted]
Bingen, WA 98605

[redacted]@sdslumber.com
www.sdslumber.com

direct 509-493-6103
cell 541-490-[redacted]
fax 509-493-[redacted]

Attempted Suppression of Expert Comments and Visual Resource Analysis for
Whistling Ridge DEIS Keith Brown, Ph.D. and Teresa Robbins

June 14, 2010

Skamania County meeting with USFS Regional Forester
regarding Whistling Ridge Wind Energy Project

Attendees:

Mary Wagner, USFS Regional Forester
Lenise Lago, USFS
Dan Harkenrider, USFS
Paul Pearce, Skamania County Commissioner
Jason Spadaro, Whistling Ridge Energy/SDS Lumber Company
Curt Smltch, Thompson Smltch (working with SDS Lumber)
Page Phillips, Office of Senator Patty Murray
Kelly Love Parker, Office of Congressman Brian Baird
Steven Sparks, Office of Congressman Brian Baird
Office of Senator Maria Cantwell (by telephone)

Agenda:

1.

Sec. 3. Purposes (Sec. 644a)

The purposes of sections 544 to 544p of this title are -

(1) to establish a national scenic area to protect and provide for the enhancement of the scenic, cultural, recreational, and natural resources of the Columbia River Gorge; and

(2) to protect and support the economy of the Columbia River Gorge area by encouraging growth to occur in existing urban areas and by allowing future economic development in a manner that is consistent with paragraph (1)

2.

Sec. 17. Savings provisions (Sec. 544o)

(a) Nothing in sections 544 to 544p of this title shall -

(1) affect or modify any treaty or other rights of any Indian tribe;

(2) except as provided in section 13(c), authorize the appropriation or use of water by any Federal, State, or local agency, Indian tribe, or any other entity or individual;

(3) except as provided in section 13(c), affect the rights or jurisdictions of the United States, the States, Indian tribes or other entities over waters of any river or stream or over any ground water resource or affect or interfere with transportation activities on any such river or stream;

(4) except as provided in section 13(c), alter, establish, or affect the respective rights of the United States, the States, Indian tribes, or any person with respect to any water or water-related right;

(5) alter, amend, repeal, interpret, modify, or be in conflict with any interstate compact made by the States before November 17, 1988;

(6) affect or modify the ability of the Bonneville Power Administration to operate, maintain, and modify existing transmission facilities;

(7) affect lands held in trust by the Secretary of the Interior for Indian tribes or individual members of Indian tribes or other lands acquired by the Army Corps of Engineers and administered by the Secretary of the Interior for the benefit of Indian tribes and individual members of Indian tribes;

(8) affect the laws, rules and regulations pertaining to hunting and fishing under existing State and Federal laws and Indian treaties;

(9) require any revision or amendment of any forest plan adopted pursuant to the National Forest Management Act of 1976 (Act of October 22, 1976, Public Law 94-588, as amended (16 U.S.C. 1600 et seq.)); or

(10) establish protective perimeters or buffer zones around the scenic area or each special management area. The fact that activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas.

3. History of USFS correspondence on Whistling Ridge Energy Project in contradiction to the above (all correspondence attached):

- May 6, 2009 letter to Allen J. Fiksdal, EFSEC Manager
- May 19, 2009 letter to Allen J. Fiksdal, EFSEC Manager
- May 20, 2009 letter from Congressman Brian Baird to Regional Forester Mary Wagner
- June 17, 2009 letter from Regional Forester Mary Wagner to Congressman Brian Baird
- May 28, 2010 telephone call to EFSEC staff by Lynn Oliver

4. Any comments by the USFS are an attempt to extend the scope and reach of the National Scenic Area, constituting hostility toward regional economic development in timber dependent Counties and setting dangerous precedence against economic development in Counties adjacent to the CRGNSA.

- Where is the USFS authority to issue these comments?
- Where does the Scenic Area authority and right to restrict economic development in neighboring Counties end?
- Does the Forest Service comment on all other industrial activities in Urban Exempt Areas and areas outside the boundary that are visible from the CRGNSA? Including activities in Portland, Vancouver, Camas, etc? Or is it just clean energy in Skamania County that the USFS opposes?
- See map showing all lands that will be excluded from wind energy development if wind turbines visible from within the National Scenic Area are denied. Note that thousands of megawatts of existing wind energy development in operation would not have been allowed.

5. Conclusion

- No part of the Whistling Ridge Wind Energy Project lies within the Columbia Gorge National Scenic Area.
- No improvements requiring National Scenic Area Land Use Permits are required for the Whistling Ridge Energy Project.
- The Columbia River Gorge Commission and U.S. Forest Service lack jurisdiction to comment on a proposed land use action located entirely outside of the National Scenic Area boundary in Skamania County.
- Commenting on the project will be prejudicial to Skamania County, the project applicant and the wind energy industry, potentially denying Skamania County opportunity for economic development and diversification and supporting project delaying appeals by project opponents.

The attempt at pressure did not end with the meeting as evidenced in the following email dated June 17, 2010 which now also references National Park Service's comment letter:

Public Information Request data

From: Jason Spadaro [redacted]@sdsllumber.com]
Sent: Thursday, June 17, 2010 5:53 PM
To: Paul Pearce
Cc: Phillips, Page; Kelly.Parker@mail.house.gov; DeVaney, Jon;
kimberly_pinchelra@cantwell.senate.gov
Subject: Whistling Ridge
Attachments: Appendix%20B.pdf

I don't mean to sound like a broken record but page three of the attached SEPA scoping notes documents more USFS comments that are sitting in the SEPA/NEPA record on Whistling Ridge. These comments, combined with Harkenrider's, and Regional Forester Mary Wagner's response to Congressman Baird's letter enable Friends of the Gorge appeal of the project EIS, delaying the project and threatening eligibility for renewable energy incentives.

Paul, are you comfortable forwarding this to Mary Wagner as further evidence of the mess her staff has created?

The National Park Service comment letter has the same effect.

Thank you everyone for helping and working on this issue. It is appreciated.

Best,
Jason Spadaro

PART TWO

We feel the pressure exerted may have resulted in the USFS not doing as in-depth an analysis of the deficiencies of the DEIS and thus, our Visual Resources analysis will focus on how the USFS comments presented during the scoping process remain valid, yet unaddressed.

The first page of the USFS 2009 scoping letter (attached) alerts the risk of significant impacts...

“The purpose of this letter is to inform you of the risk of significant impacts to protected scenic resources if the proposed energy project is built as currently planned. This letter is not meant to imply that the project outside of the Scenic Area is regulated by the Scenic Area Act. In a letter dated May 8, 2008, the Columbia River Gorge Commission provided technical assistance in response to a request by the Oregon Department of Energy regarding a similar project in Oregon. In that letter, the Gorge Commission explained that the National Scenic Area Act specifically prohibits the implementation of a buffer around the boundaries of the Scenic Area. However, the letter also explains how Scenic Area resources would be affected by the project and how they could be protected. By requesting comments on the project, I assume that EFSEC would similarly benefit from scenic resources technical expertise in this matter.

Diana Ross, CRGNSA landscape architect, provided me the following analysis of the Aesthetics portion of the application starting on page 4.2-27. My comments are based on the findings of that portion of the application and the recommendations made by my staff.”

Starting on page 3-155, the DEIS uses the same methodology and visual simulations, though fewer viewpoints than in the SDS application. It appears to completely ignore the risks of significant impacts and recommendations identified in the USFS scoping letter. It simply depicts the same inaccurate and misleading conclusions presented in the SDS application.

We ask, as Lynn Oliver of the USFS asked, “Was a qualified landscape architect consulted in the preparation of the DEIS?” None appear in the List of Preparers (pages 6–1 to 6–7). We must conclude one was not. The quality of this DEIS would have been substantially improved had the recommendations of Diana Ross, CRGNSA landscape architect been utilized. Her analysis of the application and our comments regarding relevant points of the DEIS follow:

“1) Key Viewing Areas (KVAs)

As mentioned in the application, the effects to scenic resources in the Scenic Area are assessed by analyzing the effects of a project on lands visible from 26 selected public vantage points from which the public views the landscape. It was not foreseen at the time the Act was passed that any development outside of the Scenic Area would be seen from these viewpoints. However, it is clear from the application that several Scenic Area Viewsheds (the land seen from these vantage points) will be affected.

9 of the 21 viewpoints analyzed are also Key Viewing areas (#6 & 9 were missing).”

DEIS table (page 3-177) shows that Key Viewing Areas #6 (SR-14) and #9 (Tom McCall Point) are still missing and that #10 (Panorama Point) has been deleted. Why were these not included in the DEIS? Clearly, they are required in order to accurately analyze the visual impact of this proposed project.

“2) Methodology and Summary of Scenic Impacts

There are many unknowns in the summary of methods on page 4.2-30-31 of the application. For example, the methods section did not disclose the heights used for the turbines or whether the software placed and sized the turbines or whether this was done in Photo Shop as an art project.”

The height of the turbines used is disclosed. The methods of creating the visual simulations including the use of “Photoshop” are described (pages 3-160 & 161). The simulations created using these methods are seriously flawed and do not represent an accurate visual depiction of what the viewer will experience. This is documented in the August 19, 2010 Dean Apostol, Landscape Architect memo on the DEIS presented to BPA and EFSEC ...

“In short, the images provided are too few and otherwise limited to be able to accurately assess the potential visual impacts of the proposal.

The images included in the DEIS vary greatly in scale. For example, the turbines appear much larger in the simulation for viewpoint 3, a distance of 7.6 kilometers, than they do for viewpoint 1, a distance of 6.4 kilometers. How can this be? The turbines should appear larger in the closer view. The answer must be that the reproduced image provided, no matter what focal length was used, does not reflect the distance. This is also evident in comparing viewpoints 11 and 12, which are similar view angles. The turbines in the simulation for viewpoint 12 appear smaller and farther away than those for viewpoint 11, even though the former is 3 kilometers nearer according to the data provided on the image.”

The USFS 2009 scoping analysis continues...

"There are also several questions concerning the methods used to 1) choose viewpoints, 2) define visual quality and viewer sensitivity, and 3) represent and make conclusions about impact.

1) Choosing viewpoints in the Scenic Area should be based on Key Viewing Areas. Several of these were missing from the discussion (SR-14, Tom McCall Point) and others are linear viewpoints where only one or no views were picked in the NSA (Columbia River, Hwy 35, I-84, Historic Columbia River Highway). Therefore, it is unclear whether the impacts to NSA scenic resources were adequately captured."

As pointed out earlier, SR-14 and Tom McCall viewpoints are still missing and Panorama Point has been deleted in the DEIS. It is abundantly clear from Dean Apostol's WRE DEIS analysis (2010) that the impacts to the NSA were not adequately captured in the DEIS.

"Figures 3.9-1 and 3.9-2 are useful in assessing the potential visibility of proposed turbines from within the National Scenic area and elsewhere. But they fail to note the full extent to which the turbines would be exposed to key viewing areas. The analysis treats the scenic impact problem as a viewpoint impact as opposed to a view corridor impact, but several of the affected KVAs are corridors, not points. These corridors include designated scenic roads and the Columbia River. The DEIS should be revised to analyze the distance along the entire length of these KVAs from which the project would be visible and to simulate views from multiple points along these KVAs in order to identify where the greatest impacts are likely to occur.

As it stands, the viewpoints chosen for analysis may not be truly representative: I-84, the Columbia River and the Historic Columbia River Highway all have multiple possible view locations that may experience greater impacts than the single locations chosen by the applicant. Each of these view corridors come within 3 miles of the project, yet all sample viewpoints are more than 4 miles from the project. Additional views along these three KVAs should be analyzed. For example, a simulation from the Historic Columbia River Highway at Mitchell Point directly across the Columbia River from the project is critical."

Mitchell Point is a significant view point and should have been, but is not considered in the DEIS, and according to the letter (received by BPA August 3, 2010) from the Friends of the Historic Columbia River Highway:

"The Mitchell Point overlook is even more visually sensitive than I-84, both because it is higher in elevation and it is a place where people stop, get out of their cars and take photos. It is closer to the proposed project than Viento State Park, Koberg State Park and the single location on the Hood River to Mosier section of the Historic Columbia River Highway State Trail that were analyzed. This site must be analyzed for visual impact from the proposed project."

Continuing, the USFS scoping analysis (2009) points out...

"2) The NSA is a nationally known and protected landscape of high quality and high sensitivity. All KYA scenic analyses should reflect this. The results of the applicant's analysis are heavily weighted on the assignment of existing scenic quality and viewer sensitivity. These methods were not tracked and do not represent the reality of the Scenic Area."

The visual sensitivity assessment is heavily influenced by what appears to be an arbitrary decision.

Quoting from the DEIS: "Moderate levels of sensitivity were assigned to areas where turbines would be visible from 0.5 mile to 5 miles within the primary view of residences and roadways" (page 3-159).

This is not based on any scientific studies presented. It is, in our opinion, self-serving and results in a measurement scale purposely designed to create faulty conclusions the proponent wants to support... namely that any turbine sited further than 0.5 mile will not have a high level of viewer sensitivity. This is not analyzing the facts to determine the impact, but skewing the measurement tools and analysis to achieve the desired results for the proponent.

The visual contrast method, as thoroughly discussed in the Dean Apostol comment (2010), is a more objective method and would be less susceptible to manipulation by such arbitrary decisions. The analysis should be redone using the visual contrast method rather than the Federal Highway Administration Process that was used.

"In my opinion, the FHWA method is not a suitable method for evaluating the visual impacts of wind energy projects in general, and this project in particular. This system was designed to be used only for assessing impacts from highway related development".

"... visual contrast is a useful way of measuring impacts regardless of whether a resource management objective has been established, because it relies on simple and time tested analytical standards"

This visual contrast method was indeed recommended in the USFS scoping comments (2009), but once again ignored in the preparation of the DEIS...

“3) The conclusions made on the summary chart would more accurately be made using degree of contrast with the natural landscape both during the day and at night, and distance of the viewer from the project area. This assumes that the most visually impacted viewpoints have been found and that the simulations accurately depict the degree of contrast. The impact summaries starting on page 4.2-68 discuss these contrasts but the ratings do not reflect the discussion. For example the text for viewpoint #1 states that “the presence of the turbines would reduce the scene’s degree of intactness by introducing a large number of highly visible engineered vertical elements” but the impact rating is low to moderate.”

Rather than adjusting the rating to reflect the discussion in the original application, the sentence referenced just above regarding viewpoint #1 was deleted from the DEIS. A discussion was added in an attempt to justify the proponents desired low to moderate ratings. The “average scenic value” (DEIS 3-168) within the NSA is high scenic value in contrast to most other landscapes outside the NSA, not moderate.

“The American Society of Landscape Architects included the Columbia River Gorge as one of the 100 most outstanding landscapes in the United States, ranking it along with Yosemite, Yellowstone and other national icons.” (Apostol 2010).

The USFS scoping comments (2009) continues...

“The Summary of Existing Scenic Quality and Project Visual Impacts on page 4.2-67 did not rate any viewpoint as having a high level of impact defined as: turbines “highly visible in areas with a high number of sensitive viewers” and greatly altering levels of vividness, unity, and intactness. Viento State Park was rated as highest impact (moderate to high) but the photo print did not show any turbines (Figure 4.2-17).

The Summary of Existing Scenic Quality and Project Visual Impacts in the DEIS (page 3-177), incredulously does not rate the anticipated visual impact on any viewpoint as high. The same flawed methods were used in the DEIS as in the SDS application. None of the needed changes suggested by the USFS were addressed.

The Viento State Park photomontage in the DEIS (Figure 3.9-11), still does not show a single turbine. The same “photo prints” used in the SDS application are used in the DEIS. Despite a year to prepare the DEIS, no new photos or photomontages were utilized nor were the former photos even corrected.

As Dean Apostol (2010) points out:

“This is a very misleading photomontage. The image is very faint, and the size does not correspond to the relatively short view distance of 6.4 kilometers (4 miles). The wireframe view indicates that the 18 turbines seen from this viewpoint would be very high contrast and would have high impacts, similar to those discussed under Viewpoint 11. All 18 turbines break the skyline, there are overlapping rotors and a jumbled, chaotic composition. The turbines located at the high point in the center of the image are particularly strong impact. The turbines would be framed by Dog Mountain, seen on the left side of the photo, and a portion of Underwood Bluff, seen on the right side of the photo (Figure 3.9-11). These are very natural, highly intact landforms, exacerbating the contrast that the turbines would introduce. Existing development prohibitions on these landforms, which lie within the National Scenic Area, are at the highest protection level, allowing no visual contrast. This illustrates the high sensitivity of the viewshed.”

Pointing out further limitations with the pictures, the USFS scoping comments (2009) continue...

“ It is generally very difficult to fully depict the visual effect of viewing the landscape in a small photo and because of these limitations, pictures with clouds at the skyline should not be used”. In addition, many non-NSA viewpoints and non-KVA viewpoints were added making it difficult to assess the effects in the Scenic Area. The scenic impacts both at night and during the day would be better depicted using photos of existing turbines in the Gorge. The existing development east of the Scenic Area provides a better indication of the impact on the scenic resource than represented in these visualizations. The visualizations are important for finding the number and location of the visible turbines, but have limited utility for assessing scenic impact.”

The exact same small photos used in the application with clouds are used in the DEIS, disregarding the comments of the USFS. We agree with Dean Apostol's (2010) statement:

“The photomontage images in the DEIS are flawed. The scale and distance appear to be inconsistent. Atmospheric conditions on some photos are hazy. Use of a white cloud background reduces apparent color contrast of turbines skylined on visually prominent ridges.”

This should have been addressed in the preparation of the DEIS. It must be addressed with more realistic depictions of the turbines both during the day and at night in a revised DEIS. The public will be more accurately informed and then could make relevant comment.

We agree with the findings of Dean Apostol (2010)...

“The visual impact analysis provided in the DEIS is faulty and incomplete. In addition, the DEIS’s conclusions that visual sensitivity is only low to moderate and that impacts would be low to moderate from most viewpoints (Table 3.9-2) are not supported by the facts. The project as presented would have substantial adverse impacts to scenic resources.”

Finally the USFS scoping comments (2009) made the following recommendations, which were either ignored or not adequately addressed.

“3) Recommendations

In order to assure that the scenic resource impact is adequately analyzed, I recommend the following improvements to the scenic resource impact assessment:

- *Include a discussion or summary of the most visible turbines,*
- *Include photographs of existing energy projects visible in the NSA,*
- *Do not use visual simulations (at a small scale with clouds in the picture) to depict the visual impact of visible turbines,*
- *Make certain that the most visible viewpoints have been covered, especially with respect to the linear viewpoints, and*
- *Make certain to include the night-time effects in your analysis.”*

Instead the DEIS:

Does not include “photographs of existing energy projects visible in the NSA”

Uses “visual simulations (at a small scale with clouds in the picture) to depict the visual impact of visible turbines”

Leaves out the two specifically USFS requested viewpoints SR-14 (#6), Tom McCall Point (#9) and eliminates Panorama Point (#10)

Does not “include the night-time effects” in the analysis.

The USFS scoping comments (2009) concludes with the following:

“In order to prevent the scenic impact of the turbines visible from the Scenic Area Key Viewing Areas, I also recommend that the applicant eliminate turbine locations found to be visible from Scenic Area KVAs. I am hopeful that close attention to these impacts will result in a solution which will fit the unique area that this project will potentially benefit.”

The SDS applicant has steadfastly refused to even consider any alteration or adjustment to the proposed Whistling Ridge Energy Project, totally ignoring expert feedback and recommendations, while actively seeking to suppress the inclusion of additional expert comment, as well as the removal of previously submitted comment.

We believe the attempt to suppress the USFS and the Department of the Interior is motivated due to the validity of these expert comments... comments that point out fatal flaws in both the application and the DEIS.

It saddens us that EFSEC and BPA have attached your names to this poorly constructed and inaccurate document. Having done so has reduced our trust in and your credibility as regulatory agencies. Our analysis of both the Noise and Visual Resources sections of this DEIS cause us, justifiably, to fear that the poor methodologies and resulting assessments may be replete throughout the DEIS. Please, do the right thing and redo this DEIS with the use of expert and independent feedback, appropriate methodologies, accurate and realistic representations and objective assessment.

Sincerely,



Keith Brown, Ph.D.

Teresa Robbins

█ Malfait Tracts Road
Washougal, WA 98671



Attachments:

Skamania County Board of County Commissioners Resolution 2010-51.

United States Department of the Interior Office of Environmental Policy and Compliance letter to BPA dated July 19, 2010.

United States Department of the Interior National Parks Service letter to Congressmen Brian Baird and Doc Hastings dated April 15, 2010.

Keith Brown and Teresa Robbins letter to Skamania County Board of County Commissioners re: Resolution 2010-51 dated August 23, 2010.

Keith Brown and Teresa Robbins letter to Secretary Salazar Department of the Interior re: Efforts to Stifle Comments by the Department of the Interior dated August 23, 2010.

Dan Harkenrider USFS Columbia River Gorge National Scenic Area letter to Allen Fiksdal EFSEC dated May 6, 2009.

RESOLUTION 2010-51

(A Resolution Demanding Retraction of the Department of Interior Comments on the Draft Environmental Impact Statement for the Whistling Ridge Wind Energy Project and explanation of its Actions in Commenting without Authority or Jurisdiction against the Secretary's and Administration Policy)

WHEREAS, Whistling Ridge Energy Project filed an Application for Site Certification to the Washington Energy Facility Site Evaluation Council ("EFSEC") on March 10, 2009 for the Whistling Ridge Energy Project; and

WHEREAS, EFSEC is lead agency pursuant to the State Environmental Policy Act, and Bonneville Power Administration ("BPA") is federal lead agency pursuant to the National Environmental Policy Act; and

WHEREAS, EFSEC and BPA have independently issued a joint Draft Environmental Impact Statement for this Project and are seeking public comment on the DEIS; and

WHEREAS, the entire project is located outside of the Columbia River Gorge National Scenic Area ("Scenic Area") on privately owned lands in Skamania County; and

WHEREAS, Federal Government regulation of private lands as well as the economic survival of Skamania, other local counties and communities were major concerns when the Columbia River Gorge National Scenic Area ("Scenic Area Act") was debated in Congress; which resulted in several major compromises to address these concerns before passage of the Scenic Area Act in its final form, without which, Congress would not have enacted the Scenic Area Act and President Reagan would not have signed it into law. These compromises included the purchase or trade of private lands that were regulated for the protection of scenery in the Special Management Areas, the designation of Urban Areas that are completely exempt from restrictions and the designation of an external boundary that by Congressional direction is the absolute boundary with no buffers or setbacks outside of the Scenic Area. Congressional intent is found in the "Savings Provision" at 16 USC § 544o(a)(10) which states:

Nothing in [this Act] shall . . . establish protective perimeters or buffer zones around the scenic area or each special management area. The fact that activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas."; and

WHEREAS, The National Trail System Act, 16 USC §§ 1241 – 1251 authorizes Congress to designate National Scenic and Historic Trails but does not, by mandate or implication, authorize Interior to regulate or restrict private lands or to even negatively comment on or oppose private projects proposed on private lands nearby, or visible from, designated trail sections; and

WHEREAS, Skamania County recently received a copy of the U.S. Department of the Interior (“Interior”) DEIS comment letter dated July 19, 2010, wherein Interior raises concerns about visibility of the proposed project from the Scenic Area and the nationally designated Lewis and Clark National Historic Trail and suggests elimination of Whistling Ridge wind turbines that are visible from both the Scenic Area and the Lewis and Clark National Historic Trail; and

WHEREAS, many thousands of miles of trails are designated throughout the Western United States under the National Trail System Act. With the exception of federal lands, and lands acquired by the Federal Government for preservation of trails, the Federal Government has no authority to regulate or restrict the use of private lands near trails designated under the National Trail System Act, for any reason, especially for purported visual effects on trail segments. Moreover, as described in the Interior letter, the “trail” at issue here is coextensive with US Interstate 84 and Washington State Highway 14 which are not pristine “trail” segments—they are major, busy multi-modal transportation corridors, including the only sea level train route (on both sides of the Columbia River) through the Cascades, with over 80 commercial trains transiting per day.

NOW, THEREFORE, BE IT RESOLVED THAT THE Board of Commissioners being concerned and alarmed with Interior’s comments and apparent attempt at inappropriate Federal intervention on the consideration of the Whistling Ridge application, find as follows:

The Board finds: Interior’s reference to the National Trail Systems Act and the Scenic Area as authority for the comment letter is an abuse of federal authority that exceeds the legal and policy directives and Congressional intent of both the National Trail Systems Act and the Scenic Area Act. Interior’s comments are particularly egregious where they recommend that renewable wind energy construction (proposed on private lands outside of the Scenic Area and miles away from any trail segments in Skamania County) that are visible from the National Trail Systems Act and the Scenic Area should be eliminated from the Project, or that the proponent must justify “feasibility” for the locations visible from I-84.

The Board finds: Many man-made structures and activities are visible and will be visible along these “trails” that follow Interstate highways, where the most visible of “impacts” on travelers are the many semi trucks, trains, transmission lines, dams, industrial facilities, mines, and coal, gas and nuclear power generating facilities, as well as many cities, homes, commercial buildings, advertising signs and billboards, that they pass by. It is a gross abuse of federal authority to negatively comment on, and seek to obstruct a renewable energy project on private lands merely because a small portion is remotely visible from an Interstate highway.

The Board finds: Consistent with our concerns raised above regarding National Trail Systems Act authority, that Interior’s recommendation of restricting private land development in view of the Scenic Area is in direct violation of the critically important Scenic Area Act compromises and Savings Provisions the intent of which was to allow local counties economic development opportunity for their continued survival.

The Board finds: Interior's comments and recommendations have serious policy implications not only for renewable energy development but also for other non-wind energy related projects that are visible from the Scenic Area and National Historic Trails, such as electrical transmissions systems, dams, rail transportation, interstate commerce and traffic, as well as residential, commercial and industrial development in Skamania and other Counties near the Scenic Area and/or Counties located near similarly designated trails under the National Trails System Act.

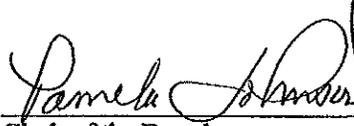
The Board finds: Interiors comments contradict both the Secretary's publicly stated policy as it pertains to renewable energy as well as contradicting the clear energy policy direction of the current Administration.

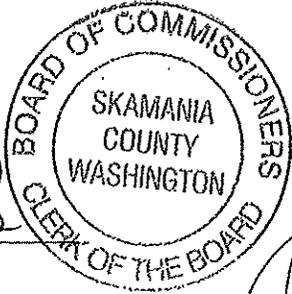
The Board finds: Finally, in addition to the comment concerning the Scenic Area and the Interstate Highway corridor, Interior provided specific comments related to purported groundwater issues—issues raised by local citizen neighbor opponents at the NEPA/SEPA comment hearing. Skamania County has regulatory responsibility for groundwater issues, and will work with EFSEC to address the citizen comment. This is *not* a federal issue. Interior has no authority to insert itself into this uniquely local issue, and its decision to do so demonstrates its lack of regard for Skamania County's authority: strongly suggesting inappropriate collaboration with Whistling Ridge project opponents.

NOW, THEREFORE, BE IT FINALLY RESOLVED THAT THE Board of Commissioners reacting to this clear abuse of authority without jurisdiction, hereby demand, in the strongest possible terms, that Interior's comments be immediately retracted and removed from the public record on this matter, and further respectfully request that the Secretary and the Administration clarify how Interior has acted within its authority, consistent with the stated policy direction of the Secretary and the Administration, and what this letter means for the implementation of the Administration's declared land management and energy policies.

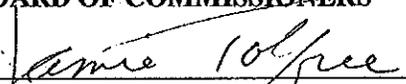
DATED this 3rd day of August 2010.

ATTEST:

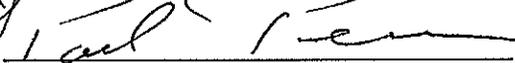

Clerk of the Board

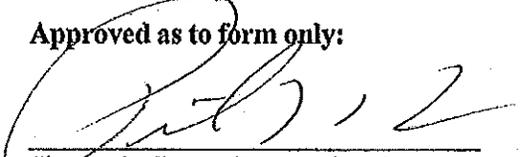


SKAMANIA COUNTY
BOARD OF COMMISSIONERS


Chairman


Commissioner


Commissioner

Approved as to form only:

Skamania County Prosecuting Attorney

Aye 3
Nay _____
Abstain _____
Absent _____



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
620 SW Main Street, Suite 201
Portland, Oregon 97205-3026



9043.1
IN REPLY REFER TO:
ER10/492

Electronically Filed

July 19, 2010

Andrew M. Montaña
Environmental Project Manager
Bonneville Power Administration – KEC-4
P.O. Box 3621
Portland, Oregon 97208

Dear Mr. Montaña:

The U.S. Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the Bonneville Power Administration's Whistling Ridge Energy Project, Skamania County, Washington. The Department offers the following comments for use in developing the Final Environmental Impact Statement for the project.

Lewis and Clark National Historic Trail

The proposed Whistling Ridge Energy project is located within five miles of the Lewis and Clark National Historic Trail (NHT), a congressionally-designated NHT, which follows the Columbia River and is within the area analyzed in the DEIS for potential visual impacts. In addition, US Interstate 84 and Washington Route 14 are the state-designated Lewis and Clark auto tour routes in the project area. Many visitors experience Lewis and Clark NHT by traveling the auto tour routes and stopping at interpretive and recreational sites along the way. The Department considers the viewshed along the river and auto tour routes to be a critical part of the trail visitor experience.

The Lewis and Clark NHT was established by Congress in an amendment to the National Trails System Act in 1978. 16 U.S.C. § 1244(a). As administrator of the trail, the National Park Service (NPS) is charged under this Act with the identification and protection of the historic route, remnants, and artifacts of the trail for public use and enjoyment.

Based on the analysis of visual impacts in the DEIS, it appears that a varying number of turbines will be visible from the trail's historic river and auto tour routes from near

Koberg Beach State Park to Lindsey Creek State Park. This approximately 15-mile stretch of the Columbia River Gorge has numerous recreational opportunities and scenic views that add significantly to enjoyment of the historic trail. Of the five viewpoints along US Interstate 84 analyzed in the DEIS, Viewpoint 14 at Viento State Park, is rated in Table 3.9-2 as having an anticipated moderate to high level of visual impact. However, on page 3-193 of the DEIS, the potential visual impact for this viewpoint is stated as only moderate. Furthermore, it appears that the turbines were inadvertently omitted in the photomontage in Figure 3.9-11. While difficult to discern the impact at this location without clarification on the accuracy of the visual simulation, we believe that the impact should be rated as high given the placement of turbines on the skyline within four miles of a park located along the auto tour route.

Turbine string A1-A7 would be highly visible from numerous locations along the trail due to its placement on a ridgeline close to the Columbia River Gorge. The NPS recommends removing or relocating these seven turbines, if feasible. This would significantly reduce the impact to visual resources along the historic trail. The visual resources in this region—Columbia River Gorge National Scenic Area and Lewis and Clark NHT—are important resources that should be protected.

Please add the following people to the federal agency distribution list for this project:

Dan Wiley
Chief of Resources Stewardship
Lewis and Clark National Historic Trail
601 Riverfront Drive
Omaha, NE 68102
(402) 661-
@nps.gov

Lee Kreutzer
National Trails System
National Park Service
S. State, Suite 200
Salt Lake City, UT 84111
(801) 741-
@nps.gov

SPECIFIC COMMENTS

Water Resources Section 3.3

Pg. 3-26: Section 3.3.1.3 lacks sufficient information on the existing groundwater environment to support the finding of little or no impact. Suggest the section more fully address the depth to groundwater, flow direction, and transmissivity (permeability) of the aquifer as it relates to possible affects on the area domestic and agricultural ground-water resources (also see section 3.3.1.5). Helsel et.al. (2002) is a good reference for this type of analysis.

Pg. 3-29: Because section 3.3.3 addresses mitigation procedures for the isolation of groundwater from chemical spills, we assume that chemicals will be present on site during both construction and operation. Suggest the document include a discussion of potential chemical spills, and aquifer transmissivity (permeability), as it relates to the potential movement of contaminants toward nearby domestic or agricultural water wells.

Reference

Helsel, D.R. and Hirsch, R.M., 2002, Statistical methods in water resources: U.S. Geological Survey—Techniques of Water-Resources Investigations Book 4, Chapter A3, 510 p. Available on the internet at: <http://pubs.usgs.gov/twri/twri4a3/>

Thank you for the opportunity to review and comment on this DEIS. If you have any questions concerning the NPS comments, please contact Dan Wiley at (402) 661-1[REDACTED] or at [REDACTED]@nps.gov, or Lee Kreutzer at (801) 741-[REDACTED] or at [REDACTED]@nps.gov. If you have any questions concerning the USGS comments, please contact Gary LeCain, USGS Coordinator for Environmental Document Reviews, at (303) 236-[REDACTED] or at [REDACTED]@usgs.gov. If you have any other questions, please contact me at (503) 326-[REDACTED]

Sincerely,

A handwritten signature in black ink, appearing to read "Preston A. Sleeper". The signature is written in a cursive style with a large initial "P" and "S".

Preston A. Sleeper
Regional Environmental Officer



United States Department of the Interior

NATIONAL PARK SERVICE

Pacific West Region
First Avenue, Fifth Floor
Seattle, Washington 98104-1060



IN REPLY REFER TO
ER-09/423

April 15, 2010

The Honorable Brian Baird
United States House of Representatives
2350 Rayburn House Office Building
Washington, D.C. 20515-4703

The Honorable Doc Hastings
United States House of Representatives
1203 Longworth House Office Building
Washington, D.C. 20515-4704

Dear Congressmen Baird and Hastings:

The National Park Service (NPS) was recently made aware of your letter dated November 18, 2009, concerning the Whistling Ridge Energy Project (Project), through Friends of the Columbia Gorge and the Lewis and Clark National Historic Trail office. We apologize for the delay in responding, as we have been unable to locate any record indicating that we received the letter.

Your letter expresses concern that NPS, through its May 18, 2009 comments on the Project, is acting outside of NPS jurisdiction to obstruct the Project. The NPS takes your concerns very seriously. NPS recognizes the limitations on its authorities outside of NPS-administered lands. In our letter dated May 18, 2009, NPS made recommendations, not demands, which would help to protect the viewshed from the Lewis and Clark National Historic Trail (NHT) corridor. NPS noted certain advantages to developing the overall wind farm at the proposed location but recommended decreasing the number of turbines in one corridor to alleviate some of the visual impacts. We recognize that NPS is not the action agency for this Project. Nonetheless, NPS has a responsibility under the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4370f, to provide comments within NPS' special expertise with respect to environmental impacts. *See* 40 C.F.R. Part 1503.

As administrator of the Lewis and Clark NHT, the NPS is obligated to protect the natural, cultural, historic, and scenic resources of the trail for public use and enjoyment by present and future generations. Therefore, we believe we have an obligation to the American people to provide comments on this project as it moves through the NEPA process, and offer suggestions to the project proponent that will help minimize significant impacts to the trail. We fully support

TAKE PRIDE[®]
IN AMERICA 

the development of renewable energy generation in an environmentally-sensitive manner that is cognizant of surrounding natural, cultural, historic, and scenic resources.

While we do not intend to retract our May 18, 2009 letter, per your recommendation, we hope this letter offers sufficient clarification. If you have any further questions or concerns, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Rory D. Westberg". The signature is written in a cursive style with a large initial "R".

Rory D. Westberg
Deputy Regional Director, Planning and Resource Management
Office: (206) 220-[REDACTED]
FAX: (206) 220-[REDACTED]
[REDACTED][\[REDACTED\]@nps.gov">@nps.gov](mailto:<span style=)

Skamania County Commissioners
P.O. Box 790
Stevenson, WA 98648

August 23, 2010

RE: Skamania County Resolution 2010-51

Dear Commissioners:

We were unaware of this action when we last saw you on August 17th or we would have approached you at that time.

We write to express our concern and dismay regarding Resolution 2010-51. It is certainly within the purview of the BOCC to seek support for a project you believe will benefit the county. It is NOT, in our opinion, your right to suppress opinions of experts uniquely qualified to comment and provide valid perspective on the impact Whistling Ridge Energy Project would have on the National Scenic Area and Historic Trails. To *“demand, in the strongest possible terms, that Interior’s comment be immediately retracted and removed from the public record on this matter”* is, we believe, a direct attempt to undermine EFSEC’s capacity to examine all relevant information regarding the environmental impact of this project.

To quote the May 6, 2009 scoping comment letter of Daniel T. Harkenrider, Area Manager for the Columbia Gorge National Scenic Area, “In a letter dated May 8, 2008, the Columbia River Gorge Commission provided technical assistance in response to a request by the Oregon Department of Energy regarding a similar project in Oregon. In that letter, the Gorge Commission explained that the National Scenic Area Act specifically prohibits the implementation of a buffer around the boundaries of the Scenic Area. **However, the letter also explains how Scenic Area resources would be affected by the project and how they could be protected. By requesting comments on the project, I assume that EFSEC would similarly benefit from scenic resources technical expertise in this matter.”** *(emphasis added)*

This process, to work effectively and be valid, must necessarily seek and examine comment from all perspectives. Dependent upon a variety of opinion, it particularly benefits from the technical expertise that can be provided by personnel of agencies such as the Office of Environmental Policy and Compliance of the Department of Interior and the Columbia River Gorge National Scenic Area.

You have sought and received support for this project from Congressman Baird. You did not object to this support and ask it be retracted because he holds federal office. You did not ask to retract the support voiced by Klickitat county officials. You did not ask to retract the support voiced by White Salmon officials.

BOCC support of this particular project has been steadfast, but your actions have discounted any environmental impact. This is evidenced in the disregard of requests to do an EIS during the Title 21 revision public hearings; the placement of a “permanent hold” on Title 21 zoning after the Hearing Examiner ruled that an EIS be completed by the county before proceeding; and finally, removing from the Hearing Examiner, responsibilities to hear appeals of SEPA determinations, thus forcing residents to go to court (at great personal expense) for any future

appeal. And now, through this resolution, the BOCC seeks to remove valid expert concerns about the environmental impact of this project.

The BOCC has every right to disagree and present counter-evidence, but no right to squelch or disallow others' opinions. You have the opportunity to present an analysis of the draft EIS. Have you identified any deficiencies? There are valid deficiencies identified by the Department of Interior, and previously depicted during the scoping process by the USFS Columbia Gorge National Scenic Area Landscape Architect. We, too, have identified and documented numerous deficiencies. And it is all of our rights to express them.

Suppression will result in skewed decisions not based on full perspectives and facts. Better decisions are made when a broad spectrum of information is provided.

Respectfully,

Keith Brown and Teresa Robbins
[REDACTED] Malfait Tracts Rd.
Washougal, WA 98671

Secretary Ken Salazar
Department of the Interior
1849 C Street N.W.
Washington, D.C. 20240

August 23, 2010

RE: Whistling Ridge Energy Project in Skamania County, Washington and efforts to stifle comment by the US Department of the Interior

Dear Secretary Salazar:

On August 3, 2010 the Skamania Board of County Commissioners passed Resolution 2010-51 (*see attached*) in which they “...demand, in the strongest possible terms, that Interior’s comment be immediately retracted and removed from the public record...”. This is a blatant attempt to prevent appropriate special expertise from weighing in and being duly considered (as required by the NEPA process) with respect to the environmental impacts of the above listed project. This resolution refers specifically to the July 19, 2010 letter from the Department of the Interior Office of Environmental Policy and Compliance (Portland, Oregon) written to Andrew M. Montano of the Bonneville Power Administration (*see attached*).

Member(s) of the Board of County Commissioners (BOCC) have activated considerable political pressure to attempt to thwart federal agency experts’ (Department of Interior as well as the United States Forest Service) capacities to provide vital and valid comment regarding this project. Unfortunately, this BOCC has a demonstrated history of attempting to sidetrack appropriate environmental analysis (*see attached letter to BOCC from Keith Brown and Teresa Robbins*).

Furthermore, on November 18, 2009, Congressmen Brian Baird and Doc Hastings requested retraction of comments provided by the Department of Interior National Park Service (NPS) in relation to the same project (*see attached*). We concur with the NPS response: “We fully support the development of renewable energy generation in an environmentally-sensitive manner that is cognizant of surrounding natural, cultural, historic, and scenic resources” and that “NPS has a responsibility under the National Environmental Policy Act (NEPA)... to provide comments within NPS’ special expertise with respect to environmental impacts.” Also, “... we believe we have an obligation to the American people to provide comments

on this project as it moves through the NEPA process, and offer suggestions to the project proponent that will help minimize significant impacts to the trail” (Lewis and Clark, NHT).

The draft EIS comment period closes August 27, 2010 for this project. We ask that you strongly confirm these agencies’ right and responsibility to comment, as well as provide them any necessary support to achieve this.

Respectfully submitted,

Keith Brown and
Teresa Robbins
██████ Malfait Tracts Road
Washougal, WA 98671

Attachments:

- Department of Interior Letter Office of Environmental Policy and Compliance (Portland Oregon Office) July 19, 2010 (to Montano, Bonneville Power Administration)
- Resolution 2010-51 by Skamania County Commissioners – August 3, 2010
- Letter to Skamania County Commissioners from Keith Brown and Teresa Robbins – August 23, 2010
- Department of Interior Letter National Park Service Pacific West Region (Seattle Washington) April 15, 2010 (response to Congressmen Brian Baird and Doc Hastings)



File Code: 2370

Date: May 6, 2009

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

Dear Mr. Fiksdal:

It is my understanding that your office is accepting agency comment on the proposed Whistling Ridge Energy Project application for site certification. The Forest Service is submitting the following comment with respect to the Columbia River Gorge National Scenic Area--one of America's natural wonders known worldwide for its scenic beauty and the variety and quality of its recreational opportunities. Since the Scenic Area was created by Congress in 1986, new developments occur within a controlled framework that protects the resources that make the Scenic Area special. I understand that only a small portion of the proposal is located within the boundaries of the Scenic Area. This letter concerns impacts that will result from wind turbines visible from within the Scenic Area.

The purpose of this letter is to inform you of the risk of significant impacts to protected scenic resources if the proposed energy project is built as currently planned. This letter is not meant to imply that the project outside of the Scenic Area is regulated by the Scenic Area Act. In a letter dated May 8, 2008, the Columbia River Gorge Commission provided technical assistance in response to a request by the Oregon Department of Energy regarding a similar project in Oregon. In that letter, the Gorge Commission explained that the National Scenic Area Act specifically prohibits the implementation of a buffer around the boundaries of the Scenic Area. However, the letter also explains how Scenic Area resources would be affected by the project and how they could be protected. By requesting comments on the project, I assume that EFSEC would similarly benefit from scenic resources technical expertise in this matter.

Diana Ross, CRGNSA landscape architect, provided me the following analysis of the Aesthetics portion of the application starting on page 4.2-27. My comments are based on the findings of that portion of the application and the recommendations made by my staff:

1) Key Viewing Areas (KVAs)

As mentioned in the application, the effects to scenic resources in the Scenic Area are assessed by analyzing the effects of a project on lands visible from 26 selected public vantage points from which the public views the landscape. It was not foreseen at the time the Act was passed that any development outside of the Scenic Area would be seen from these viewpoints. However, it is clear from the application that several Scenic Area Viewsheds



(the land seen from these vantage points) will be affected.

9 of the 21 viewpoints analyzed are also Key Viewing areas (#6 & 9 were missing).

- 1-SR 141
- 4 & 22- Cook-Underwood Road
- 10-Panorama Point
- 11-I-84 Westbound
- 12-Koberg State Park (Columbia River)
- 13-I-84 Eastbound
- 14-Viento State Park (Columbia River)
- 19-Historic Columbia River Highway

2) Methodology and Summary of Scenic Impacts

There are many unknowns in the summary of methods on page 4.2-30-31 of the application. For example, the methods section did not disclose the heights used for the turbines or whether the software placed and sized the turbines or whether this was done in Photo Shop as an art project.

There are also several questions concerning the methods used to 1) choose viewpoints, 2) define visual quality and viewer sensitivity, and 3) represent and make conclusions about impact.

1) Choosing viewpoints in the Scenic Area should be based on Key Viewing Areas. Several of these were missing from the discussion (SR-14, Tom McCall Point) and others are linear viewpoints where only one or no views were picked in the NSA (Columbia River, Hwy 35, I-84, Historic Columbia River Highway). Therefore, it is unclear whether the impacts to NSA scenic resources were adequately captured.

2) The NSA is a nationally known and protected landscape of high quality and high sensitivity. All KVA scenic analyses should reflect this. The results of the applicant's analysis are heavily weighted on the assignment of existing scenic quality and viewer sensitivity. These methods were not tracked and do not represent the reality of the Scenic Area.

3) The conclusions made on the summary chart would more accurately be made using degree of contrast with the natural landscape both during the day and at night, and distance of the viewer from the project area. This assumes that the most visually impacted viewpoints have been found and that the simulations accurately depict the degree of contrast. The impact summaries starting on page 4.2-68 discuss these contrasts but the ratings do not reflect the discussion. For example the text for viewpoint #1 states that "the presence of the turbines would reduce the scene's degree of intactness by introducing a large number of highly visible engineered vertical elements" but the impact rating is low to moderate.

The Summary of Existing Scenic Quality and Project Visual Impacts on page 4.2-67 did not rate any viewpoint as having a high level of impact defined as: turbines "highly

3) Recommendations

In order to assure that the scenic resource impact is adequately analyzed, I recommend the following improvements to the scenic resource impact assessment:

- Include a discussion or summary of the most visible turbines,
- Include photographs of existing energy projects visible in the NSA,
- Do not use visual simulations (at a small scale with clouds in the picture) to depict the visual impact of visible turbines,
- Make certain that the most visible viewpoints have been covered, especially with respect to the linear viewpoints, and
- Make certain to include the night-time effects in your analysis.

In order to prevent the scenic impact of the turbines visible from the Scenic Area Key Viewing Areas, I also recommend that the applicant eliminate turbine locations found to be visible from Scenic Area KVAs. I am hopeful that close attention to these impacts will result in a solution which will fit the unique area that this project will potentially benefit.

Sincerely,

/s/ Daniel T. Harkenrider

DANIEL T. HARKENRIDER
Area Manager

cc: Jill Arens
Columbia River Gorge Commission

Michelle, Kayce (UTC)

WR - DEIS
Public Comment #474

From: Rebecca Papke [REDACTED]@msn.com]
Sent: Thursday, August 26, 2010 4:21 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Rebecca Papke
[REDACTED] Lofty Loop SE
Salem, OR 97317

Michelle, Kayce (UTC)

From: Wirt T. Maxey [REDACTED]@msn.com]
Sent: Thursday, August 26, 2010 5:06 PM
To: EFSEC (UTC)
Subject: Comments on Whistling Ridge Energy Project DEIS
Attachments: Title 22 memo.3.1.docm

Attach are comments on the Whistling Ridge DEIS. Please include in the record.

Thank You
Wirt T. Maxey

To: Washington State Energy Facility Site Evaluation Council;
Bonneville Power Administration.

From: Wirt T. Maxey

Re: Comments about the Proposed Whistling Ridge Energy Project
Draft Environmental Impact Statement

Date: July 15, 2010

**THE PROPOSED WHISTLING RIDGE ENERGY PROJECT IS
ILLEGAL UNDER TITLE 22 OF THE SKAMANIA COUNTY CODE**

Background Facts:

Whistling Ridge Energy LLC is proposing a wind farm in an area of Skamania County which is located just outside the boundaries of the Columbia River Gorge National Scenic Area. (NSA) The proposed wind turbines are 430+/- feet tall and must be equipped with strobe lights at the top to satisfy FAA regulations. Cook Underwood Road is a designated "Key Viewing Area" within the NSA, located in Skamania County. Many, if not all, of the proposed turbines

and the strobe lights thereon will be highly visible from the Cook Underwood Road Key Viewing Area, as well as from numerous points throughout the NSA.

Issue: Is the proposed project legal under Title 22 of the Skamania County Code (Title 22)?

Summary: Although the National Scenic Area Act prohibits the creation of buffer zones¹, there are no provisions in The Act which prevent Skamania County, or any other governmental entity with jurisdiction, from protecting the NSA from scenic intrusions originating from outside the Scenic Area. For example, Oregon has recognized this principal. The Oregon EFSC provides that before issuing a site certificate the Council must determine by a preponderance of evidence that there will be no significant adverse impacts to the

¹ "SEC. 17 SAVINGS PROVISIONS.

(a) Nothing in sections 544 to 544P of this title shall-
(10) establish protective perimeters or buffer zones around the scenic area or each special management area. The fact that activities or uses inconsistent with the management directives for the scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude such activities or uses up to the boundaries of the scenic area or special management areas. 16 USC 544o (a)(10)."

scenic, aesthetic, recreational, and wildlife resources of the Columbia River Gorge. OAR 345-022-0000(1)(a).

Title 22 includes numerous provisions demonstrating that Skamania County, like Oregon, has protected the NSA Key Viewing Areas within Skamania County from scenic intrusions originating from both inside and outside the Scenic Area.

Conclusion: Title 22 protects the “Viewshed” of Cook Underwood Road, and requires that any development which can be seen from Cook Underwood Road be “Visually Subordinate” to its setting as seen from Cook Underwood Road. Because the proposed Whistling Ridge Energy Project cannot meet the test of visual subordination the project is illegal. The proposed project violates both the letter and the spirit of Title 22.

Analysis: This comment is directed to sections 3.8.2 (Applicable Land Use Regulations) of the DEIS. Section 3.8.2 of the DEIS briefly

mentions Title 22 and incorrectly assumes that, because the Whistling Ridge project is located outside the NSA boundaries, Title 22 is not applicable.

Section 22.02.050 of Title 22 provides, in pertinent part, that "This title applies to all lands in that portion of Skamania County lying within the Columbia River Gorge National Scenic Area...and to no other lands within the county..." The Cook Underwood Road Key Viewing Area lies within the National Scenic Area. Thus, Title 22 applies to the Cook Underwood Road Key Viewing Area.

"Viewshed" is defined in Section 22.04.010 as "a landscape unit seen from a key viewing area."²

"Development" is defined in Section 22.04.010 to mean "any land division or structure, including but not limited to new construction

² "Landscape Unit" is an undefined term and must therefore be given its' ordinary and common meaning, which would include any structure which is visible from a key viewing area.

of buildings and structures, and mining, dredging, filling, grading, paving and excavation.”

Section 22.04.010(j) of Title 22 designates Cook Underwood Road as a “Key Viewing Area”.

Section 22.18.030 entitled “ADDITIONAL STANDARDS GOVERNING NEW DEVELOPMENTS VISIBLE FROM KEY VIEWING AREAS” provides extensive standards for developments, such as the Whistling Ridge Energy Project, which are visible from key viewing areas. Section 22.18.030A provides that “The provisions in this section shall apply to proposed developments on sites topographically visible from key viewing areas”. ***Thus, to the extent any of the turbines and/or their strobe lights are visible from Cook Underwood Road, (or any other key viewing area) the requirements of Section 22.18.030 must be met.***

In order to meet the requirements of Section 22.18.030B, the portion of the Whistling Ridge Project which is visible from Cook Underwood Road must be “visually subordinate to its setting as seen from” Cook Underwood Road. Visually Subordinate is defined in Section 22.04.010 as follows:

“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. Visually subordinate forest practices in the SMA shall repeat form, line, color, or texture common to the natural landscape, while changes in their qualities of size, amount, intensity, direction, pattern, etc., shall not dominate the natural landscape setting”. (Emphasis added).

Clearly, the proposed wind turbines and their strobe lights which are visible from Cook Underwood Road can not pass the test of visual subordination.

Additionally, Section 22.18.030L of Title 22 provides that “Exterior lighting shall be directed downward and sided, hooded and

shielded such that it is not highly visible from key viewing areas". Section O. provides that "The silhouette of new buildings shall remain below the skyline of a bluff, cliff or ridge as seen from key viewing areas". Clearly, the proposed Whistling Ridge project cannot pass these tests.

The project's proponents are likely to point to the language in Section 22.02.050 of Title 22 stating that "This title applies to all lands in that portion of Skamania County lying within the Columbia River Gorge National Scenic Area...*and to no other lands within the county...*" and argue that, based on the italicized language, Title 22 is not applicable to the proposed project because it lies (in some cases approximately just 60+/- feet) outside the NSA. While it may be true that the project lies outside the NSA,³ **it is undeniable that Cook Underwood Road does lie within of the NSA. It is also undeniable that some or all of the turbines and their strobe lights will be highly visible from Cook Underwood Road and**

³ The proposed project is so close to the NSA, that an on the ground survey should be required to insure no encroachment.

therefore lie within the view shed of Cook Underwood Road.
Application of Title 22 to the Cook Underwood Road “Key
Viewing Area” results in the proposed project being illegal,
because the proposed project would impact the Cook
Underwood Road view shed in a manner that is prohibited by
Title 22.

Section 22.02.050 merely states that lands lying outside the NSA
boundaries are not entitled to scenic protection and in no way
whatsoever states or implies that Key Viewing Areas within the NSA
are not protected from scenic intrusions originating outside the
boundaries of the NSA.

The project's proponents may also point to section 22.02.120(A)(10) of Title 22 and argue that, since Title 22 does not create “buffer zones”, Title 22 does not apply to the project. Section 22.02.120(A)(10) provides:

- A. Nothing in this Title shall:
 - 10. Establish protective perimeters or buffer zones outside

of the Columbia River Gorge National Scenic Area.

“Buffer Zone” is a defined term in Title 22, therefore in order to interpret section 22.02.120(A)(10) it is necessary to consider and apply the statutory definition of “buffer zone”. Section 22.04.010 (18) of Title 22 provides:

18. **BUFFER or BUFFER ZONE** means an area adjacent to a water resource or other sensitive area that is established and managed to protect sensitive natural resources *from human disturbance*. In instances that involve a wetland, stream or pond, the buffer zone includes all or a portion of the riparian area.(emphasis added)

Reading section 22.02.120(A)(10) in conjunction with the statutory definition of “buffer zone” makes it plain that the prohibition against buffer zones in no way detracts from the protection given to key viewing area viewsheds elsewhere in Title 22. **Rather, it merely provides that nothing in Title 22 shall be interpreted to protect areas outside the NSA from “human disturbance”.** WRE is legally entitled to disturb the project areas outside the NSA however they wish (subject to Skamania County Zoning and Comprehensive Plan

limitations), so long as the project doesn't impinge on the protection granted Key Viewing areas elsewhere in Title 22.

If title 22 had been intended to limit the protection granted key viewing areas to intrusions originating from within the NSA, then the definitional and other sections referenced herein would have been so written and so limited and SCC 22.02.120(A)(10) would read something like; ... 'Establish protective perimeters or buffer zones outside the NSA, or prohibit visual intrusions on key viewing areas which originate from outside the boundaries of the NSA.' Alternatively, the definition of "buffer zone" would have been written differently to specifically negate the scenic protections granted key viewing area viewsheds elsewhere in Title 22.

Although the National Scenic Area Act prohibits the creation of buffer zones, there are no provisions in The Act which prevent Skamania County, or any other governmental entity with jurisdiction, from protecting the NSA from scenic intrusions originating from outside the Scenic Area. For example, Oregon has recognized this

principal. The Oregon EFSC provides that before issuing a site certificate the Council must determine by a preponderance of evidence that there will be no significant adverse impacts to the scenic, aesthetic, recreational, and wildlife resources of the Columbia River Gorge. OAR 345-022-0000(1)(a).

Title 22 includes numerous provisions demonstrating that this Ordinance protects the NSA Key Viewing Areas within Skamania County from scenic intrusions originating from both inside and outside the Scenic Area. Title 22 clearly asserts jurisdiction over visual impacts seen from Cook Underwood Road which originate from outside the NSA boundaries and clearly prohibits intrusions on the Cook Underwood Road view shed which originate from outside the NSA.

Viewshed is defined in Section 22.04.010 as "a landscape unit seen from a key viewing area". (emphasis added) This definition is

not limited to landscape units which originate from within the NSA boundaries.

Section 22.04.010 provides that "Development means any land division or structure, including but not limited to new construction of buildings and structures, and mining, dredging, filling, grading, paving and excavation."(emphasis added) Section 22.04.010 does not define development to mean "any land division or structure, including but not limited to new construction of buildings and structures, and mining, dredging, filling, grading, paving and excavation *within the National Scenic Area Boundary*" The definition or the term "development" is not limited to developments which are located within the NSA boundaries.

Section 22.18.030A provides that "The provisions in this section shall apply to proposed developments on sites topographically visible from key viewing areas". Section 22.18.030A does not state "...shall apply to proposed developments on sites *within the National Scenic*

Area Boundary topographically visible from key viewing areas". *The protection afforded the Cook Underwood key viewing area view shed by Section 22.18.030, is not limited to protection form visual impacts of development located within the NSA boundaries.*

Section 22.18.030O. provides similar support for the conclusion that Title 22 protects the Cook Underwood Road key viewing area from scenic impacts originating from outside the NSA boundaries. Section O. provides that "The silhouette of new buildings shall remain below the **skyline** of a bluff, cliff or ridge as seen from key viewing areas".(emphasis added) This section **does not state** that "The silhouette of new buildings **within the National Scenic Area Boundary** shall remain below the skyline of a bluff, cliff or ridge as seen from key viewing areas".

"Skyline" is defined by Section 22.04.010 as follows: " Skyline means the line that represents the place at which a landform, such as a cliff, bluff or ridge, meets the sky, as viewed from a specified

vantage point, only a key viewing area... ” Once again, this definition is *not limited* to skylines within the NSA.

As well, as a matter of fact, the only “skyline of a bluff, cliff or ridge” within Skamania County which can be seen from the Cook Underwood Road Key Viewing Area is from looking in a Northerly direction, towards the proposed project. Cook Underwood Road itself is located on the Underwood bluff and to the south the topography slopes downward to the Columbia River. Oregon lies on the other side of the river.

Pursuant to well established rules of statutory construction, if Title 22 had been intended to protect the view shed of the Cook Underwood Road Key Viewing Area (or any other key viewing area) only from visual impacts originating from within the boundaries of the NSA, the Ordinance would have specifically done so by including that limitation in the definitional sections discussed above. Since no such limitations exists in Title 22, it is clear that the View Shed of

Cook Underwood Road is protected by the express provisions of Title 22 from visual impacts originating from both within and outside of the NSA boundaries.

Title 22 includes numerous provisions demonstrating that Skamania County, like Oregon, has protected the NSA Key Viewing Areas within Skamania County from scenic intrusions originating from both inside and outside the Scenic Area.

THE PROPOSED WHISTLING RIDGE ENERGY PROJECT IS ILLEGAL UNDER TITLE 22, BECAUSE IT CANNOT PASS THE TEST OF VISUAL SUBORDINATION.

Respectfully Submitted

Wirt T. Maxey

Michelle, Kayce (UTC)

From: Jessica Walz [REDACTED]@gptaskforce.org]
Sent: Thursday, August 26, 2010 5:21 PM
To: EFSEC (UTC)
Subject: Comments on DEIS for Whistling Ridge Energy Facility
Attachments: Whistling Ridge Project DEIS Comments.doc

Please accept the attached comments on behalf of the Gifford Pinchot Task Force in regards to the Draft Environmental Impact Statement for the Whistling Ridge Energy Project. If you have any questions or concerns regarding the attached comments please call Jessica at 503 221-[REDACTED] or by e-mail [REDACTED]@gptaskforce.org.

Thank you,

Jessica Walz

Jessica Walz
Conservation Program Director
Gifford Pinchot Task Force
[REDACTED] SW Oak St., Suite [REDACTED]
Portland, OR 97205
Phone: 503-221-[REDACTED]
Fax: 503-221-[REDACTED]
[REDACTED]@gptaskforce.org
Web: www.gptaskforce.org



GIFFORD PINCHOT TASK FORCE

SW Oak Street, Suite 410 Portland, OR 97205 Phone: (503) 221- Fax: (503) 221-

May, 18, 2009

Andrew M. MONTANI
Environmental Protection Specialist
Bonneville Power Administration
P.O. Box
NE 11th Avenue
Portland, Oregon 97208-3621

Stephen Posner,
Energy Facility Site Manager
Washington EFSEC
Plum Street SE
Third Floor
Olympia, WA 98504-3172

Re: Whistling Ridge Energy Project, Draft Environmental Impact Statement

Submitted VIA E-mail to @commerce.wa.gov

Dear Responsible Official:

I am writing on behalf of the Gifford Pinchot Task Force (GP Task Force) to comment on the Draft Environmental Impact Statement (DEIS) for the Whistling Ridge Energy Project. The Task Force supports the biological diversity and communities of the Northwest through conservation and restoration of forests, rivers, fish, and wildlife. The GP Task Force is a non-profit organization with over 4,000 members in the Pacific Northwest. One of our primary campaigns focuses on protection and restoration of public lands and the preservation of critical habitat for endangered and threatened wildlife. Although we are supportive of finding alternative

ways of producing energy, we are concerned by the clearing of the forest landscape necessary for this project as well as the potential for interference with bird and wildlife migration, nesting, and foraging. Thank you for the opportunity to comment on the plan.

The project is likely to cause significant adverse impacts to the natural resources of the area because of the considerable forest land clearing that must be undertaken for the 50 + wind turbines that will be sited in this location. Some of the effects include direct impacts to wildlife habitat, wildlife displacement, avian death, fragmentation of wildlife migration corridors, and severe edge effects to intact interior forest habitat.

Clearing traditionally forested land close to an intact forest boundary (i.e the Gifford Pinchot National Forest (GPNF)) can create severe edge effects including increased disease incursion on the edge environments, noxious weed invasion, significant changes in microclimates, increase risk of fire, and increase nest predation for birds nesting in traditionally interior habitat. The most glaring failure of this DEIS is the lack of adequate data on potential effects this land clearing will have on barred owl and spotted owl competition. This project will clear forest land near historic activity centers for spotted owl and within the White Salmon spotted owl special emphasis areas (SOSEA). Although the DEIS discusses these areas and claims that destruction of the forested landscape will have little if any effect on spotted owl (DEIS, Page 3-49 - 3-56) it does not discuss or analyze the effects this large clearing can have on increased competition on spotted owl habitat on the edges of this cleared land.

Barred owls are known to be a more dominant species and can easily force spotted owl to move from nesting sites. Barred owls are more adept at using edge forests and second growth forest and will aggressively defend territories. By forcing barred owl into other locations through loss of their current foothold habitats in this area and creating environments more suitable for barred owl encroachment will create unsuitable spotted owl habitat and force spotted owls out of current occupied territory. By failing to analyze this effect of loss of forest habitat the DEIS fails to properly assess the true effects of this project on spotted owl.

The DEIS also fails to properly assess this area for wildlife migration corridors. While the DEIS does specifically look at some species of concerns like the western gray squirrel and indicates that other wildlife were present in the area (DEIS, Page 3-69) it fails to properly assess the loss of this habitat or any potential use as migration corridor from the Gorge to the Gifford Pinchot National Forest. Clearing these areas will significantly affect use of the area by large mammals like bear and cougar as migration routes and will significantly alter use by deer and elk especially if forage is not available for the ungulate species. The private forest lands along the edge of the GPNF are important as migration travel ways from the gorge to the forests. These areas have traditionally been frequented by the large elk herds of south Mount St. Helens, deer, and a variety of predators including black bears and cougar. Clearing these forest lands is forcing more of these animals into dangerous urban areas to meet their migratory needs. The DEIS fails to properly assess direct and indirect impacts to wildlife because it neglects to analyze an important need of many predator and herd species: migration corridors.

Birds suffer direct impacts from wind turbines. Establishing a wind turbine facility in an important migratory passageway such as the Gorge could significantly increase the risk to the population. The DEIS does measure the risk to Bald and Golden Eagles as relatively low (DEIS, 3-77) however wind facilities have notoriously killed more birds than predicted in their DEIS. Siting turbines in canyons and on ridgelines increases the risk of fatalities for migrating birds. Studies done in Montana and California have found greater increases in bird fatalities along migratory passways when siting occurred at low and high points. (Harmata et. al (2000), Smallwood and Thelander (2005), and Thayer (2007)). The siting of turbines in the locations as planned are likely to have a higher impact than what is estimated in the DEIS.

One of the most prolific threats to our national forest is the change in use of forested acreage surrounding national forest lands. The clearing of the land so near one of our national forest for a wind project only increases this threat. Significant impacts can result from the loss of forest habitat including: direct impacts to wildlife, sediment in streams due to increase in roads, as well as climate change effects. The Gifford Pinchot National Forest is the 4th largest carbon storage forest in the country and the loss of its surrounding forested habitat puts this valuable forest at risk of increased fires, microclimate changes, soil decimation, and many other threats.

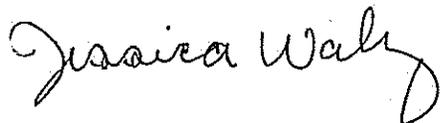
The DEIS fails to look at the direct and indirect impacts this wind project can and will have on the surrounding forest environments including on the GPNF.

We applaud the DEIS for incorporating an extensive section on visual impacts, however one of the major flaws of the DEIS is a failure to include much analysis of the visual impacts from hiking trails or viewpoints from within the Gifford Pinchot National Forest. The Gifford Pinchot National Forest is used extensively throughout the year as a destination for hikers, bikers, mount climbers, cross country skiers and other outdoor enthusiasts. One of the main draws is its views including views of Mount Hood from across the Gorge, the Gorge itself, as well as areas surrounding the GPNF. One of the potential impacts to the view shed is looking toward the northeast to Mount Adams and to the southeast to Mount Hood. We would like additional visual analysis done from areas on the GPNF which include visual simulations of the views from that area to be included in the Final Environmental Impact Statement.

Roads also have a tremendous impact on the environment. Roads wash sediment into streams, they fragment habitat, and they can fail causing more damage to stream environments. Very little to no analysis is given to the environment affects of increasing the road mileage on the area (DEIS, Page 3-226-3-227). The Final Environmental Impact Statement should include the analysis of sediment from gravel as well as paved road leaching into streams.

Thank you for the opportunity to comment on the DEIS for the Whistling Ridge Project. If you have any questions or concerns please do not hesitate to contact me at (503) 221-2102 ext. 101 or jessica@gptaskforce.org.

Thank You,

A handwritten signature in cursive script that reads "Jessica Walz".

Jessica Walz

Conservation Director

Gifford Pinchot Task Force

Michelle, Kayce (UTC)

From: Barbara Manildi [redacted]@earthlink.net
Sent: Thursday, August 26, 2010 5:31 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Barbara Manildi
[redacted] Red Cedar Way
Lake Oswego, OR 97035

Michelle, Kayce (UTC)

From: [REDACTED]@yahoo.com
Sent: Thursday, August 26, 2010 5:39 PM
To: EFSEC (UTC)
Subject: I support Whistling Ridge

Hello Energy Facility Site Evaluation Council,

I would like to voice my strong support for the Whistling Ridge Energy Project. This wind farm will give the Skamania County economy the boost it needs. We are too dependent on timber harvests and federal timber payments. Too many residents are stuck in low-income brackets while unemployment ranks far above the state average. Fortunately, Skamania has another natural resource to develop: wind. Bringing another industry here is exactly what our county needs. It will stimulate local spending, create jobs, and provide new tax revenues. How can that be a bad thing? Skamania County needs to diversify its resources and revenue, and Whistling Ridge can make that happen. I hope the Council approves the SDS application and that the project advances quickly.

Sincerely,
Jim & Keenan Webber
PO Box [REDACTED]
Carson, WA 98610

Michelle, Kayce (UTC)

From: [REDACTED]@aol.com
Sent: Thursday, August 26, 2010 5:49 PM
To: EFSEC (UTC)
Subject: SDS wind turbines in the Columbia River Gorge

Please don't allow SDS to put the wind turbines in the natural beauty of the Columbia River Gorge. We have been working with visitors to the Gorge for 27 years at Lost Lake, Mt. Hood National Forest and they come from all over the world to see the Gorge. Please consider how poorly it will effect our wildlife and views. Please PLEASE don't allow it. Thank You, Roy & Barbara Hillmick

Michelle, Kayce (UTC)

From: liz lamade [REDACTED]@verizon.net
Sent: Thursday, August 26, 2010 5:50 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

liz lamade
[REDACTED] palisades crest drive
lake oswego, OR 97034

Michelle, Kayce (UTC)

From: Heidi Venture [REDACTED]@gmail.com]
Sent: Thursday, August 26, 2010 5:57 PM
To: EFSEC (UTC)
Subject: Letter from a Columbia Gorge Wildflower Lover

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

The area where this project would be built is home to many species of wildflowers, birds and mammals. There can be no doubt that they will be adversely affected by the destruction of habitat that wind turbines require. The Columbia Gorge Region is home to over 700 species of wildflowers, many of which grow only here.

I'm also concerned about birds. The nearby wind project in Klickitat County is killing hundreds of birds and bats every year. And it isn't even an area where there are lots of birds. The ridge top project could very well be even more destructive to birds.

Lastly, the Columbia Gorge Scenic area includes the skyline, at least the quality of the scenic area does. This project will have a horrible impact on the scenic beauty of this area. There is no place like it in our country. It's worth protecting.

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Heidi Venture
[REDACTED] Katie's Lane
Hood River, OR 97031

Michelle, Kayce (UTC)

From: Trudy Maney [REDACTED]@yahoo.com]
Sent: Thursday, August 26, 2010 6:52 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Trudy Maney
[REDACTED] S Juniper Canyon Road
Helix, OR 97835

Michelle, Kayce (UTC)

From: [REDACTED]@aol.com
Sent: Thursday, August 26, 2010 7:05 PM
To: EFSEC (UTC)
Subject: I support Whistling Ridge

Hello Energy Facility Site Evaluation Council,

The Whistling Ridge Energy Project helps the state utilities reach the goals set by Initiative 937. It on industrial timber lands and the project plans are compatible with the State Forest Practices Act and County Planning Regulations. This is a west side wind project which is the most feasible and most cost-effective option for bringing 15% new renewable energy on the grid by 2020. SDS Lumber has developed a good plan for join us of its timber lands to generate clear energy. This is a unique match that helps stabilize a major employer from cyclical financial cycles of the lumber market. The are has been used as an industrial timber lands for over 100 years. Environmental studies show that the impacts are minimal.

I urge you to approve the EFSEC Certificate for this project.

Sincerely,
David McClain
[REDACTED] sw 176 Ave
Beaverton, OR 97007

Michelle, Kayce (UTC)

From: Don Stephens [REDACTED]@gmail.com]
Sent: Thursday, August 26, 2010 8:00 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

I spend many spring, summer and fall evenings in White Salmon near Pucker Huddle Road viewing sunsets over Underwood Mountain. I strongly oppose use of this site for wind energy production. It does not belong here in the most scenic area of the Gorge.

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Don Stephens
[REDACTED] SE Cora
Portland, OR 97202

Michelle, Kayce (UTC)

From: ANN TIBBOT [REDACTED]@gmail.com]
Sent: Thursday, August 26, 2010 9:18 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

ANN TIBBOT
[REDACTED] Liberty Rd. S. #51
Salem, OR 97306

Michelle, Kayce (UTC)

From: Maria Young [REDACTED]@yahoo.com]
Sent: Thursday, August 26, 2010 9:23 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Maria Young
[REDACTED] SE 14th
Portland, OR 97202

Michelle, Kayce (UTC)

From: Charles Bronson [REDACTED]@comcast.net]
Sent: Thursday, August 26, 2010 9:29 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Charles Bronson
[REDACTED] - 86th Avenue NW
Gig Harbor, WA 98335

Michelle, Kayce (UTC)

From: Ellyne Kutschera [REDACTED]@pdx.edu
Sent: Thursday, August 26, 2010 10:21 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

I am writing about the DEIS for the Whistling Ridge Energy Project, proposed in the Underwood, WA area, near the Skamania and Klickitat county lines.

I am concerned because this project appears to have questionable use while impacting wildlife and the Gorge area in a significantly negative way. The Columbia River Gorge National Scenic Area still needs to be preserved in as high a quality state as possible, not only because it is a treasure but because in-tact ecosystems are of increasing value in the face of ever continuing development.

I sincerely hope alternatives will be seriously considered, and am supporting the following concerns:

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Ellyne Kutschera
[REDACTED] NE Wendy Lane
Gresham, OR
Gresham, OR 97030

Michelle, Kayce (UTC)

From: Cort Brumfield [REDACTED]@comcast.net]
Sent: Thursday, August 26, 2010 10:35 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record. Your support is just so important & appreciated.

Cort Brumfield
[REDACTED] N. E. Webster Street
Portland, OR 97220

Michelle, Kayce (UTC)

From: Kelly & Roger Wood [REDACTED]@comcast.net]
Sent: Thursday, August 26, 2010 11:12 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Kelly & Roger Wood
[REDACTED] W. Burnside Rd.
focg [REDACTED]
Portland, OR 97210

Michelle, Kayce (UTC)

From: Jack West [REDACTED]@teleport.com]
Sent: Thursday, August 26, 2010 11:18 PM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Jack West
[REDACTED] SE Licynta Lane
Milwaukie, OR 97222

Michelle, Kayce (UTC)

From: Lisa Becker [REDACTED]@msn.com]
Sent: Friday, August 27, 2010 3:30 AM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Lisa Becker
[REDACTED] Jolie Pointe Rd West Linn, Or 97068 West Linn, OR 97068

Michelle, Kayce (UTC)

From: Paul Metzger [REDACTED]@q.com]
Sent: Friday, August 27, 2010 6:12 AM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

I am a strong supporter of solar and wind energy development, but I am also a strong supporter of preserving our natural heritage. The Columbia River Gorge is a scenic treasure ever bit as important to preserve and protect as the Grand Canyon, or Yellowstone Park, or Niagara Falls.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Paul Metzger
[REDACTED] SW Evelyn St

Portland, OR 97219

Michelle, Kayce (UTC)

From: Paul Metzger [REDACTED]@q.com]
Sent: Friday, August 27, 2010 6:12 AM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

I am a strong supporter of solar and wind energy development, but I am also a strong supporter of preserving our natural heritage. The Columbia River Gorge is a scenic treasure ever bit as important to preserve and protect as the Grand Canyon, or Yellowstone Park, or Niagara Falls.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Paul Metzger
[REDACTED] SW Evelyn St

Portland, OR 97219

Michelle, Kayce (UTC)

From: Alison Bryan [REDACTED]@gorge.net]
Sent: Friday, August 27, 2010 7:55 AM
To: EFSEC (UTC)
Subject: Whistling Ridge

To those charged with making a decision on the proposed Wind turbine project on Whistling Ridge:

We support wind energy projects,

however:

Not near houses

Not where they are visible to the National Scenic area.

Not in the middle of a forest where animals become endangered.

Perhaps the Broughton Lumber Company would be able to trade the proposed site for one further removed from houses and the Gorge.

Alison and John Bryan
[REDACTED] Post Canyon Drive
Hood River, OR 97031

Michelle, Kayce (UTC)

WR - DEIS
Public Comment #496

From: Michael Stathatos [REDACTED]@earthlink.net]
Sent: Friday, August 27, 2010 8:25 AM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Michael Stathatos
[REDACTED] Riverside Dr.
Washougal, WA 98671

Michelle, Kayce (UTC)

From: repara [REDACTED]@saw.net]
Sent: Friday, August 27, 2010 9:06 AM
To: EFSEC (UTC)
Subject: Comments-Whistling Ridge--Repar-1
Attachments: Comments_DEIS_BPA_Inadequate_27Aug2010.doc; BPA_Wind_Power_Efforts_March_2010.pdf; BalancingArea.pdf

Importance: High

Dear EFSEC,

Attached, please find one of my comment memos and attachments on the Whistling Ridge wind farm proposal. Thank you.

Mary J. Repar
[REDACTED] E. Loop Rd. #2
Stevenson, WA 98648
Tel: 509.427.[REDACTED]
E-mail: [REDACTED]@saw.net

"Life is not measured by the number of breaths we take but by the moments that take our breath away."

Mary J. Repar
E. Loop Rd.,
Stevenson, WA 98648
Tel: 509.427.

27 August 2010

EFSEC
905 Plum Street SE
Olympia, WA 98504-3172
e-mail: @commerce.wa.gov

BPA
Public Affairs Office – DKE -7
P.O. Box
Portland, OR 97293-4428
Toll-free comment line: 800.622
FAX: 503.230.
503. 230.
www.bpa.gov/comment

Re: Comments on the Whistling Ridge DEIS--BPA's inadequate input on areas that should be covered by the DEIS--such as cumulative impacts on ecosystems, fish and other wildlife; transmission lines; land use issues; etc.

Dear EFSEC and BPA,

In this process of evaluating the Draft Environmental Impact Statement for the Whistling Ridge wind farm proposed project, the Bonneville Power Administration (BPA) has been a strangely absent co-proponent. SDS has been front and center as a strong proponent of this wind farm proposal, the first-ever that might be situated in the middle of the Northwest forest. But, BPA and their technical expertise and knowledge do not appear to be adequately presented in this DEIS. Why not? BPA is a Federal agency and they are subject to all the rules and regulations of the National Environmental Policy Act but in this DEIS their input is strangely silent and non-existent, especially in some very critical areas that require in-depth analysis and discussion. The public should be able to address all aspects of this proposal.

For example, BPA seems to be proposing a lot of different transmission projects throughout WA and other states; one such project is their I-5 Corridor Reinforcement Project. **[I-5 Corridor Reinforcement Project EIS (DOE/EIS-0436)]¹**

¹ The I-5 Corridor Reinforcement Project Environmental Impact Statement will evaluate the environmental impacts of BPA's proposed 500-kilovolt transmission line and substations.

What is the scope of the analysis in the Draft EIS?

The EIS will evaluate environmental impacts potentially created from the construction, operation and maintenance of a new 500-kV transmission line and substations. See Where the I-5 Corridor Reinforcement Project Could be Located for EIS project area maps. In the EIS, BPA will identify environmental impacts

that could be created by the project. The EIS will also propose mitigation measures that could avoid or reduce potential impacts. Impacts and any mitigation measures that would avoid or reduce impacts would be analyzed for each environmental resource. All components of the project would be addressed, including the following:

- Towers,
- Conductors,
- Counterpoise,
- Fiber Optic Cable,
- Right-of-Way Clearing,
- Access Roads,
- Staging Areas,
- Gates,
- Substation Facilities

Specifically, the Draft EIS will include the following chapters:

- Summary
- Purpose and Need for Action
- Alternatives
- Affected Environment
- Environmental Consequences
- Consultation, Permit and Review Requirements
- EIS Preparers
- List of Agencies, Organizations and Persons Sent the EIS
- References
- Glossary and Acronyms
- Index

What alternatives will be analyzed in the I-5 Corridor Reinforcement Project EIS?

Alternatives that will be considered in the EIS include the following:

- Action alternatives that propose building a new transmission line on specific routes and building substations at specific locations. The number of action alternatives will be determined after the scoping process is complete and public comments and additional technical studies are analyzed; and
- A **No Action** alternative that will analyze the impacts of not building a new transmission line and substations.

What impacts and issues will be addressed in the I-5 Corridor Reinforcement Project EIS?

BPA is asking for comments on the proposal and suggestions about topics to consider in the EIS. Typical issues that BPA has considered on similar projects are listed below. Each project is unique and BPA wants to know if you are aware of issues in the project area that are not on this preliminary list.

The EIS will evaluate direct, indirect and cumulative impacts to:

- Land Use
- Cultural Resources
- Aesthetics

<http://www.bpa.gov/corporate/i-5-eis/what-included.cfm>] These projects do not appear to be connected through one, all-encompassing DEIS that would address the cumulative impacts and effects of BPA's past, present, and future building of bigger and bigger transmission lines throughout our region. I'm not sure whether BPA thinks that none of us will notice and not connect the transmission lines! But I noticed and I'm sure a lot of other people have, too.

Cumulative impacts and effects analyses, under NEPA, are not done on a project by project basis. They are done on a regional and/or geographical area. BPA is the regional energy producer for WA, OR, ID and parts of Montana. *See attached PDF file BPA_Wind_Power_Efforts_March_2010.pdf.* BPA has not adequately addressed the impacts of all their regional transmission projects that are allegedly supposed to carry all the energy that is or will be produced by beau coup wind farms in WA, OR, and other parts of the West, and also by the proposed Whistling Ridge wind farm project. *See attached PDF file BalancingArea.pdf.*

BPA needs bigger and bigger transmission lines because they have to do something to integrate and balance all the wind energy that is being produced. They do not have adequate transmission capability for all of these wind farms. The question one may ask then is: Why are so many wind farms being subsidized into existence so that BPA has to build 200 foot tall new transmission lines all over the West?? Isn't there a better way? Can't we do more to conserve energy, use more efficiencies in existing technologies in order to save and conserve energy so that we won't have to build more, and more transmission lines, more backup gas plants to balance wind energy inefficiency, and wind farms in our rural areas? Are our rural areas being used up, being subjected to environmental injustices, being degraded through their industrialization—just to supply more and more energy to metropolitan urban areas, areas that cannot seem to get enough energy?? If we produce it, they will suck it up. It is time to turn off the energy tap from the NW. Let us all learn to live within our energy means.

In reading the Whistling Ridge DEIS, I couldn't help but notice BPA's absence throughout the document. After some research, I came across BPA's I-5 Corridor Reinforcement Project DEIS (DOE/EIS-0436). **See footnote 1 for full text.** What quickly became obvious to me, after reading about this I-5 project to build a 500-kilovolt transmission line and substations, was that the Whistling Ridge DEIS didn't have any of

-
- Sensitive Plants and Animals and their Habitats
 - Fish and Water Resources
 - Erosion and Soils
 - Socioeconomics and Public Services
 - Electric and Magnetic Fields
 - Noise
 - Public Health and Safety
 - Air Quality
 - Recreation
 - Environmental Justice

the information, as far as I was able to (not) find, about the existing transmission lines that would be used by the wind farm project and whether new ones would be proposed at some future date, the substation that is being proposed and what effects it would have on the environment, etc. The I-5 EIS “will evaluate environmental impacts potentially created from the construction, operation and maintenance of a new 500-kV transmission line and substations.” Why aren’t the BPA transmission lines that Whistling Ridge would use not evaluated in the Whistling Ridge DEIS? The I-5 EIS continues, “All components of the project would be addressed, including the following:

- Towers,
- Conductors,
- Counterpoise,
- Fiber Optic Cable,
- Right-of-Way Clearing,
- Access Roads,
- Staging Areas,
- Gates,
- Substation Facilities.“

I don’t even know what counterpoise is but I sure would like to know its meaning! What are staging areas? Why aren’t all these “components” addressed by BPA in the Whistling Ridge DEIS? Cumulative impacts are measured in the past, present, and future and BPA has built transmission lines in the past, present, and will in the future. Cumulative impacts have to be done on a regional basis, not on a project basis. Why hasn’t BPA done cumulative impacts analyses for their transmission lines and substations? For their towers and conductors? For their access roads? For their staging areas? Gates? Substation facilities? So many questions, so few answers.

In the I-5 BPA proposal, the following talks about “No Action Alternative”: “A **No Action alternative** that will analyze the impacts of not building a new transmission line and substations.” So, why doesn’t the Whistling Ridge DEIS have a BPA analysis about the impacts of not building any new transmission lines, or using the old transmission line, or substations? Why isn’t the “No Action Alternative” addressed more fully and thoughtfully in the DEIS? SDS Lumber, the co-proponent, made a lackadaisical effort to address the “No Action Alternative” (probably because they don’t want one!) but I sensed that their heart wasn’t in it. However, BPA is a Federal agency and we all know that they have no heart, so I do expect them to whole-heartedly address, in excruciating technical detail, what the impacts of a “No Action Alternative” would be.

Further, the I-5 EIS goes on to say that it “...will evaluate direct, indirect and cumulative impacts to:

- Land Use
- Cultural Resources
- Aesthetics
- Sensitive Plants and Animals and their Habitats

- Fish and Water Resources
- Erosion and Soils
- Socioeconomics and Public Services
- Electric and Magnetic Fields
- Noise
- Public Health and Safety
- Air Quality
- Recreation
- Environmental Justice.”

From the Whistling Ridge DEIS, it is very apparent that BPA did not address any of these issues as they pertain to transmission lines and substations, technology that BPA should know something about! They should. Their own BalancingArea.pdf (see attachment), states the following impacts to fish:

“BPA’s Balancing Area: Balancing Fish, Water, and Wind

Potential cumulative impacts to fish and other aquatic resources from past, present, and future development in the region include the **loss of riparian habitat**, increased sediment loading, **increased stream temperatures**, pollution from herbicide and insecticide use, changes in peak and low stream flows, **fragmentation of fish habitat**, decreases in stream bank stability, and altered nutrient supply. Since wind projects in the region are typically located in upland areas and generally well away from fish habitat, these projects are not expected to have a significant contribution to direct cumulative impacts to fish species.

However, the interconnection of existing and proposed wind-powered generation projects in the region to the BPA transmission system does poses the potential for cumulative impacts to listed Columbia River fish species through a somewhat complex relationship among the wind projects, general Columbia River hydrosystem operations (see map below), and operation of the hydrosystem to meet Clean Water Act (CWA) and Endangered Species Act (ESA) requirements for listed fish species.” [my bold emphasis]

So, there is a cumulative impacts issue for fish. This is not adequately addressed in the Whistling Ridge DEIS, and it is apparent from this document that BPA has knowledge about the issue and could have addressed it in the DEIS. SDS is not the lone proponent on this wind farm project and cumulative impacts are not done on a single project basis. ALL of BPA’s regional infrastructure has cumulative impacts on fish and it should be part and parcel of this wind farm DEIS.

Other areas not addressed in the Whistling Ridge DEIS are electric and magnetic fields from transmission lines. Why didn’t BPA address this issue in the DEIS? Are there health effects for humans and wildlife from transmission lines? If bigger and taller transmission lines are built are there bigger electric and magnetic fields? Can transmission lines cause forest fires? What are the environmental impacts of

transmission lines? Habitat fragmentation? How much pesticide is used on an annual basis to keep the transmission area free of vegetation and pests? What are the environmental effects of this pesticide use? Etc., etc., etc.

I've got a lot of questions about BPA's portion of this DEIS and my questions have not been adequately addressed or answered.

All of the above direct and indirect cumulative impacts should have been addressed by BPA in the Whistling Ridge DEIS, especially as they pertain to the technical aspects of regional energy production. And, BPA is a regional energy producer.

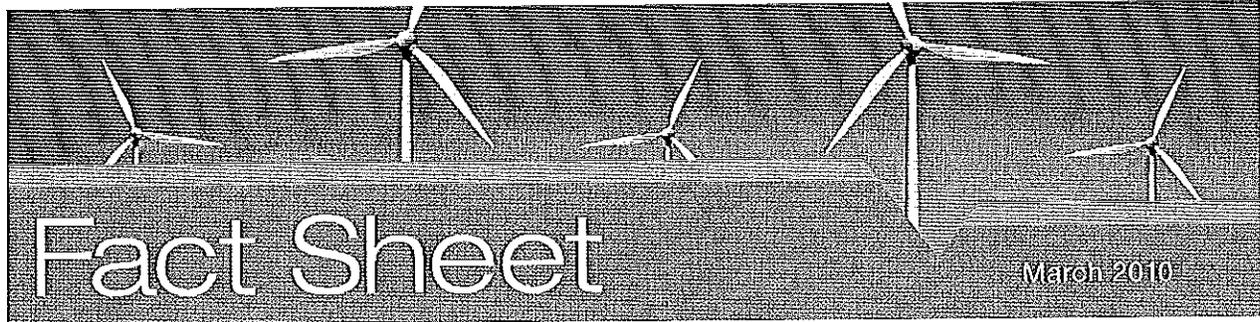
BPA has not, as they are obligated to do through Federal regulations, actively participated in this NEPA process for the Whistling Ridge wind farm proposal. The DEIS is fatally flawed and incomplete because of their lack of technical input about the cumulative impacts and effects of this project on our environment and ecosystems. BPA needs to be an active participant in this process and so far they have totally abrogated their regulatory obligations under NEPA. The Whistling Ridge wind farm DEIS is incomplete and should be redone with BPA's input.

Thank you.

Sincerely,

/e-signature/Mary J. Repar

27 August 2010



BPA's wind power efforts surge forward

As the nation seeks new sources of clean electricity, wind has emerged as the most mature and promising new resource. It is free of CO₂ emissions, relatively cost effective compared to other new generating resources and is, thus far, the most viable non-hydro renewable resource available on a large scale. Its assimilation into the U.S. and Pacific Northwest generation resource base is advancing rapidly, thanks to concerted efforts to meet and overcome challenges to dealing with wind's variability.

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

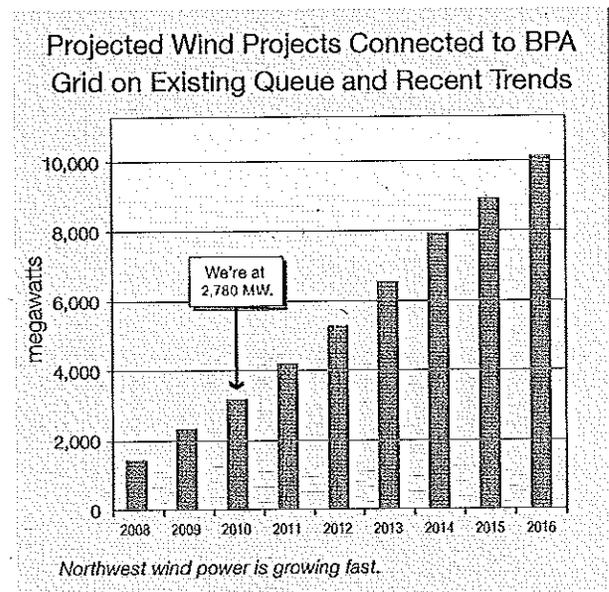
Growth rate fuels progress

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

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

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

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



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

Making it work

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

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

Building transmission to support wind integration

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

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

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

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

Network Open Season did show, however, that BPA needs to move forward with four new transmission

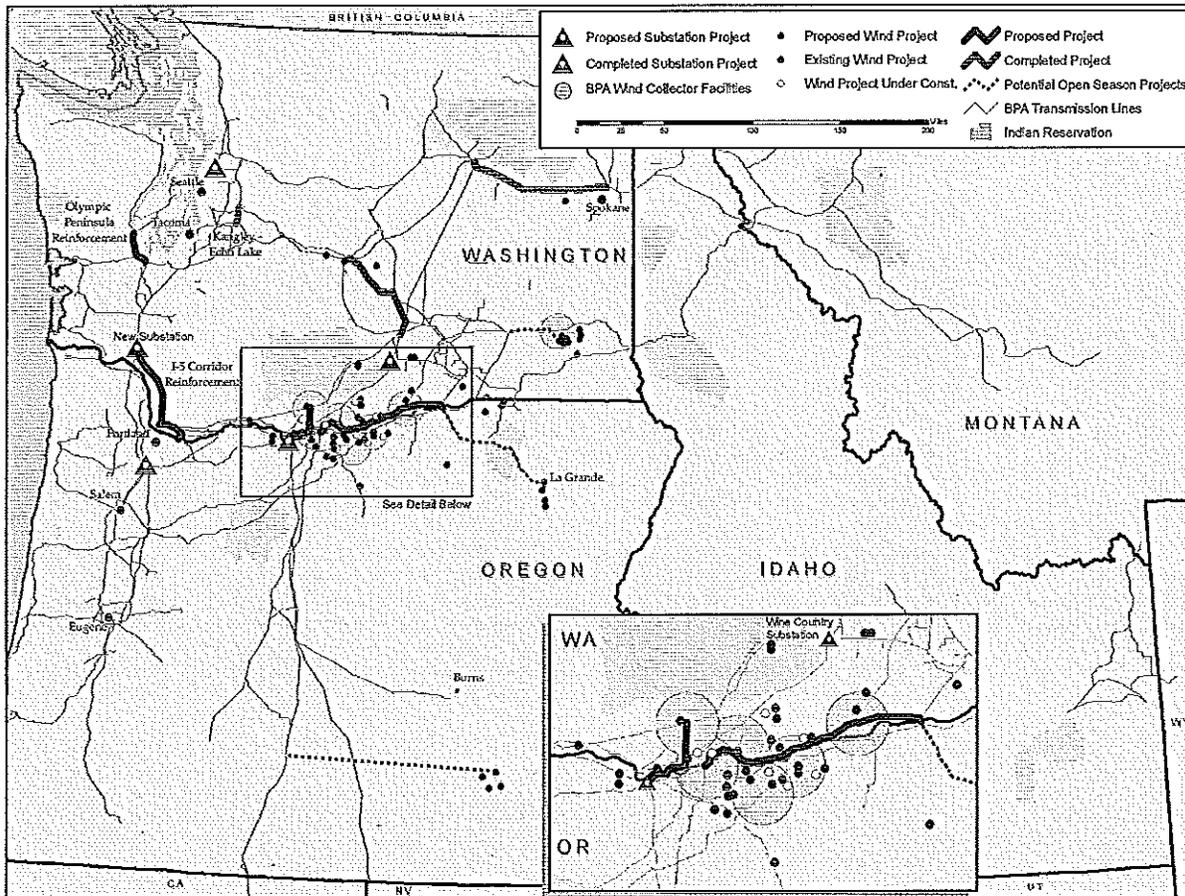
BPA wind initiatives are stretching the capability of the existing system.

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

Changing grid management for wind power integration

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

Completed and Proposed BPA Transmission Line & Wind Projects



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

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

New protocols manage extreme wind ramps

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

in scheduled wind generation deplete BPA's ability to provide balancing energy, BPA revises the wind schedules downward, and receiving utilities must make up the difference with their own resources.

Shorter scheduling intervals

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

The challenge

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

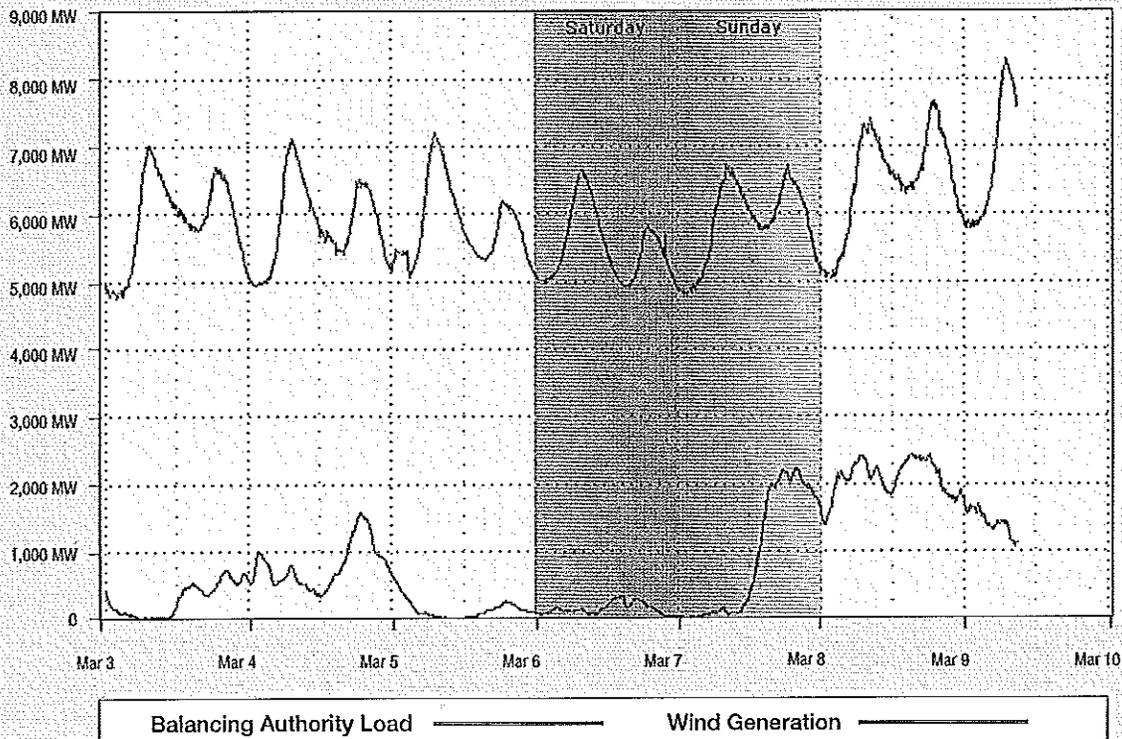
To maintain system balance in the high-voltage grid, utilities use balancing reserves, or generation held available to manage fluctuations between power load

and power generation. In the Northwest, the hydro system has historically provided all the balancing reserves we need, because hydro generation can be increased or decreased quickly. But the hydro system has limits. To support continued large-scale wind power growth, we are learning to operate the existing system in new ways.

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

BPA Balancing Authority Load & Total Wind Generation

March 3–10, 2010



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

New wind forecasting applications

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

Dynamic transfer

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

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

Customer-supplied imbalance reserves

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

There are more than 30 discrete balancing authorities in the Western Electricity Coordinating Council

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

Exploring generation capacity reserves

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

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

Key terms

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

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

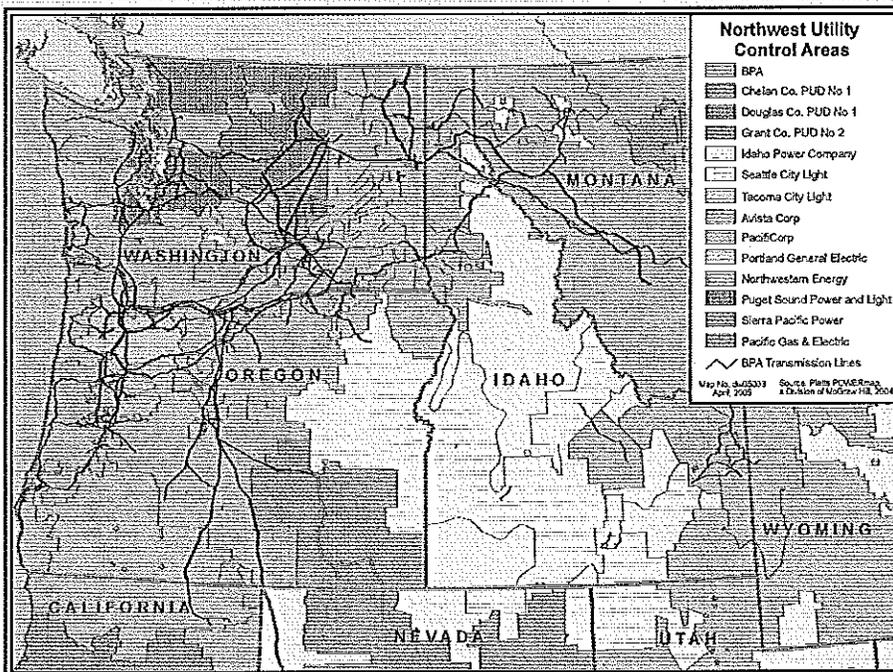
Part of a much larger picture

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

Utilities in the Northwest are working together to realize similar benefits across their smaller balancing authorities. BPA is among many Western utilities participating in a Joint Initiative of ColumbiaGrid, WestConnect and the Northern Tier Transmission Group — entities managing and coordinating some transmission issues among utilities — to develop

common approaches to wind integration. For example, the Joint Initiative is creating a common system for dynamically scheduling control of a wind generator from a resident balancing authority to another balancing authority where the wind power is being consumed.

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



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

Energy storage technologies could be a valuable source of such flexibility to the degree they can absorb excess wind energy when it is not needed and return it to the grid during periods of greater demand. For example, BPA is working with the Pacific Northwest National Laboratory on its study of various options including pumped storage, compressed air storage, batteries and flywheels. PNNL is also examining residential applications such as hot water heaters as potential sources of energy storage for the grid.

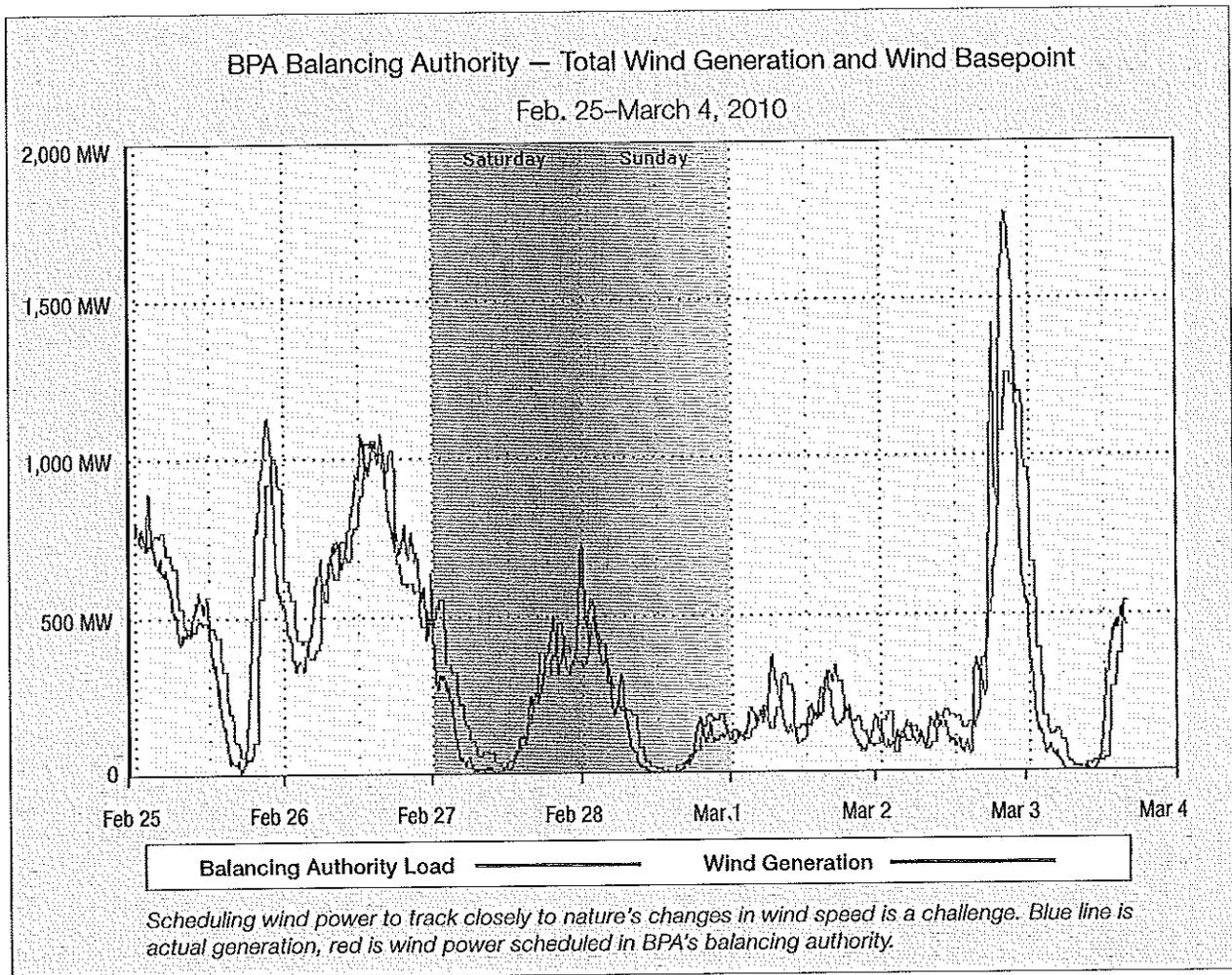
BPA is working with the U.S. Army Corps of Engineers and the Bureau of Reclamation on the potential for pumped hydro storage in the Northwest. This represents a new application of an existing but evolving technology that could help fill the need for more

BPA has begun to explore options for adding flexibility capacity.

frequent uses of ramping generation to respond to wind variability.

Follow our progress

To follow BPA's wind integration work or participate in its efforts, go to www.bpa.gov/go/wind, contact Eric King at evking@bpa.gov or call BPA at 1-800-622-4519.



BPA's Balancing Area Balancing Fish, Water, and Wind

Potential cumulative impacts to fish and other aquatic resources from past, present, and future development in the region include the loss of riparian habitat, increased sediment loading, increased stream temperatures, pollution from herbicide and insecticide use, changes in peak and low stream flows, fragmentation of fish habitat, decreases in stream bank stability, and altered nutrient supply. Since wind projects in the region are typically located in upland areas and generally well away from fish habitat, these projects are not expected to have a significant contribution to direct cumulative impacts to fish species.

However, the interconnection of existing and proposed wind-powered generation projects in the region to the BPA transmission system does pose the potential for cumulative impacts to listed Columbia River fish species through a somewhat complex relationship among the wind projects, general Columbia River hydrosystem operations (see map below), and operation of the hydrosystem to meet Clean Water Act (CWA) and Endangered Species Act (ESA) requirements for listed fish species.

Many of the region's wind generators are located within what is known as the BPA Balancing Area. In BPA's balancing area, like in all balancing areas, there must be a match between generation and load at all times. Within BPA's Balancing Area, most existing and proposed wind projects are concentrated in one geographic area, located to the east of the Columbia River Gorge. Because of this concentration, the amount of wind power on BPA's transmission system tends to vary with the sometimes widely fluctuating wind velocities (and hence wind project output) in this area. That is, when wind speeds are low in this area, there is very little wind power generated, and the amount of wind power on BPA's system is low. Conversely, when wind speeds are high, the wind projects are generating close to or at full capacity, and the amount on BPA's system is high.

The proportion of wind power on BPA's transmission system has grown quickly and dramatically in recent years, and even greater future growth is expected. As of January 2010, there were more than 2,700 MW of total wind generation interconnected to the BPA system. In addition, BPA expects to have up to 6,000 MW of total wind generation interconnected to the system by 2013.

The combination of an increasingly large proportional share of wind power on BPA's system and the natural fluctuation of this power results in large, unscheduled swings in wind generation of up to several hundred megawatts within a single hour. **To address this situation, BPA currently reserves capacity in the hydrosystem to provide balancing services for these swings when needed.**

The potential for impacts to Columbia River fish arises when the electrical output from wind generators in the region exceeds their hourly generation schedules. In such situations, BPA must immediately decrease generation elsewhere in the system to maintain the constant balance of generation and load needed to keep the system stable. This can be accomplished in one of three ways. First, BPA can reduce overall Columbia River water flows and generation by releasing less water from Columbia River hydroprojects and putting the water into storage. Second, BPA can decrease hydroproject generation by spilling water at the dams rather than running it through the dam turbines. Third, BPA can reduce other sources of generation within the BPA Balancing Area.

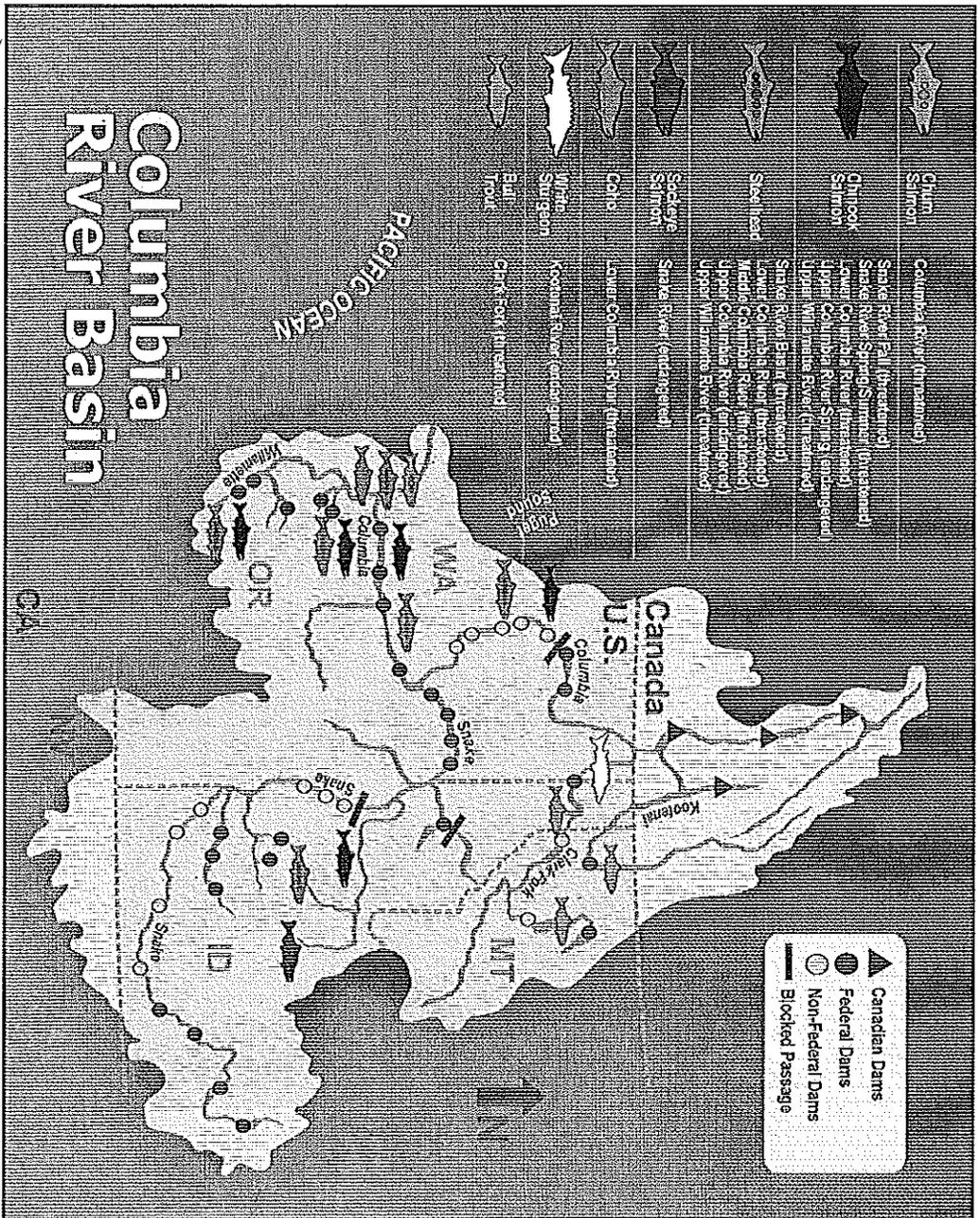
During certain times and conditions, the first option of reducing flows is not available because reservoir space is being maintained for required flood protection at the hydro projects. At these times, river flows are already high due to spring runoff or other required drafts to maintain flood control space. Because of these flood control requirements, there simply is no space at the reservoirs in which to store additional water to decrease generation during these periods.

Likewise, the second option – spilling water at the dams – is not available during certain times and conditions because this spilling results in elevated levels of total dissolved gases developing in the river. As the amount of water spilled increases, so does the level of total dissolved gases. The CWA standards for total dissolved gases, which were established to protect fish, limit the level of dissolved gas saturation permissible in the river when migrating salmon are present. Naturally occurring levels of gas in the Columbia and Snake rivers varies between 105 and 120 percent of equilibrium total gas saturation pressure (ambient atmospheric pressure). The state standard for saturation in these rivers is limited to 110 percent of saturation at any point of sample collection without a state waiver. The U.S. Army Corps of Engineers has obtained a state waiver from Oregon and Washington that allows the level of gas in the rivers to be 120 percent. Running the river to this level, but no higher, to avoid CWA violations has become a fundamental component of how spill and resultant fish passage has been managed at hydroelectric power generation facilities.

Another issue with the second option is the increased potential to actually harm ESA-listed fish species. Higher levels of gas supersaturation associated with increased spilling increases the risk of ESA-listed fish species being affected by gas bubble trauma from excessive uncompensated gas pressure which they cannot avoid. Species, life-stage, size and genetics are all important factors in determining the tolerance of fish to supersaturated waters. Acute mortality will occur when gas bubbles are present in the heart in sufficient quantity to prevent the movement of blood. Various sublethal effects have also been reported to significantly impact

mortality, most importantly blindness, decreased tolerance to stress, loss of lateral sense, and secondary infections. Permanent affects to individuals and large-scale mortality in populations may occur after only short-term exposure to high levels of gas, especially in environments where compensating pressures do not exist. Avoiding such impacts to ESA-listed fish species is also a fundamental component of how spill and resultant fish passage has been managed at hydroelectric power generation facilities.

Because of these issues with the first and second options, BPA currently is working towards implementing the third option. Accordingly, BPA is working with wind project developers and operators to develop measures for temporarily reducing sources of wind generation within the BPA Balancing Area when necessary. As part of a comprehensive review of wind project interconnections and their effects that was conducted in winter 2008, BPA has established transmission operation protocols under which BPA's dispatch system automatically instructs wind project operators to reduce their generation to specified levels if necessary for reliability and ESA or CWA compliance. BPA has issued Dispatcher Standing Order (DSO) 216 to document these protocols, and is continuing to refine and clarify this DSO as more is learned about wind project operations relative to BPA's transmission system (visit http://www.transmission.bpa.gov/windtop_controls/default.cfm for more information). These measures ensure that wind power on BPA's transmission system does not cumulatively impact Columbia River hydro operations necessary for listed fish species.



The Federal Columbia River Power System (purple dams) as seen on the Columbia and Snake Rivers.

Michelle, Kayce (UTC)

From: [REDACTED]@barnhartcrane.com
Sent: Friday, August 27, 2010 9:50 AM
To: EFSEC (UTC)
Subject: I support Whistling Ridge

Hello Energy Facility Site Evaluation Council,

Wind power is our future. It goes with hydro power hand in glove. Fossil power is affordable now, but as sources of coal and gas decline, and as global demand for them increases, these electricity generating fuels will make fossil power by far the most expensive source. Not in ten years, but in five. The states with the highest percentage of wind power will be the most prepared for that high cost future.

I've been on the turbine roads at Whistling Ridge (and Coyote Crest). The sites are challenging, but the wind resource is strong. The developers have solid plans for high quality projects. It's time to get wind power generation a little closer to the people who use it.

Thank you,
Dave Malen

Sincerely,
Dave Malen
[REDACTED] SE 9th Circle
Camas, WA 98607

Michelle, Kayce (UTC)

From: Annette Lange Hildebrand [REDACTED]@yahoo.com]
Sent: Friday, August 27, 2010 9:50 AM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

I am so saddened by even the thought of Whistling Ridge Energy Project in the Underwood Washington area.
The impact would last a life time, not only to the world acclaimed scenery that is beyond price, but to the sensitive habitat and wildlife as well.

There is a need for wind and solar energy, yes.
However, there are other areas, especially in Sherman County and other areas in NE Oregon, beyond the scenic area of the Columbia River.
There are places that migrating birds are not passing through as well.
Please, please reconsider the location of this project.

Thank you for allowing me to submit these comments into the record.

Sincerely,
Annette Lange Hildebrand
[REDACTED] SW N.Dakota St. [REDACTED]
Tigard, Or 97223

Annette Lange Hildebrand
[REDACTED] SW Conestoga Dr.
Apt [REDACTED]
Beaverton, OR 97008

Michelle, Kayce (UTC)

From: Corie Lahr [REDACTED]@gmail.com]
Sent: Friday, August 27, 2010 9:49 AM
To: EFSEC (UTC)
Subject: Whistling Ridge Negatively Impacts Columbia Gorge

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

This proposal is likely to have different and greater wildlife impacts than any other wind energy facility proposed in the State of Washington, because it is proposed along a forested ridgeline in the foothills of the Cascade Mountains and on the boundary of the Columbia River Gorge National Scenic Area. The proposed project would cause significant negative impacts to sensitive wildlife and plant habitat, and would degrade the outstanding scenic beauty of the Lewis and Clark National Historic Trail and Columbia River Gorge National Scenic Area.

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

The DEIS has other flaws. The DEIS fails to adequately analyze the potential cumulative impacts of this project when considered with other existing and likely future wind energy projects and other development projects in the region. The photo simulations in the DEIS are inadequate and misleading. Some of them have cloudy backgrounds, thus not adequately representing the full extent of the impacts, and other simulations are out scale. Additional viewpoints need to be considered, including views from the Historic Columbia River Highway. The DEIS erroneously concludes that the scenic impacts would not be significant, even though most of the turbines would be visible from designated key viewing areas within the National Scenic Area. In addition, the BPA and EFSEC have not adequately consulted with the Yakama Nation to ensure the protection of cultural resources.

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

Thank you for extending the public comment period and allowing me to submit these comments into the record.

Corie Lahr
[REDACTED] Rattler Ridge
Mosier, OR 97040

Michelle, Kayce (UTC)

From: repar [redacted]@saw.net
Sent: Friday, August 27, 2010 10:12 AM
To: EFSEC (UTC)
Subject: Comments-Whistling Ridge DEIS-EJ-Repar-3
Attachments: Comments_DEIS_Environmental Justice_27Aug2010.doc;
NEPA_ej_guidance_nepa_epa0498.pdf; EJ_presidential order_12898.pdf

Importance: High

Dear EFSEC,
Attached, please find my comments on Environmental Justice, for the Whistling Ridge DEIS,
with attachments. Thank you.

Mary J. Repar
[redacted] E. Loop Rd. [redacted]
Stevenson, WA 98648
Tel: 509.427 [redacted]
E-mail: [redacted]@saw.net

*"Life is not measured by the number of breaths we take but by the moments that take our
breath away."*

Mary J. Repar
[REDACTED] E. Loop Rd., [REDACTED]
Stevenson, WA 98648
Tel: 509.427. [REDACTED]

27 August 2010

EFSEC
905 Plum Street SE
Olympia, WA 98504-3172
e-mail: [REDACTED]@commerce.wa.gov

BPA
Public Affairs Office – DKE -7
P.O. Box [REDACTED]
Portland, OR 97293-4428
Toll-free comment line: 800.622.4 [REDACTED]
FAX: 503.230. [REDACTED]
503. 230. [REDACTED]
www.bpa.gov/comment

Re: Inadequacy of the Environmental Justice analyses for the proposed BPA and SDS Lumber Whistling Ridge wind farm project located in rural Skamania County; and, cumulative impacts of environmental injustice on the rural environment and inhabitants, both human and wildlife

Dear EFSEC and BPA,

An area which I thought got very short shrift and not enough in-depth analysis, in the DEIS, was the subject of Environmental Justice (EJ). To me, a lay person, EJ means that the exploitation of the environment (including wildlife, ecosystems, habitats, etc.) and humans should not be allowed by individuals, entities, and agencies, in order to benefit themselves. BPA and SDS are both entities, one Federal, the other private. BPA certainly must adhere to Executive Order 12898, "Federal Actions to address Environmental Justice in Minority populations and Low-Income Population."

In doing my research on the EJ issue, I came across the following statement from the Environmental Protection Agency (EPA) (**see attachment, entitled NEPA_ej_nepa_epa0498.pdf**); although this is EPA-specific, I believe it also pertains to another Federal agency, BPA: "On February 11, 1994, President Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This Executive Order is **designed to focus the attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities. It requires federal agencies to adopt strategies to address environmental justice concerns within the context of agency operations.** In an accompanying Presidential memorandum, the President emphasizes existing laws, including the **National Environmental Policy Act (NEPA) should provide opportunities for federal agencies to address environmental hazards in minority communities and low-income communities.** In April of 1995, the U.S. Environmental Protection Agency (EPA) released the document titled "Environmental

Justice Strategy: Executive Order 12898." The document defines the approaches by which EPA will ensure that **disproportionately high and adverse human health or environmental effects on minority communities and low-income communities are identified and addressed**. It establishes Agency-wide goals for American Indian, Alaska Native, and other indigenous peoples (e.g., Native Hawaiian). It also establishes Agency-wide goals for environmental protection, and lists actions the EPA would take to incorporate environmental justice into its mission." [my bold emphasis]

There is a section in the Executive Order 12898 (see attachment **EJ_presidential_order_12898.pdf**) on EJ, "Sec. 4-4. Subsistence Consumption of Fish and Wildlife, 4-401. Consumption Patterns. In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns" which is pertinent to the DEIS and I believe was NOT adequately addressed. BPA must have a lot of information on the Indian tribes, who "principally rely on fish and/or wildlife for subsistence" so they didn't they include it in the EJ section of the DEIS? There are cumulative impacts to wildlife and humans from BPA's energy generation. Where are the cumulative impacts and effects analyses in the DEIS?

Another section deals with discrimination, "6-602. *Executive Order No. 12250*. This Executive order is intended to supplement but not supersede Executive Order No. 12250, which requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving Federal financial assistance. Nothing herein shall limit the effect or mandate of Executive Order No. 12250." Well, I think that rural areas are being discriminated against by being littered with Federally subsidized wind farms whose impermeable surfaces and hundreds of miles of environment-destroying, prairie criss-crossing maintenance roads are highly destructive to the rural environment. Why aren't these wind farms located in urban areas, areas which they primarily serve with their energy production?

The "No Action" Alternative for the Whistling Ridge DEIS was also not adequately explored in the EJ section. In *Morongo Band of Mission Indians v. Federal Aviation Administration*, 161 F.3d 569, 98 Cal. Daily Op. Serv. 8560 (9th Cir. 11/23/1998)¹, it states "**NEPA's regulations require agencies to "[r]igorously explore**

¹ *Morongo Band of Mission Indians v. Federal Aviation Administration*, 161 F.3d 569, 98 Cal. Daily Op. Serv. 8560 (9th Cir. 11/23/1998)

[1] U.S. Court of Appeals, Ninth Circuit

[2] No. 98-70033

[3] 161 F.3d 569, 98 Cal. Daily Op. Serv. 8560, 1998.C09.42034 <http://www.versuslaw.com>

[4] November 23, 1998

and objectively evaluate all reasonable alternatives." 40 C.F.R. S 1502.14. "The `existence of a viable but unexamined alternative renders an environmental impact statement inadequate.' [my bold emphasis] Where is the rigorous exploration of the "No Action" alternative in the DEIS? It does not exist. That is one big reason why DEIS should NOT be written by the proponents of projects—they tend to be heavily biased toward having their project built!

In the EPA document (see attachment) that I have already cited, there is the following statement: "EISs are required to be broad in scope, *addressing the full range of potential effects of the proposed action on human health and the environment*. Regulations established by both the Council on Environmental Quality (CEQ) and EPA require that socioeconomic impacts associated with significant physical environmental impacts be addressed in the EIS." [my bold and *italic emphasis*]." There is certainly no "full range of potential effects of the proposed action on human health and the environment" analysis in the DEIS. Health effects that might or would occur—audio, visual, environmental—are downplayed in the EIS and information that is contradictory is not included. What are the benefits and detriments of siting hundreds if not thousands of wind farms in rural environments? What are the impacts to the rural communities and their way of life? What are the impacts to water resources? To air quality? Wind farm proponents talk about turbines as if they do not change air quality, but propellers whirling around do change the chemical composition of air. Where is the analysis to look at this air quality issue? Wind turbines can change the flow of wind in the area where they are located. How do wind turbines changing local wind patterns affect the local area? How does it affect crops? Rainfall? Rural areas have

[5] MORONGO BAND OF MISSION INDIANS, PETITIONER, v. FEDERAL AVIATION ADMINISTRATION; WILLIAM WITHYCOMBE, REGIONAL ADMINISTRATOR, FAA, RESPONDENTS.

[15] SUMMARY

[16] OPINION

[17] The Morongo Band of Mission Indians ("Morongo Band" or "Tribe") petitions for review of a Record of Decision ("ROD") of the Federal Aviation Administration ("FAA"), implementing the Los Angeles International Airport ("LAX") East Arrival Enhancement Project ("AEP"). The Morongo Band raises claims under the National Environmental Policy Act ("NEPA"), 42 U.S.C. SS 4321-4370d, section 106 of the National Historic Preservation Act ("NHPA"), 16 U.S.C. S 470f, section 4(f) of the Transportation Act, 49 U.S.C. S 303(c), and various FAA regulations.

[48] NEPA's regulations require agencies to "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. S 1502.14. "The `existence of a viable but unexamined alternative renders an environmental impact statement inadequate.'" Resources Ltd. v. Robertson, 35 F.3d 1300, 1307 (9th Cir. 1994) (quoting Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992)). An agency, however, is "entitled to identify some parameters and criteria -- related to Plan standards -- for generating alternatives to which it would devote serious consideration. Without such criteria, an agency could generate countless alternatives." Id. (quoting Mumma, 956 F.2d at 1522). The "touchstone for our inquiry is whether an EIS's selection and Discussion of alternatives fosters informed decision-making and informed public participation." City of Angoon v. Hodel, 803 F.2d 1016, 1020 (9th Cir. 1986) (internal quotations and citation omitted).

water resources that are used by many urban areas. If these water resources are used and abused, we will all suffer.

In conclusion, the environmental justice section of the Whistling Ridge DEIS, p. 3-250+, is not adequately address by BPA, a Federal agency. Nor is it adequately addressed by SDS, the co-proponent of this wind farm project. Rural areas are being disproportionately impacted by these Federally-subsidized wind farms, and thorough, data-rich, regional cumulative impacts analyses have not been done, to date, by BPA or SDS. Environmental justice practices demand a complete analysis of cumulative impacts on human health and the environment. BPA should, as a Federal agency, know this and should have done its Federally-mandated environmental justice analysis of the cumulative impacts and effects of its actions on rural communities in its region of energy production.

/e-signature/Mary J. Repar

27 August 2010

Presidential Documents

Title 3—

The President

Executive Order 12898 of February 11, 1994

Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1—Implementation.

1-101. Agency Responsibilities. To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands.

1-102. Creation of an Interagency Working Group on Environmental Justice.
(a) Within 3 months of the date of this order, the Administrator of the Environmental Protection Agency ("Administrator") or the Administrator's designee shall convene an interagency Federal Working Group on Environmental Justice ("Working Group"). The Working Group shall comprise the heads of the following executive agencies and offices, or their designees: (a) Department of Defense; (b) Department of Health and Human Services; (c) Department of Housing and Urban Development; (d) Department of Labor; (e) Department of Agriculture; (f) Department of Transportation; (g) Department of Justice; (h) Department of the Interior; (i) Department of Commerce; (j) Department of Energy; (k) Environmental Protection Agency; (l) Office of Management and Budget; (m) Office of Science and Technology Policy; (n) Office of the Deputy Assistant to the President for Environmental Policy; (o) Office of the Assistant to the President for Domestic Policy; (p) National Economic Council; (q) Council of Economic Advisers; and (r) such other Government officials as the President may designate. The Working Group shall report to the President through the Deputy Assistant to the President for Environmental Policy and the Assistant to the President for Domestic Policy.

(b) The Working Group shall: (1) provide guidance to Federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(2) coordinate with, provide guidance to, and serve as a clearinghouse for, each Federal agency as it develops an environmental justice strategy as required by section 1-103 of this order, in order to ensure that the administration, interpretation and enforcement of programs, activities and policies are undertaken in a consistent manner;

(3) assist in coordinating research by, and stimulating cooperation among, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other agencies conducting research or other activities in accordance with section 3-3 of this order;

(4) assist in coordinating data collection, required by this order;

(5) examine existing data and studies on environmental justice;

(6) hold public meetings as required in section 5-502(d) of this order; and

(7) develop interagency model projects on environmental justice that evidence cooperation among Federal agencies.

1-103. Development of Agency Strategies. (a) Except as provided in section 6-605 of this order, each Federal agency shall develop an agency-wide environmental justice strategy, as set forth in subsections (b)-(e) of this section that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The environmental justice strategy shall list programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to, at a minimum: (1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations; (2) ensure greater public participation; (3) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and (4) identify differential patterns of consumption of natural resources among minority populations and low-income populations. In addition, the environmental justice strategy shall include, where appropriate, a timetable for undertaking identified revisions and consideration of economic and social implications of the revisions.

(b) Within 4 months of the date of this order, each Federal agency shall identify an internal administrative process for developing its environmental justice strategy, and shall inform the Working Group of the process.

(c) Within 6 months of the date of this order, each Federal agency shall provide the Working Group with an outline of its proposed environmental justice strategy.

(d) Within 10 months of the date of this order, each Federal agency shall provide the Working Group with its proposed environmental justice strategy.

(e) Within 12 months of the date of this order, each Federal agency shall finalize its environmental justice strategy and provide a copy and written description of its strategy to the Working Group. During the 12 month period from the date of this order, each Federal agency, as part of its environmental justice strategy, shall identify several specific projects that can be promptly undertaken to address particular concerns identified during the development of the proposed environmental justice strategy, and a schedule for implementing those projects.

(f) Within 24 months of the date of this order, each Federal agency shall report to the Working Group on its progress in implementing its agency-wide environmental justice strategy.

(g) Federal agencies shall provide additional periodic reports to the Working Group as requested by the Working Group.

1-104. Reports to the President. Within 14 months of the date of this order, the Working Group shall submit to the President, through the Office of the Deputy Assistant to the President for Environmental Policy and the Office of the Assistant to the President for Domestic Policy, a report that describes the implementation of this order, and includes the final environmental justice strategies described in section 1-103(e) of this order.

Sec. 2-2. Federal Agency Responsibilities for Federal Programs. Each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.

Sec. 3-3. Research, Data Collection, and Analysis.

3-301. Human Health and Environmental Research and Analysis. (a) Environmental human health research, whenever practicable and appropriate, shall include diverse segments of the population in epidemiological and clinical studies, including segments at high risk from environmental hazards, such as minority populations, low-income populations and workers who may be exposed to substantial environmental hazards.

(b) Environmental human health analyses, whenever practicable and appropriate, shall identify multiple and cumulative exposures.

(c) Federal agencies shall provide minority populations and low-income populations the opportunity to comment on the development and design of research strategies undertaken pursuant to this order.

3-302. Human Health and Environmental Data Collection and Analysis. To the extent permitted by existing law, including the Privacy Act, as amended (5 U.S.C. section 552a): (a) each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(b) In connection with the development and implementation of agency strategies in section 1-103 of this order, each Federal agency, whenever practicable and appropriate, shall collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action. Such information shall be made available to the public, unless prohibited by law; and

(c) Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are: (1) subject to the reporting requirements under the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11001-11050 as mandated in Executive Order No. 12856; and (2) expected to have a substantial environmental, human health, or economic effect on surrounding populations. Such information shall be made available to the public, unless prohibited by law.

(d) In carrying out the responsibilities in this section, each Federal agency, whenever practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments.

Sec. 4-4. Subsistence Consumption of Fish and Wildlife.

4-401. Consumption Patterns. In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns.

4-402. Guidance. Federal agencies, whenever practicable and appropriate, shall work in a coordinated manner to publish guidance reflecting the latest scientific information available concerning methods for evaluating the human health risks associated with the consumption of pollutant-bearing fish or

wildlife. Agencies shall consider such guidance in developing their policies and rules.

Sec. 5-5. *Public Participation and Access to Information.* (a) The public may submit recommendations to Federal agencies relating to the incorporation of environmental justice principles into Federal agency programs or policies. Each Federal agency shall convey such recommendations to the Working Group.

(b) Each Federal agency may, whenever practicable and appropriate, translate crucial public documents, notices, and hearings relating to human health or the environment for limited English speaking populations.

(c) Each Federal agency shall work to ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and readily accessible to the public.

(d) The Working Group shall hold public meetings, as appropriate, for the purpose of fact-finding, receiving public comments, and conducting inquiries concerning environmental justice. The Working Group shall prepare for public review a summary of the comments and recommendations discussed at the public meetings.

Sec. 6-6. *General Provisions.*

6-601. *Responsibility for Agency Implementation.* The head of each Federal agency shall be responsible for ensuring compliance with this order. Each Federal agency shall conduct internal reviews and take such other steps as may be necessary to monitor compliance with this order.

6-602. *Executive Order No. 12250.* This Executive order is intended to supplement but not supersede Executive Order No. 12250, which requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving Federal financial assistance. Nothing herein shall limit the effect or mandate of Executive Order No. 12250.

6-603. *Executive Order No. 12875.* This Executive order is not intended to limit the effect or mandate of Executive Order No. 12875.

6-604. *Scope.* For purposes of this order, Federal agency means any agency on the Working Group, and such other agencies as may be designated by the President, that conducts any Federal program or activity that substantially affects human health or the environment. Independent agencies are requested to comply with the provisions of this order.

6-605. *Petitions for Exemptions.* The head of a Federal agency may petition the President for an exemption from the requirements of this order on the grounds that all or some of the petitioning agency's programs or activities should not be subject to the requirements of this order.

6-606. *Native American Programs.* Each Federal agency responsibility set forth under this order shall apply equally to Native American programs. In addition, the Department of the Interior, in coordination with the Working Group, and, after consultation with tribal leaders, shall coordinate steps to be taken pursuant to this order that address Federally-recognized Indian Tribes.

6-607. *Costs.* Unless otherwise provided by law, Federal agencies shall assume the financial costs of complying with this order.

6-608. *General.* Federal agencies shall implement this order consistent with, and to the extent permitted by, existing law.

6-609. *Judicial Review.* This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person. This order shall not be construed to create any right to judicial review involving the compliance or noncompliance

of the United States, its agencies, its officers, or any other person with this order.

William Clinton

THE WHITE HOUSE,
February 11, 1994.

Final Guidance For Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses

April 1998

DISCLAIMER AND ACKNOWLEDGMENTS

The mention of company or product names is not to be considered an endorsement by the U.S. Government or by the Environmental Protection Agency. With the technical assistance of Science Applications International Corporation (SAIC), this document was prepared in partial fulfillment of EPA Contract 68-WE-0026, Work Assignment 72-IV.

This guidance was prepared under the direction of an EPA Workgroup co-chaired by Arthur Totten and Bill Dickerson of the Office of Federal Activities and helped by Karen Norris. The Workgroup members included the following:

Region 1: James Younger

Region 2: Joe Bergstein

Region 3: Roy Denmark

Region 4: Heinz Mueller; Chris Hoberg

Region 6: Yvonne Vallette; Jack Ferguson

Region 8: Gene Kersey

Region 10: Rick Seaborne

Office of Administration and Resource Management: Rob
M. Lee

Office of Air and Radiation: Will Wilson

Office of Environmental Justice: Alex Varela

Office of Water, American Indian Environmental Office:
Elizabeth Bell

Office of Federal Activities: Marshall Cain; Bill Dickerson;
Arthur Totten

Office of General Counsel: Jim Havard; David Coursen;
Mary O'Lone

Office of Prevention, Pesticides and Toxic Substances:
Bruce Sidwell

Office of Regional Operations and State/Local Relations:
Ann Cole

Office of Research and Development: Candace Castillo

Office of Solid Waste and Emergency Response: Kent
Benjamin

This guidance is intended to improve the internal management of EPA with respect to environmental justice under NEPA. It will not be deemed to create any right, benefit or trust obligation either substantive or procedural, enforceable by any person, or entity in any court against the agency, its officers, or any other person. Compliance with this guidance will not be justiciable in any proceeding for judicial review of agency action.

TABLE OF CONTENTS

1.0 PURPOSE

1.1 Background

1.1.1 What is Environmental Justice?

1.1.2 Executive Order 12898

1.2 Principles/Philosophy of this Guidance

1.2.1 EPA Actions Requiring NEPA Compliance

1.2.2 EPA Review of Proposed Actions Under Clean Air Act §309

1.3 Organization of this Guidance

2.0 KEY TERMS AND FACTORS FOR
CONSIDERATION IN EVALUATING
ENVIRONMENTAL JUSTICE CONCERNS

2.1 Defining Minority and/or Low-Income Population

2.1.1 Minority and Minority Population

2.1.2 Low-Income Population

2.2 Considering Effects

2.2.1 Disproportionately High and Adverse Effects

2.2.2 Cumulative and Indirect Effects

2.2.3 Environmental Exposure

2.3 Summary of Factors to Consider in Environmental
Justice Analyses

3.0 INCORPORATING ENVIRONMENTAL JUSTICE
INTO THE NEPA PROCESS

3.1 Overview of the NEPA Process

3.2 Incorporating Environmental Justice Concerns into this
Process

3.2.1 Environmental Justice Screening Analysis

3.2.2 Environmental Justice and the Determination of
Significance

3.2.3 Scoping and Planning

3.2.3.1 Incorporating Environmental Justice Concerns into EA Development

3.2.3.2 Incorporating Environmental Justice Concerns in EIS Scoping

3.2.4 Identification of Affected Resources

3.2.5 Identification of Alternatives

3.2.6 Prediction of Environmental Consequences

3.2.7 Mitigation Measures

3.2.8 Decisions

4.0 PUBLIC PARTICIPATION

4.1 Public Participation Under NEPA

4.2 Mechanisms to Enhance Participation

5.0 METHODS AND TOOLS FOR IDENTIFYING AND ASSESSING DISPROPORTIONATELY HIGH AND ADVERSE EFFECTS

5.1 Locational/Distributional Tools

5.2 Ecological and Human Health Risk Assessments

5.3 Socioeconomic Analyses

LIST OF EXHIBITS

Exhibit 1. Summary of EPA Program NEPA Requirements and Equivalent or Voluntary Activities

Exhibit 2. Summary of Factors to Consider in
Environmental Justice Analysis

Exhibit 3. Scoping Considerations and Examples of
Environmental Justice Issues

Exhibit 4. Communications Issues Raised by Low-Income
and/or Minority Communities

APPENDICES

Appendix A - Regional Contacts

Appendix B - References

1.0 PURPOSE

On February 11, 1994, President Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This Executive Order is designed to focus the attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities. It requires federal agencies to adopt strategies to address environmental justice concerns within the context of agency operations. In an accompanying Presidential memorandum, the President emphasizes existing laws, including the National Environmental Policy Act (NEPA) should provide opportunities for federal agencies to address environmental hazards in minority communities and low-income communities. In April of 1995, the U.S. Environmental Protection Agency (EPA) released the document titled "Environmental Justice Strategy: Executive Order 12898." The document defines the approaches by which EPA will

ensure that disproportionately high and adverse human health or environmental effects on minority communities and low-income communities are identified and addressed. It establishes Agency-wide goals for American Indian, Alaska Native, and other indigenous peoples (e.g., Native Hawaiian). It also establishes Agency-wide goals for environmental protection, and lists actions the EPA would take to incorporate environmental justice into its mission.

In August 1997, the EPA Office of Environmental Justice released the "Environmental Justice Implementation Plan." The Implementation Plan supplements the EPA environmental justice strategy. It provides estimated time frames for undertaking revisions, identifying the lead agents and determining the measures of success for each action item. Several EPA offices are developing more specific plans and guidance to implement Executive Order 12898 and this Agency-wide strategy.

This document serves as a guidance to incorporate environmental justice goals into EPA's preparation of environmental impact statements (EISs) and environmental assessments (EAs) under NEPA. The National Environmental Policy Act of 1969 (42 U.S.C. §4321 et seq.) serves as the Nation's basic environmental protection charter. A primary purpose of NEPA is to ensure that federal agencies consider the environmental consequences of their actions and decisions as they conduct their respective missions. For "major Federal actions significantly affecting the quality of the human environment," the federal agency must prepare a detailed environmental impact statement (EIS) that assesses the proposed action and all reasonable alternatives. EISs are required to be broad in scope, addressing the full range of potential effects of the proposed action on human health and the environment. Regulations established by both the Council on Environmental Quality (CEQ) and EPA require that socioeconomic impacts associated with significant physical environmental impacts be addressed in the EIS.

Environmental assessments have also become very important components of the NEPA process. Originally intended to serve as a mechanism for determining whether an agency's action was significant, thereby meriting an EIS, EAs are important analyses on their own. As a matter of policy, EAs completed by EPA regularly address

socioeconomic effects associated with environmental impacts of Agency actions.

The purpose of this guidance is to assist EPA staff responsible for developing EPA NEPA compliance documentation, including EISs and EAs, in addressing a specific concern -- that of environmental justice. Because analyzing and addressing environmental justice may assist in determining the distributional effects of environmental impacts on certain populations, it is entirely consistent with the NEPA process. This guidance is intended to:

- heighten awareness of EPA staff in addressing environmental justice issues within NEPA analyses and considering the full potential for disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;
- present basic procedures for identifying and describing junctures in the NEPA process where environmental justice issues may be encountered;
- present procedures for addressing disproportionately high and adverse effects to evaluate alternative actions, and;
- present methods for communicating with the affected population throughout the NEPA process.

As seen throughout this guidance document, environmental justice issues can be and should be analyzed and addressed using many of the same tools currently intrinsic to the NEPA process.

1.1 Background

1.1.1 What is Environmental Justice?

Environmental Justice has been defined by a variety of organizations interested in the topic. EPA's Office of Environmental Justice offers the following definition:

"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people,

including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

The goal of this "fair treatment" is not to shift risks among populations, but to identify potential disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

1.1.2 Executive Order 12898

Executive Order 12898 and its accompanying memorandum have the primary purpose of ensuring that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations ..."⁽¹⁾ The Executive Order also explicitly called for the application of equal consideration for Native American programs. To meet these goals, the Order specified that each agency develop an agency-wide environmental justice strategy.

The Presidential Memorandum that accompanied the Executive Order calls for a variety of actions. Four specific actions were directed at NEPA-related activities, including:

1. Each federal agency must analyze environmental effects, including human health, economic, and social effects, of federal actions, including effects on minority communities and low-income communities, when such analysis is required by NEPA.
2. Mitigation measures outlined or analyzed in EAs, EISs, or Records of Decision (RODs), whenever feasible, should address significant and adverse environmental effects of proposed federal actions on minority communities and low-income communities.
3. Each federal agency must provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving

accessibility of public meetings, official documents, and notices to affected communities.

4. In reviewing other agencies' proposed actions under Section 309 of the Clean Air Act, EPA must ensure that the agencies have fully analyzed environmental effects on minority communities and low-income communities, including human health, social, and economic effects.

As noted earlier, the purpose of this guidance is to assist EPA personnel in identifying and evaluating disproportionately high and adverse human health or environmental effects in minority communities and low-income communities within the context of NEPA documents prepared by EPA for actions which EPA complies with the procedural requirements of NEPA (*e.g.*, research and development activities, facilities construction, wastewater treatment construction grants, EPA-issued National Pollutant Discharge Elimination System (NPDES) permits for new sources, and programs under the EPA Voluntary NEPA Compliance Policy), including instances where EPA satisfies its NEPA compliance obligation as a cooperating agency. It is also meant to improve the affected communities' access to the NEPA process.

1.2 Principles/Philosophy of this Guidance

This guidance highlights important ways in which EPA-prepared NEPA documentation may help to identify and address EJ concerns. The rationale and associated implications of the guidance will be described in the remainder of this document. This section provides a summary listing of the major implications.

EPA officials should be vigilant in identifying where EPA actions may have disproportionately high and adverse human health or environmental effects on minority and/or low-income communities.

Identification should occur as early as possible, preferably during any initial screening exercise. The screening exercise should identify the presence of minority or low-income communities and whether such communities are likely to experience adverse environmental or human health effects as a result of proposed EPA actions.

The sensitivity to environmental justice concerns should sharpen the focus of the analysis. While the analytical tools to be used are similar, the analysis should focus both on the overall affected area and population and on smaller areas and/or communities within the affected area.

It is desirable that EPA NEPA analysts tasked with identifying and addressing environmental justice issues work as a team. This team should be comprised of an interdisciplinary staff that includes individuals familiar with environmental justice issues, public participation mechanisms and outreach strategies, Native American concerns and issues and who are experienced in the risk assessment process. Additionally, the team should consult with EPA's Regional Environmental Justice coordinators (refer to Appendix A), who are valuable resources in identifying local community groups among other functions.

Where proposed actions may affect tribal lands or resources (e.g., treaty-protected resources⁽²⁾, cultural resources and/or sacred sites⁽³⁾) EPA will request that the affected Indian Tribe⁽⁴⁾ seek to participate as a cooperating agency (40 CFR 1508.5). Where differences occur regarding the preferred alternative or mitigation measures that will affect tribal lands or resources, the affected Indian Tribe may request that a dispute resolution process be initiated to resolve the conflict between the tribe and the Agency.

Environmental justice concerns may lead to more focused analyses, identifying significant effects that may otherwise have been diluted by examination of a larger population or area. Environmental justice concerns should always trigger the serious evaluation of alternatives as well as mitigation options.

Identifying the "affected community" is particularly important. The effects of the proposed action will often vary depending on the distance of the affected community from the action and the type of effect created by the action (e.g., airborne or waterborne pollution, increased traffic, etc.). Effects on the community should be discussed in terms of reasonable increments from the site of the action.

Community involvement is particularly important in cases involving potential environmental justice issues. Early and sustained communications with the affected community

throughout the NEPA process is an essential component of environmental justice.

For meaningful community involvement to be achieved in circumstances where environmental justice is an issue, technical assistance supplied by EPA should be available to the community to assist in their full participation (e.g., interpretation of scientific documents, development of alternatives or mitigation measures).

EISs and RODs, and EAs and FONSI (Finding of No Significant Impact) should document the analyses used to identify the presence or absence of disproportionately high and adverse effects and present the results of those analyses. The ROD and the FONSI should document the conclusion of these analyses (i.e., whether the action will or will not have a disproportionately high and adverse effect on minority and/or low-income communities) and describe any mitigation that will be undertaken to avoid or minimize such effects.

1.2.1 EPA Actions Requiring NEPA Compliance

EPA is required to comply with NEPA for its research and development activities, facilities construction, wastewater treatment construction grants under Title II of the Clean Water Act and under certain Appropriations Acts, and EPA-issued National Pollutant Discharge Elimination System (NPDES) permits for new sources subject to new source performance standards. The Agency is exempted by statute for actions taken under the Clean Air Act and for most Clean Water Act programs. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), requires EPA to comply only with the substantive, not the procedural, requirements of other environmental laws for on-site responses. In the case of other EPA programs, the courts have found EPA procedures to be "functionally equivalent" to the NEPA process and therefore these EPA programs are exempt from NEPA procedural requirements. Also, EPA voluntarily prepares EISs for a number of actions pursuant to a long-standing statement of Agency policy.

Exhibit 1 identifies EPA's major program areas and indicates which actions are subject to NEPA, which Congress has exempted from NEPA, which have been

found to be functionally equivalent to NEPA, and which receive NEPA-like analyses. This guidance is applicable solely to EPA programs and actions subject to NEPA and not those identified as "functionally equivalent" in Exhibit I. However, this should not preclude its use as reference where "functionally equivalent" programs or actions processes may benefit from the information contained therein.

1.2.2 EPA Review of Proposed Actions Under Clean Air Act §309

As a result of §309 of the Clean Air Act, EPA has a key role in the overall implementation of NEPA. Specifically, §309 mandates that EPA "review and comment in writing on the environmental impact of any matter relating to duties and responsibilities granted pursuant to this chapter or other provisions of the authority of the Administrator, contained in any (1) legislation proposed by any federal department or agency, (2) newly authorized federal projects for construction and any major federal agency action (other than a project for construction) to which Section 4332(2)(C) of this title applies [subject to Section 102(2)(C) of NEPA], and (3) proposed regulations published by any department or agency of the Federal government. Such written comment shall be made public at the conclusion of any such review" (42 U.S.C. §7609(a)).

In conducting §309 reviews, EPA is further directed by the Presidential Memorandum that accompanied Executive Order 12898 to ensure that agencies fully analyze environmental effects of their proposed actions on minority and low-income communities, including human health, social, and economic effects. As a result of both §309 and the Presidential Memorandum, EPA is able to assist other federal agencies in evaluating proposed actions that are subject to NEPA by identifying possible environmental justice concerns that may result from such actions and by offering alternative solutions and mitigation measures for unavoidable impacts.

Although mention is made here of EPA's responsibilities under §309, this document is not intended to provide guidance for §309 reviews. EPA's §309 guidance should be used for that purpose. This guidance supplements the Council on Environmental Quality's *"Environmental*

Justice Guidance Under the National Environmental Policy Act" and is tailored to EPA's conduct in actions for which EPA must comply with NEPA and where EPA has jurisdiction as a cooperating agency. It does not provide guidance related to other federal agencies' actions or for EPA's review of other federal agencies' EISs.

1.3 Organization of this Guidance

The remainder of this guidance is organized as follows: **Chapter 2** describes key environmental justice terms and factors and the application of the key definitions and factors in the context of standard NEPA analyses; **Chapter 3** describes key steps in the NEPA process, including both EISs and EAs, where analyses of environmental justice concerns should be incorporated; **Chapter 4** discusses public participation approaches of direct relevance to minority and/or low-income communities; and **Chapter 5** provides a brief overview of methodological tools that can be used to identify and assess potential disproportionately high and adverse effects.

2.0 KEY TERMS AND FACTORS FOR CONSIDERATION IN EVALUATING

ENVIRONMENTAL JUSTICE CONCERNS

The purpose of this section is to introduce key terms and concepts to heighten the EPA analyst's awareness of how disproportionately high and adverse effects may be identified. The discussion is based on guidance prepared by a task force of the Interagency Working Group on Environmental Justice (IWG). The IWG was created by Executive Order 12898 and is comprised of the heads (or representatives) of 17 departments and agencies.

The identification and analysis of disproportionately high and adverse human health or environmental effects on minority communities and low-income communities should occur throughout the NEPA process, from the initial phases of the screening analysis through the consideration and communication of all alternatives and associated mitigation techniques.

In conducting an EPA NEPA analysis that is sensitive to environmental justice concerns, the inter-disciplinary team

of EPA NEPA analysts should have an understanding of key terms central to environmental justice and should understand what factors need to be considered to ensure that all relevant concerns are identified and evaluated in a direct and explicit manner. The team should include experts familiar with available and appropriate public participation procedures and strategies and, where such concerns may arise, individuals familiar with the unique concerns of Native American Tribes and populations. Developing a keen sensitivity to potential environmental justice concerns and modifying the scope of the analysis can have a dramatic impact on whether environmental justice concerns are identified and addressed adequately and appropriately. Therefore, the EPA NEPA analyst must be sensitive to what issues and factors to look for to avoid the possibility that disproportionately high and adverse effects may be inadvertently missed, incorrectly characterized, or inappropriately minimized. So as to avoid potential oversights of environmental justice concerns, the EPA NEPA analyst should work closely with the affected community in drafting an EIS or EA, and where the community's concerns warrant, EPA should formalize this interaction (e.g., community advisory boards).

Appendix A includes the Council on Environmental Quality's (CEQ's) "Environmental Justice Guidance Under the National Environmental Policy Act" which incorporates the IWG-developed guidance on key terms in Executive Order 12898 that are pertinent to environmental justice analyses. That guidance was developed to assist federal agencies in conducting analyses of disproportionately high and adverse effects of their programs, policies, and activities. The guidance is not static but provides for informed judgment in every case; this means that EPA NEPA analysts will need to make careful decisions to ensure that environmental justice concerns are identified and addressed.

The remainder of this chapter is organized into two sections. The first section addresses terms that should be considered in identifying the existence of minority communities or low-income communities. The second section identifies factors that often are associated with disproportionately high and adverse effects, including cumulative and indirect impacts, on minority or low-

income members of the larger community. Methodological approaches for conducting analyses appear in Chapter 5.

2.1 Defining Minority and/or Low-Income Population

The purpose of this section is to assist the analyst in determining whether there is a minority community or low-income community that may be addressed in the scope of EPA's NEPA analysis.

2.1.1 Minority and Minority Population

The first part of the guidance on minority population provided by the IWG provides a numeric measure: over 50 percent of the affected area. The remainder of the guidance calls for the analyst to use his or her best judgment in evaluating the potential for EJ concerns. It is important that the EPA NEPA analyst consider both the circumstances of any groups residing within the affected area, as well as the percentage of the affected community that is composed of minority peoples.

Within its guidance, the IWG explains that a minority population may be present if the minority population percentage of the affected area is "meaningfully greater" than the minority population percentage in the general population or other "appropriate unit of geographic analysis." The term "affected area," although not defined by the guidance, should be interpreted as that area which the proposed project will or may have an effect on. The IWG guidance also advises agencies not to "artificially dilute or inflate" the affected minority population when selecting the appropriate unit of geographic analysis. Clearly, a key element here is the selection of the appropriate level of geographic analysis; that is, selecting a comparison population to which the population in the affected area will be compared to identify if there are "meaningfully greater" percentages. The selection of the appropriate unit of geographic analysis may be a governing body's jurisdiction, a neighborhood census tract, or other similar unit. This is done to prevent artificial dilution or inflation of the affected minority population. In an EPA NEPA analyses, the analyst should use the potentially affected population under various alternatives as a benchmark for comparison wherever possible. In addition, a simple demographic comparison to the next larger geographic area or political jurisdiction

should be presented to place population characteristics in context and allow the analyst to judge whether alternatives adequately distinguish among populations. For example, all preliminary locations for a project could fall in minority neighborhoods, therefore, a comparison among them would not reveal any population differences. Consequently, an additional alternative would be necessary to allow any disproportionately high and adverse effects to be identified.

The fact that census data can only be disaggregated to certain prescribed levels (*e.g.*, census tracts, census blocks) suggests that pockets of minority or low-income communities, including those that may be experiencing disproportionately high and adverse effects, may be missed in a traditional census tract-based analysis. Additional caution is called for in using census data due to the possibility of distortion of population breakdowns, particularly in areas of dense Hispanic or Native American populations. In addition to identifying the proportion of the population of individual census tracts that are composed of minority individuals, analysts should attempt to identify whether high concentration "pockets" of minority populations are evidenced in specific geographic areas.

The IWG guidance also advises agencies to consider both groups of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals, where either type of group "experiences common conditions" of environmental exposure or effect within the guidance provided for minority population. This can result from cultural practices, educational backgrounds, or the median age of community residents (*e.g.*, disproportionate numbers of elderly residents, children, or women of child bearing age may be more susceptible to environmental risks).

A factor that should be considered in assessing the presence of a minority community is that a minority group comprising a relatively small percentage of the total population surrounding the project may experience a disproportionately high and adverse effect. This can result due to the group's use of, or dependence on, potentially affected natural resources, or due to the group's daily or cumulative exposure to environmental pollutants as a result of their close proximity to the source. The data may show that a distinct minority population may be below the

thresholds defined in the IWG key terms guidance on minority population. However, as a result of particular cultural practices, that population may experience disproportionately high and adverse effects. For example, the construction of a new treatment plant that will discharge to a river or stream used by subsistence anglers may affect that portion of the total population. Also, potential effects to on- or off-reservation tribal resources (e.g., treaty-protected resources, cultural resources and/or sacred sites) may disproportionately affect the local Native American community and implicate the federal trust responsibility to tribes.⁽⁵⁾

The EPA NEPA analyst should look at each situation on a case-by-case basis to determine if there may be disproportionately high and adverse effects on a minority population.

The EPA NEPA analyst should make every effort to identify the presence of distinct minority communities residing both within, and in close proximity to, the proposed project, and to identify those minority groups which utilize or are dependent upon natural resources that could be potentially affected by the proposed action. Non-traditional data gathering techniques, including outreach to community-based organizations and tribal governments early in the screening process, may be the best approach for identifying distinct minority communities and/or tribal interests within the study area. See Chapter 4 for a discussion of public outreach techniques.

2.1.2 Low-Income Population

This guidance recommends that pursuant to the CEQ guidance, low-income populations in an affected area (that area in which the proposed project will or may have an effect) should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty. In conjunction with census data, the EPA NEPA analyst should also consider state and regional low-income and poverty definitions as appropriate. In identifying low-income populations, agencies may consider as a community a group of individuals living in geographic proximity to one another or set of individuals (such as migrant workers or Native Americans) where either type of group

experiences common conditions of environmental exposure.

As with the identification of minority communities, the level of aggregation of available data is an issue of concern when seeking to determine whether one or more low-income communities may be affected by a project. Also, as with minority communities, "pockets" of low-income individuals may be masked by aggregated data. The level of aggregation of data, as well as how current the available data are, should be taken into account by the EPA NEPA analyst.

Determining the existence and location of low-income and minority communities within the reaches of a projects' influence can be a difficult task. Several means of gathering this information are available; however, it is up to the EPA NEPA analyst to ascertain which techniques will best suit the project at hand. Further, the EPA NEPA analyst must be flexible and open to consider additional avenues which may be unique to select projects or geographic areas. The use of national decennial census data in depicting low-income/poverty and minority statistics is one of the most common methods used. While the census provides valuable information for the EPA NEPA analyst, there are often many gaps associated with the information. Therefore, it may be necessary for the EPA NEPA analyst to validate this information with the use of additional sources. The additional methods available in locating the populations of interest include contacting local resources, government agencies, commercial database firms, and the use of locational/distributional tools. (Please see Chapter 5 regarding the use of locational/distributional tools.)

Local resources should be sought for local and up-to-date knowledge of a given area and its inhabitants as well as a lead to other sources of information. Examples of local resources include: community and public outreach groups, community leaders, and state universities (i.e., economic departments).

State government agencies such as the Department of Economic Development, Planning and Development Department, State Minority Business Office, and State Enterprise Zone Offices are also valuable resources to contact. For example, if an area is designated as an

"enterprise zone", unique economic and demographic data may exist in that particular area, access to which could enhance the EPA NEPA analyst's ability to assess the economic situation of a given area.

Local resources and state governments can both be contacted for information regarding factors that are characteristic of low-income communities and which may assist in identifying these communities. These factors may include: limited access to health care, an inadequate, overburdened or aged infrastructure, and particular dependence of the community, or components of the community, on subsistence living (*e.g.*, subsistence fishing, hunting, gathering or farming). In some cases, these factors can be evaluated directly from traditional information sources. For example, the age and condition of water treatment facilities and presence of lead service lines should be available from municipal utilities. Outreach to community groups may be the most reliable data collection method in other cases, such as those where the degree to which the cultural and dietary habits of low-income or minority families and their economic condition dictate subsistence living. Consequently, where the community median household income may exceed that of the poverty line, conditions generally associated with low-income communities may be present, resulting in cumulative effects that may meet the threshold for environmental justice concerns.

Commercial database firms are often capable of tailoring census data information of human communities and income/poverty level to specified areas of geographic detail. For example, by manipulating specified census bureau tract data with customized buffer areas, statistics can be generated to accommodate current growth estimates from local government agencies or planning departments. Locational/distributional tools are also capable of determining the locations of certain human communities. Examples include maps, aerial photographs, and geographical information systems (GIS). Further explanations of these tools are presented in Chapter 5.

2.2 Considering Effects

This section discusses the term "disproportionately high and adverse human health or environmental effects" and

provides an overview of some factors that should be considered in assessing the presence of such effects. It also addresses how the concept of environmental justice plays in conducting cumulative and indirect impact analyses in support of NEPA.

2.2.1 Disproportionately High and Adverse Effects

Disproportionately high and adverse effects encompass both human health and environmental effects. The IWG's guidance suggests the need for the analyst to exercise informed judgments as to what constitutes "disproportionate" as well as "high and adverse." This, in turn, suggests some level of comparative analysis with the conditions faced by an appropriate comparison population. As noted in Section 2.1.1, alternatives need to be drawn so that the potentially affected populations under various alternatives are distinctive and allow disproportionality to be assessed.

2.2.2 Cumulative and Indirect Effects

EPA NEPA analyses must consider the cumulative effects on a community by addressing the full range of consequences of a proposed action as well as other environmental stresses which may be affecting the community. Cumulative impacts are defined in 40 CFR 1508.7, as "the incremental impact(s) of the action when added to other past, present, and reasonably foreseeable future actions...." For example, when considering a project that will have a permitted discharge to the surrounding surface waters, it may be of concern to populations who rely on subsistence living patterns (*i.e.*, fishing) and already receive public water through lead service lines; the cumulative effects associated with both the discharge and the lead service lines must be taken into account. In such cases, mitigation measures need to be developed and analyzed to reduce an adverse cumulative effect. In addition, minority populations and low-income populations are often located in areas or environments that may already suffer from prior degradation. EPA analysts need to place special emphasis on other sources of environmental stress within the region, including those that have historically existed, those that currently exist, and those that are projected for the future. Common variables of concern may include:

- Number/concentration of point and nonpoint release sources, including both permitted and non-permitted.
- Presence of listed or highly ranked toxic pollutants with high exposure potential (e.g., presence of toxic pollutants included within EPA's 33/50 program).
- Multiple exposure sources and/or paths for the same pollutant.
- Historical exposure sources and/or pathways.
- Potential for aggravated susceptibility due to existing air pollution (in urban areas), lead poisoning, existence of abandoned toxic sites.
- Frequency of impacts.

Source data, including historical, existing, and projected sources, yielding projected effects in concert with that from the resulting proposed action should be analyzed with respect to minority or low-income receptors. As noted above, these include cultural, health and occupation-related variables such as:

- Health data reflective of the community (e.g., abnormal cancer rates, infant and childhood mortality, low birth weight rate, blood-lead levels).
- Occupational exposures to environmental stresses which may exceed those experienced by the general population.
- Diets, or differential patterns of consumption of natural resources⁽⁶⁾, which may suggest increased exposures to environmental pathways presenting potential health risk.

The EPA NEPA analyst may have difficulty in determining the point at which stress levels become too great, exceeding risk thresholds. This lack of a definitive threshold should encourage the EPA NEPA analyst to compare the cumulative effects of multiple actions with appropriate community, regional, state, or national goals, standards, etc. to determine whether the total effect is significant.

With respect to natural resources, analysts should look to the community's dependence on natural resources for its

economic base (*e.g.*, tourism and cash crops) as well as the cultural values that the community and/or Indian Tribe may place on a natural resource at risk. Further, it is essential for the EPA NEPA analyst to consider the cumulative impacts from the perspective of these specific resources or ecosystems which are vital to the communities of interest.

Several methods for determining cumulative effects are described within CEQ's January 1997 handbook entitled, "Considering Effects Under the National Environmental Policy Act." The EPA NEPA analyst may wish to consider these methods in assessing cumulative effects on low-income and/or minority communities.

In the process of determining future actions, for example, it is essential for the EPA NEPA analyst to apply judgment and experience, to go beyond the number of projects that are funded in the area, and predict which of the actions in the early planning stage have realistic potential to move forward. The EPA NEPA analyst should use the best available information from similar projects in the region and also consult with local government planning agencies which may have master development plans in the region. In addition, private land-owners and organizations may be willing to disclose their future land use plans.

Although cumulative effects analyses commonly involve assumptions and uncertainties, exhausting all applicable analyses will provide the greatest likelihood of accurately depicting the possibility of disproportionately high and adverse effects on low-income and/or minority communities. Analysts should be as resourceful as possible in addition to seeking information from traditional sources. Decisions should be supported by the best data currently available and/or the best data gathering techniques in conjunction with all appropriate analyses.

EISs and EAs must also address indirect impacts [40 CFR 1502.16(b), 1508.8(b) 1508.9], which are characterized as those that are caused by the action and are reasonably foreseeable, but that occur later in time and/or at a distance. Indirect effects include growth effects related to induced changes in the pattern of land use; population density and/or changes to infrastructure; or growth rates and related effects to the air, water and other natural systems, including ecosystems.

Increased urbanization may occur around a new facility due to increased employment or due to transportation system upgrades. This may result in disproportionately high and adverse effects to low-income communities due to increased air pollution, lower housing values, and reduced access to fishing/farming locations. In addition, recreational lands and water may be indirectly affected by government actions. In the case of activities potentially affecting Native Americans, potential impacts, both direct and indirect, can occur to sacred sites and/or other natural resources used for cultural purposes. For example, the loss of a sacred site, or other impacts to larger areas of religious and spiritual importance may be so absolute that religious use of the site abruptly ceases--a direct impact. However, discontinued use may result in other indirect impacts. Proposed actions may also result in business failures, and associated unemployment, erosion of tax bases, and reduced public services. These types of effects may be exacerbated for low-income communities and minority communities due to an inability to relocate, to travel long distances to find alternative means of employment, or to attract new industry or commerce.

The potential for indirect impacts to affect a community is best understood when the analytical team is thoroughly familiar with the local community. It is important that the EPA NEPA analyst gain a full understanding of potential cultural impacts to the community. This is best accomplished through direct communication using effective public participation and consultation. A discussion of public participation approaches appears in Chapter 4.

2.2.3 Environmental Exposure

Executive Order 12898 provides that environmental human health research, whenever practicable and appropriate, shall include diverse segments of the population in epidemiological and clinical studies, including segments at high risk from environmental hazards, such as minority and low-income populations and workers who may be exposed to substantial environmental hazards. The Executive Order further states that environmental human health analyses, whenever practicable and appropriate, shall identify multiple and cumulative exposures.

In addressing the term "environmental hazard" for the purpose of research, data collection and analysis provisions in the Executive Order, the IWG Key Terms guidance states that it is "a chemical, biological, physical or radiological agent, situation, or source that has the potential for deleterious effects to the environment and/or human health." The IWG points out that the factors that may be important in defining a *substantial*⁽⁷⁾ environmental hazard are the likelihood, seriousness, and the magnitude of the impact. The IWG Key Terms provides guidance for "multiple environmental exposure" and "cumulative environmental exposure."

The EPA NEPA analyst should include individuals who are familiar with collecting and analyzing data that assesses the potential environmental and human health risks potentially borne by minority and low-income communities as a result of the project or activity. EPA NEPA analysts gain a better understanding of potential environmental risks to the community by directly using effective public participation and consultation techniques. An assessment of such potential risks should then be used to determine whether disproportionately high and adverse effects may be borne by minority communities or low-income communities.

2.3 Summary of Factors to Consider in Environmental Justice Analyses

This section provides an overview of many of the factors that should be considered when identifying and evaluating environmental justice concerns. Given the subjective nature of some of the elements that are important to environmental justice analyses, some consideration of the *factors* or characteristics that may lead to disproportionately high and adverse effects to a community may prove to be useful when conducting such analyses. EPA's Office of Environmental Justice points out that an understanding of the underlying factors that contribute to environmental justice concerns allows for a more thorough identification of the concerns and the development of more effective mitigation measures.

In focusing the identification of environmental justice concerns, the EPA NEPA analyst may approach the analysis of environmental justice from three vantage points: 1) whether there exists a potential for disproportionate risk;

2) whether communities have been sufficiently involved in the decision-making process; and 3) whether communities currently suffer, or have historically suffered, from environmental and health risks or hazards. The factors listed in this section are provided within the context of these three approaches for identifying potential environmental justice concerns and provide the EPA NEPA analyst with a starting point in determining what factors to consider in an environmental justice assessment. However, almost every situation will have its own nuances. As such, the EPA NEPA analyst should be prepared to apply these factors flexibly to fit a specific situation, just as the IWG guidance provided above may require judgments to ensure that communities are defined in a fair manner (See Exhibit 3 for Summary of Factors).

Exhibit 3. SUMMARY OF FACTORS TO CONSIDER IN ENVIRONMENTAL JUSTICE ANALYSIS	
<i>FACTORS ASSOCIATED WITH POTENTIAL EXPOSURE TO/AND RISKS FROM ENVIRONMENTAL HAZARDS</i>	
The general factors that should be considered include DEMOGRAPHIC factors, GEOGRAPHIC factors, ECONOMIC factors, and HUMAN HEALTH and RISK factors. For each of these, specific variables for consideration are listed.	
DEMOGRAPHIC FACTORS	
Demographic factors are one of the key components of environmental justice. Race, ethnicity, and low-income status are some of the primary considerations of the environmental justice movement. However, numerous other demographic factors also may play vital roles in an environmental justice assessment. These include, but are not limited to:	
Population Age	Older or younger populations may be more susceptible to risks, when taking into account special health concerns of the elderly and potential for greater exposure in younger populations (e.g., ingestion of soil). In addition, children's immature bodily defense systems may make them more susceptible to toxic effects.
Population Density	High population density may promote a synergistic effect between industrial pollutants and typical urban pollutants (e.g., ground level ozone), especially if industry is located in close proximity (5 miles or less) to high density populations. Low population density may lead the NEPA analyst to underestimate the actual environmental harm to the affected population when conducting a risk assessment.
Population Literacy	If documents are technically complex and not adequately explained communities with lower levels of education may encounter difficulty in its ability to understand or sufficiently identify and interpret risk

	and other factors.
Population / Economic Growth	Rapid or severe changes in population or economic growth rate may result in potential impacts to existing community or public services and infrastructure. Changes in growth rate may include: (1) an increase in low-income or minority population(s) in an area (e.g., migration), (2) high birth rates, and (3) cumulative impacts due to multiple sources of population increases.
GEOGRAPHIC FACTORS	
Certain communities may be at high risk from environmental hazards or exposed to substantial environmental hazards due to geographic factors that isolate them from other surrounding communities or that tend to allow pollutants to accumulate in the environment surrounding the community. Such factors include, but are not limited to:	
Climate	Weather patterns (e.g., prevailing winds) that may concentrate pollutants in a certain area, allow pollutants to migrate, increase certain exposure pathways (such as respiration), or cause pollutants to behave in a manner that differs from that expected under normal weather conditions.
Geomorphic Features	Mountains, hills, or other surface features, natural or human in origin, that may affect pollutant dispersal and may focus or funnel pollutants in particular directions or to particular locations.
Hydrophic Features	Presence of surface water and/or aquifers that may provide drinking water, subsistence fisheries, cultural significance and use, and recreational use.
ECONOMIC FACTORS	
Economic factors can be divided into two categories: the economic condition of the individuals in the community in question, and the overall economic base of the community. The economic condition of the individuals in the population, if poor, may exacerbate risk factors and may preclude avoidance of risk factors. The economic condition of the community at large may result in situations that preclude the local government's ability to adequately protect the population or may promote the acceptance of disproportionately high and adverse effects. Such factors include, but are not limited to:	
<u>Individual Economic Conditions</u> Income Level / Health Care Access	This includes such issues as whether affordable or free quality health care is available and, whether any cultural barriers exist to seeking health care. Many low-income and/or minority communities lack adequate levels and quality of health care, often due to lack of resources or lack of access to health care facilities.
Infrastructure Conditions	Consideration should be given to whether existing infrastructure provides sufficient protection from adverse impacts (e.g., protection of domestic water supply, especially if the community relies on

	public or non-public drinking wells or surface water; adequacy of sewage facilities) and the effect that new facilities may have on the ability of existing infrastructure to be reliable and provide adequate protection. In many low-income and/or minority communities, historic allocation of resources has resulted in inadequate infrastructure development and maintenance.
Life-Support Resources	This includes subsistence living situations (<i>e.g.</i> , subsistence fishing, hunting, gathering, farming), diet, and other differential patterns of consumption of natural resources. If a community is reliant on consumption of natural resources, such as subsistence fishing, an additional exposure pathway may be associated with the community that is not relevant to the population at large. Similarly, dietary practices within a community or ethnic group, such as a diet low in certain vitamins and minerals, may increase risk factors for that group.
Distribution of Costs	Consideration of the distribution of costs to pay for environmental projects to the extent that regulations and programs are paid for by user fees on necessary goods and services (<i>e.g.</i> , sewer and water bills, garbage services, electric bills, gasoline taxes). These have a substantial negative effect on low-income families who must pay a disproportionate fraction of their income for these goods and services, the addition of user fees for another plant or facility may add to the disparate treatment of those individuals.
<u><i>Community Economic Base</i></u> Industrial	Reliance on polluting industries for jobs and economic development. If the community is reliant on polluting industries for jobs and tax revenue, there may be reluctance to take actions that would avoid risk to health and the environment at a cost to the industry. In addition, minority or low-income communities may not enjoy other benefits in proportion to the risks or impacts they bear.
Brownfields	Communities with low revenues may be unable to finance economic rehabilitation efforts that would improve the physical environment of a community.
Natural Resources	Reliance on natural resources for economic base (<i>e.g.</i> , tourism, crops; use of resources to create salable items, such as woven baskets among Native Americans; subsistence and commercial fisheries).
Other	Other indirect effects which a low-income or minority population, due to economic disadvantage, may not be able to avoid, that will have a synergistic effect with other risk factors (<i>e.g.</i> , vehicle pollution, lead-based paint poisoning, existence of abandoned toxic sites, dilapidated housing stock).
HUMAN HEALTH AND RISK FACTORS	

<p>Evaluation of human health and risk factors relevant to environmental justice concerns may prove to be complicated when detailed technical analyses of risk factors and interaction of toxic chemicals are undertaken. However, the following include, but are not limited to, factors which allow for consideration of whether more detailed risk assessments or analyses specific to minority or low-income populations are appropriate:</p>	
Emissions	Number of point and nonpoint sources of emissions including permitted and non-permitted (violations) releases.
Toxics	Presence of or exposure to highly toxic pollutants.
Exposures	Multiple exposure sources and/or paths for the same pollutant.
Pollutants	Exposure to multiple pollutants.
Pesticides	Exposure to pesticides by workers and to the misuse of pesticides.
Locations	Exposure through multiple locations (e.g., workplace, home, school, ambient).
Concentrations	Exposure to emissions from concentrated locations of the same type of industry (or industries).
Health Data	Health data for population in question (e.g., abnormal levels of cancers, asthma, emphysema, birth defects, low birth weight, infant and childhood mortality blood-lead levels asbestosis). This data could indicate historical hazards and health risks which, in concert with the effects of the proposed action could cumulatively or indirectly raise environmental justice issues.
Research Gaps	Research gaps (e.g., subsistence consumption, demographics dietary effects, synergistic effects of chemicals).
Data Collection	Data collection/analysis reliability and validity.
<p><i>FACTORS RELATED TO CULTURAL AND ETHNIC DIFFERENCES AND COMMUNICATIONS CONCERNS</i></p>	
<p>When determining whether communities have been afforded opportunity for meaningful involvement, broad factors for consideration include the following. Other considerations for public participation are discussed in Chapter 4 of the "<i>Guidance on Environmental Justice in EPA's NEPA Compliance Analyses.</i>"</p>	
Public Access	Whether community members have access to the decision-making process (i.e., whether the community is fairly represented on commissions, boards, etc., and whether the community is fairly made aware of their role in the decision-making process).
Cultural Expectations	Cultural expectations and understanding of the decision-making process.
Meaningful Information	Access to meaningful and understandable information, such as clear presentation of what a facility produces, what pollutants it releases, how these are managed, and the potential risk to the population.
Job Security	Potential for fear within the community that participating in the process may jeopardize job security.

Literacy Rate	If a low literacy rate exists, consideration should be given to the clarity and accuracy of presentations to the community and whether non-written materials, such as videos, have been considered for use in presentations.
Translations	Consideration of non-English translations, both written and oral during community presentations or public meetings.
Community Representation	Consideration should be given to whether representatives were selected by community decree or by outside sources without proper consultation with the community.
Community Identification	Whether identification of minority and/or low-income communities took into account all potentially-impacted communities. If communities were geographically defined rather than culturally defined, certain communities that are impacted, given other cultural factors, may be unfairly excluded.
Indigenous Populations	<p>In addition, when projects or activities may affect tribal lands or resources or Native American communities, the NEPA analytical team should include one or more analysts familiar with Native American issues and culture, and the Agency should formally request the affected Indian Tribe(s) to seek participation as a cooperating agency. Specific factors to consider in such situations include, but are not limited to:</p> <p>The trust responsibility to and treaties, statutes and executive orders with federally-recognized Indian Tribes.</p> <p>Effect of insufficient financial and technical resources for the development and implementation of tribal environmental programs.</p>
<i>FACTORS RELATED TO HISTORICAL AND POLICY ISSUES</i>	
Environmental justice assessments may require looking at historical conditions, existing conditions, and the impact of future actions. Many of the factors discussed above, such as cumulative risk, will necessarily address this question, but certain other factors may also require consideration, including:	
Industrial Concentration	Concentration of industries that may create a high risk of exposure to environmental hazards for the community's economic base. Factors that may lead to such a result include government/industry arrangements that may reduce available public funding for adequate protection of low-income or minority populations (e.g., tax breaks provided to certain industries to encourage the location of such industries to a certain area).
Inconsistent Standards	Non-uniformity in enforcement and site-selection standards across communities including methods for pursuing enforcement targeting, compliance actions and compliance initiatives.
Research Gaps	Research gaps and past data collection practices and validity. For

	example, data relevant to low-income communities may not be adequately collected and analyzed given the potential for inadequate resources within the community to collect and analyze data.
Program Gaps	Program gaps between tribal, state, and federal programs (such as asbestos worker protection programs) that may have subjected communities to high risk of exposure to environmental hazards. Such gaps include the lack of explicit Congressional authorization for tribal participation in and delegation/authorization of certain EPA programs and the sufficiency of funding and technical assistance for the development of tribal environmental programs.
Non-Inclusive Processes	Decision-making and documentation processes that were non-scientific, and/or non-inclusive in nature (e.g., selection of community representatives by potentially-affected industry rather than by community decree).
Past Practices	Adequacy of past resource allocation practices.
Cultural Diversity	Past and present cultural diversity or lack thereof on decision-making boards, within agencies, commissions, etc.
Obligations	Adherence to prior agreements, such as treaties, statutes and executive orders with tribes. EPA should be particularly careful not to diminish tribal resources, including cultural and natural resources and treaty rights, without tribal concurrence and EPA should ensure the protection of such resources from environmental harm.

3.0 INCORPORATING ENVIRONMENTAL JUSTICE INTO THE NEPA PROCESS

3.1 Overview of the NEPA Process

A general framework for implementing NEPA requirements is presented in regulations (40 CFR Parts 1500 through 1508) promulgated by the Council on Environmental Quality (CEQ). Federal agencies, in turn, have developed their own rules for NEPA compliance that are consistent with the CEQ regulations while addressing the specific missions and program activities of each agency. EPA's regulations are found at 40 CFR Part 6. Over the past 25 years, the NEPA framework for environmental review of proposed federal actions has been substantially refined, based on further congressional directives, action by CEQ, and an extensive body of case law.

As stated in Section 1.0, an EIS is required for major federal actions significantly affecting the quality of the human environment. The basic analytical planning process

for EISs required under NEPA and its implementing regulations for assessing the environmental impacts that may result from a government action includes:

1. **Definition:** Define the purpose and need for the action.
2. **Screening:** Preliminary delineation of potential impacts.
3. **Scoping:** Outline proposed action; define objectives; define scope; identify decisions that need to be made; focus resources; initiate public participation.
4. **Affected Resources:** Define the resources that may be affected if the action meets the proposed objectives.
5. **Alternatives:** Identify and define practical alternatives for meeting objectives.
6. **Mitigation:** Identify possible mitigation measures to minimize or avoid potential impacts.
7. **Consequences:** Predict the environmental impacts and other consequences of the proposed action and alternatives.
8. **Decisions:** Make decisions regarding a course of action, including mitigation measures developed to address environmental effects threatened by proposed actions.
9. **Monitoring:** Observing, recording, and documenting mitigation measures to evaluate their effectiveness.

CEQ regulations (40 CFR Part 1502) dictate the process that federal agencies must follow for all EISs, except where compliance with the regulations would be inconsistent with statutory requirements or where agency procedures allow for exceptions for national security reasons. Public participation and involvement is required throughout the NEPA process, beginning with scoping.

Proposed actions predicted to present less significant impacts often are analyzed in environmental assessments (EAs). As mentioned in Section 1.0, EAs are important analytical tools, originally intended to aid in the determination of significance of the effects of a proposed action. Compared to EISs, there are fewer detailed regulatory requirements for EAs as to content, format or

public participation. The scale of EAs usually depends on the relative significance of the projected impacts.

Environmental justice issues encompass a broad range of impacts covered by NEPA, including impacts on the natural or physical environment and interrelated social and economic effects. The CEQ implementing regulations define "effects" or "impacts" to include those that are "ecological...aesthetic, historic, cultural, economic, social or health, whether direct, indirect or cumulative." In preparing EISs, NEPA requires EPA to consider both impacts on the natural or physical environment and interrelated social and economic impacts. In analyzing social and economic impacts, unique cultural aspects should also be reviewed. EPA, as a matter of policy, will consider interrelated social and economic impacts in EAs. This serves as a base to further the goals of the Executive Order. Environmental justice concerns may arise from impacts on the natural or physical environment, such as human health or ecological impacts on minority populations and low-income populations, or from inter-related social or economic impacts.

Moreover, EISs and EAs should document the extent to which environmental justice issues have been identified and addressed. The initial step in the analysis of potential effects is to assess whether there indeed will be potential physical or natural environmental impacts. If it is determined by the analytical team that there will be no environmental effects, and thus no disproportionately high and adverse effects, then this finding should be documented and no further analysis of effects is necessary.

If preliminary analysis indicates that there is a potential for environmental effects, then a more detailed assessment is conducted to estimate the level of those effects. There are occasions in which "grey areas" may be encountered. The EPA NEPA analyst may be unsure as to whether the environmental effects are *de minimis*, meaning when there are very small effects, or something greater than *de minimis* yet less than significant natural or physical impacts demanding an EIS. This guidance suggests that when the EPA NEPA analyst is unsure whether these environmental impacts are *de minimis* or something more than *de minimis* but less than significant, the EA should include an analysis of interrelated social and economic effects (and, as

described in Section 3.2 below, there now should be an EIS-like scoping process if the screening analysis indicates that there may be disproportionately high and adverse effects on minority and/or low-income communities). The EA should include socioeconomic analyses scaled according to the severity of the impacts.

Following an EIS or EA, the Agency must announce its decision in a Record of Decision (ROD) or a FONSI. The ROD, and where appropriate the FONSI, should document the conclusion of the findings presented in the EIS or EA (i.e., whether the action will or will not have a disproportionately high and adverse effect on minority and/or low-income communities) and include a description of those mitigation measures that the Agency is committing to implement to reduce or avoid environmental consequences associated with the proposed action.

3.2 Incorporating Environmental Justice Concerns into this Process

One of the most important means by which EPA can ensure that disproportionately high and adverse effects on minority and/or low-income communities are identified and analyzed, is to "institutionalize" the process of identification and analysis. The next sections of this Chapter describe the screening-level analysis that begins the process, and how environmental justice considerations can be integrated into later steps and activities required under CEQ and EPA regulations.

As noted in Chapter 1, one effect of incorporating environmental justice considerations into NEPA analyses will be to more sharply focus these analyses. To do this, it is necessary to assess the distribution of environmental impacts demographically and/or geographically, as well as to assess the overall impacts to the affected communities. As described in Chapter 5, the analytical tools commonly used for analyzing potential impacts may have to be modified to allow this more refined focus. Overall, the evaluation of environmental justice concerns raises a number of issues related to "significance" and to other NEPA procedures. The discussion below describes several issues that are relevant to the determination of significance and the consequent level of analysis; also included are discussions of how consideration of such issues should

affect the determination and subsequent analyses. The analytical team should keep in mind that the presence of disproportionately high and adverse effects may or may not necessarily change the final decision, but will change the focus of the analysis and may result in additional mitigation measures.

3.2.1 Environmental Justice Screening Analysis

In preparing for any proposed action, one of the first actions is a preliminary delineation of potential impacts and of the potentially affected area. A screening for environmental justice concerns should be incorporated into this initial NEPA screening analysis. This section describes a two-step screening process, the results of which then guide subsequent actions related to environmental justice.

The first step in identifying potential environmental justice concerns should be a screening-level analysis to determine the existence of a low-income and/or minority population. Depending on the outcome, it may then be necessary to enhance public participation to gain a fuller understanding of the potential environmental justice issues (see Chapter 4), initiate development of alternatives and mitigation options, and/or initiate analyses to identify and assess disproportionately high and adverse human health or environmental effects (see Chapter 5). In addition, if the proposed project may affect tribal lands or resources, then EPA, in keeping with federal and EPA policies of government-to-government relations, will formally request that affected Indian Tribe(s) seek to participate as a cooperating agency.

The screening analysis should occur as soon as the proposed action is well understood, around the time planning for scoping begins for EISs and planning begins for EAs. Although neither the impacts nor the full area to be affected may be fully understood at this point, it is usually possible to make fair approximations. In the screening analysis, two questions should be addressed, as described below.

Question 1

Does the potentially affected community include minority and/or low-income populations?⁽⁸⁾

If yes, this should trigger both an enhanced outreach effort to assure that low-income and minority populations are engaged in public participation and analysis designed to identify and assess the impacts. Also, a positive response to this question should increase the team's sensitivity to the potential for cumulative impacts.

In general, census and other data should be used to characterize the population within the affected area, in terms of minority (*i.e.*, racial or ethnic), economic, and educational demographics. However, it should be noted that census data have been shown to be unreliable in some cases, in part because the level of aggregation may not offer a fine enough mesh to identify the existence of such communities. Also, census data are based on self-reporting. These data are not always consistent and are prone to undercounting minority populations and low-income populations due to a perceived reluctance for certain populations to divulge information (see Section 2.1.1). This is a screening-level analysis, so extensive efforts to validate census data should not be necessary at this stage, unless there is substantial uncertainty in (a) the answer to the screening question or (b) the ability to delineate the affected area at this early stage. Because the applicability of the census data can only be determined on a case-by-case basis, the EPA NEPA analyst should supplement this information with data from other sources. For example, additional information can be obtained from: local resources through questions, interviews, and research; geographical mapping system (GIS) or other similar overlay mapping systems; and economic impact analyses.

Environmental effects are often realized in inverse proportion to the distance from the location or site of the proposed action (*i.e.*, the closer the population is to the action, the greater the potential impacts). As a result, an effort should be made to correlate the demographic analysis to the area most likely to bear environmental effects. On the other hand, depending on the resource affected, and the users of that resource, proximity to the site may not correlate with the likelihood of disproportionately high and adverse effects on minority communities or low-income communities.

It also is important during the initial screening stages to locate all minority communities or low-income

communities within the region surrounding a proposed location. The analytical teams should keep in mind that sometimes distinct minority communities or low-income communities may be geographically located within another minority community or low-income community. In some cases, a minority community or low-income community that is surrounded by another minority community or low-income community may bear disproportionately high and adverse effects compared to the surrounding communities. In addition, the EPA NEPA analyst should be sensitive to situations where the affected community represents the majority population over the extended area. For example, locations along the United States-Mexico border include entire counties where minority populations represent a majority of the population in the county. These areas are predominantly Latino, although when the county population is compared to the population of the entire state, the proportion represents a much smaller percentage of the population. Similarly, counties in the Mississippi Delta region represent areas where African Americans comprise a majority of the total population.

Question 2

Are the environmental impacts likely to fall disproportionately on minority and/or low-income members of the community and/or tribal resources?

A positive response should trigger both an enhanced outreach effort to assure that low income and minority populations are engaged in public participation and an analysis designed to identify impacts on both the larger population and on minority and/or low-income members of the population. A positive response could result from any of several factors, including the following:

Within a potentially affected area, minority and/or low-income populations could be unevenly distributed, thus subject to different levels or intensity of impacts than the larger population. This pattern should cause concern for cumulative impacts. An example would be subsistence dependence on an affected resource by members of a community.

The impacts may affect a cultural, historical, or protected (e.g., treaty) resource of value to an Indian Tribe or a

minority population, even when the population is not concentrated in the vicinity.

If the answer to both screening questions is "no," then the environmental justice screening analysis should be documented in scoping notices and in EISs/EAs and RODs/FONSI. In addition, certain unique cultural, geographic, or economic factors may exist within an area that could warrant additional investigation. Also, later information and analyses may show that the screening analysis was mistaken. Indeed, analysts should re-examine the screening questions (and the key factors identified in Chapter 2) at key steps in the NEPA process (e.g., following scoping, in drafting the EIS/EA, in soliciting comments on draft EISs, in responding to comments, and in preparing RODs and FONSI).

3.2.2 Environmental Justice and the Determination of Significance

CEQ regulations (40 CFR 1508.27) detail factors that should be considered in making a determination of whether a proposed action is significant, thereby requiring a "detailed statement" (i.e., an EIS). Economic or social effects alone do not trigger an EIS [40 CFR 1508.14].

According to CEQ's *Guidance for Considering Environmental Justice under the National Environmental Policy Act*, the "...Executive Order does not change the prevailing legal thresholds and statutory interpretations under NEPA and existing case law. For example, for an EIS to be required, there must be a sufficient impact on the environment to be 'significant' within the meaning of NEPA. Agency consideration of impacts on low-income populations, minority populations or Indian tribes may lead to the identification of disproportionately high and adverse human health or environmental effects that are significant and that otherwise would be overlooked." CEQ requires that significance be evaluated in terms of "intensity" or "severity of impact." Here too, the narrowed focus could affect the determination. Several factors that affect the evaluation of intensity are relevant to situations involving environmental justice issues. These include the degree of scientific controversy, uncertainty (since distributional analysis is relatively new in the NEPA context and this

introduces an element of uncertainty in impact assessment), and cumulative significance of related actions.

Environmental justice concerns should sensitize EPA NEPA analysts to the need to focus analyses on relevant contexts. Focusing the analysis may show that potential impacts, which are not significant in the NEPA context, are particularly disproportionate or particularly severe on minority and/or low-income communities. As mentioned previously, disproportionately high and adverse effects should trigger the serious consideration of alternatives and mitigation actions in coordination with extensive community outreach efforts.

3.2.3 Scoping and Planning

Scoping consists of identifying and defining the range of actions, alternatives and impacts that will be considered in an environmental impact statement (40 CFR 1508.25). During the scoping phase of the EIS process, EPA must consider connected, cumulative and similar actions to the proposed action, identify alternatives to the proposed action that may mitigate or avoid potential environmental consequences, and assess potential impacts (direct, indirect, and cumulative). A similar planning process is used for EAs.

The identification of environmental justice concerns and the incorporation of these concerns into the scoping analysis can have implications for the nature and extent of the scoping analysis, the EIS and/or the EA.⁽⁹⁾ Indian Tribe representation in the process should be sought in a manner that is consistent with the government-to-government relationship between the United States and tribal governments, the federal government's trust responsibility to federally-recognized tribes, and treaty rights. This will help to ensure that the NEPA process is fully utilized to address concerns identified by tribes and to enhance protection of tribal environments and resources. As defined by treaties, statutes, and executive orders, the federal trust responsibility may include the protection of tribal sovereignty, properties, natural and cultural resources, and tribal cultural practices.

3.2.3.1 Incorporating Environmental Justice Concerns into EA Development

If the environmental justice screening analysis does not identify minority communities or low-income communities, and suggests no disproportionately high and adverse effects on those communities and/or on tribal resources, then the EA and FONSI should describe the analysis and note the conclusion.

If the initial screening analysis identifies an affected community that is minority and/or low-income or identifies a disproportionately high and adverse effect upon a minority community, and/or on tribal resources, or on a low-income community, then a smaller scale scoping analysis (than that undertaken for an EIS) should be conducted and some level of public participation should be designed and implemented to solicit community involvement and input, and to develop alternatives and mitigation measures. Mitigation measures should be developed and alternatives should be crafted so as to allow an evaluation of the relative disproportionality of impacts across reasonable alternatives. The EA also should include a comparative socioeconomic analysis that is scaled and tailored to evaluate the potential effects to the minority and/or low-income community (*i.e.*, in the case of environmental justice concerns, the EA should include socioeconomic analyses scaled according to the severity of the impacts).

3.2.3.2 Incorporating Environmental Justice Concerns in EIS Scoping

If the environmental effects of a project are deemed significant, the scoping notices (including the notice of intent for the EIS) should include a description of the results of the environmental justice screening analysis. If the results of the screening analysis are negative (*i.e.*, any potentially affected population is not a minority community or low-income community and the effects are not likely to fall disproportionately on a minority and/or low-income community, and/or on tribal resources), then the scoping notice should state this finding and request additional information on whether there may be disproportionately high and adverse effects that were overlooked during the screening analysis.

If the environmental justice screening analysis concludes that there is a potential for disproportionately high and

adverse effects, then the EPA NEPA analyst should ensure that the EIS scoping process raises environmental justice concerns and that sufficient data and information are generated to evaluate these potential effects. Prior to the full-scale scoping process, public outreach strategies should be developed and implemented. The public participation process should be used to define and evaluate environmental justice concerns by:

Consulting with community leaders and members of the surrounding communities to seek their assistance in identifying all minority and/or low-income communities that may be affected by the proposed action.

Consulting with officials in tribal, state and/or local government agencies over the environmental and human health concerns within the region and who may be familiar with the demographics of the affected populations. Where environments of Indian tribes may be affected, agencies must consider pertinent treaty, statutory or executive order rights and consult with tribal governments in a manner consistent with the government-to-government relationship.

Soliciting information from the local community on potential environmental justice issues through public participation efforts (see Chapter 4 for a discussion of public participation).

- Soliciting public comment on environmental issues through formal public notice and comment procedures tailored to the community (see Chapter 4).
- If the proposed activity is deemed significant to warrant the development of an EIS, or if the community has raised significant concerns to be addressed in an EA, EPA should establish a community advisory board to work with EPA in the development of the respective NEPA documents.

The public participation efforts designed as part of the scoping effort for an EIS should clearly describe any environmental justice concerns identified by EPA, and should specifically ask the public to suggest alternatives and mitigation measures aimed at reducing or avoiding disproportionately high and adverse effects. The Agency also should design comparative socioeconomic, environmental and health analyses of all reasonable

alternatives and mitigation measures that are tailored and/or scaled to evaluate the impacts to the affected minority and/or low-income community and/or tribal resources.

3.2.4 Identification of Affected Resources

CEQ regulations state that an EIS is required only when there is a significant impact on the physical or natural environment. Notwithstanding, early in the EA and/or EIS process, the EPA NEPA analyst should identify the physical environment and all natural resources that could be potentially affected by the proposed action and by alternative actions. The EPA NEPA analyst should develop a full understanding of baseline demographic, socioeconomic, and environmental conditions so that a comprehensive assessment of the types of impacts that may be imposed upon all human and natural resources (*e.g.*, air, water, soils, wildlife) can be conducted and an understanding of how these impacts may translate into human health concerns can be developed. For a detailed discussion on how effects to human health and natural resources might be determined, please reference Section 2.2.

To account for potential environmental justice concerns, EPA NEPA analysts should be sensitive to identifying whether affected resources are used by a minority or low-income community. In addition, analyses of potential effects on all surrounding resources should be focused narrowly or specifically toward how potential effects to these resources may translate into disproportionately high or adverse human health and/or environmental effects on minority and/or low income communities.

The EPA NEPA analyst should use all means available to identify particular natural resources that, if affected by the proposed action, could have a disproportionately high and adverse effect on minority and/or low-income communities. In particular, natural resources that support subsistence living (*e.g.*, hunting, fishing, gathering) should be identified. In addition, Indian Tribes may have treaty-protected resources on or off reservation lands and may hold some natural resources sacred due to religious beliefs and/or social/ceremonial ties. Alternatives and mitigation measures should be explicitly solicited from the affected community early in the process, such as during scoping.

Throughout the process, but especially beginning in this phase, the Agency should provide affected communities with technical assistance to ensure that the communities thoroughly understand the proposed action and have meaningful participation and input. All resources that could be affected should be thoroughly developed and documented. A discussion of all findings should be shared with potentially affected communities during public participation phases of the NEPA process to ensure full disclosure and to solicit additional public comment and input.

3.2.5 Identification of Alternatives

NEPA and the CEQ regulations require the identification and development of a reasonable array of alternatives. In addition, CEQ requires that all reasonable alternatives, including a "no action" alternative, must be analyzed rigorously and objectively. The selection of potential alternatives should begin early in the evaluation and, in fact, should be part of the scoping process. In addition, if environmental justice issues are identified, then alternatives should be drawn so as to allow an assessment of the disproportionate nature of the effects, as well as the magnitude of the effects, on the communities of concern.

An evaluation of potential environmental justice issues should be conducted for all reasonable alternatives. In addition, for each alternative that may result in potential environmental justice concerns, mitigation measures aimed specifically at those impacts should be identified and analyzed. The results of all analyses of environmental justice issues, including study results that identify no environmental justice issues, should be described fully in scoping documents, EISs and EAs. All results should be fully disclosed during public participation procedures, and public comment and input on the analyses and conclusions should be solicited. Chapter 2 provides an overview of the factors that should be evaluated to identify and define potential environmental justice concerns. These factors will also be helpful in understanding the need for mitigation or additional alternatives and identifying mitigation or alternative options.

The EPA NEPA analyst should keep in mind that the goal of identifying and developing alternatives for mitigating

disproportionately high and adverse effects is not to distribute the impacts proportionally or divert them to a non-minority or higher-income community. Instead, alternatives should be developed that mitigate or avoid effects to both the population at large and any disproportionately high and adverse effects on minority or low-income communities. In other words, the goal of developing reasonable alternatives is not to move the impacts around, but to identify viable alternative actions that meet program goals and avoid or reduce the environmental, socioeconomic, human health and/or ecological effects associated with the preferred action. Generally, the types of alternatives that may potentially lead to the avoidance or reduction of effects include: a) the identification of alternate locations or sites where impacts to susceptible populations or environments will be avoided; b) altering the timing of planned activities or periodic emissions to account for seasonal dependencies on natural resources; c) the adoption of pollution prevention practices and policies to reduce or mitigate emissions and/or impacts; d) reducing the size or intensity of an action; and e) taking no action.

3.2.6 Prediction of Environmental Consequences

CEQ regulations require government agencies to identify, predict and describe reasonably foreseeable beneficial as well as adverse changes to existing conditions that may result from implementing either the proposed action or alternative actions. Impacts across alternatives must be compared. The prediction and description of potential disproportionately high and adverse effects must begin during the screening and scoping stages of the process, as noted above. Throughout the NEPA process, environmental justice concerns should be identified, disclosed, and discussed with affected communities.

In preparing an EIS or EA, ecological and human health risk assessments are conducted to identify and evaluate potential environmental and human health impacts that may be imposed. In addition, interrelated socioeconomic impacts that would result from a proposed action and alternatives are analyzed. Chapter 5 provides an overview of the types of analyses and analytical tools that may be used to analyze these issues and approaches that may be appropriate to assess disproportionately high and adverse

effects. Again, throughout the development and public disclosure of EPA NEPA analyses and findings, full discussions of the analytical process undertaken to identify environmental justice concerns and all findings and conclusions should be disclosed to and discussed with all affected and interested parties.

In evaluating the environmental impacts of the proposed action and alternative actions in an EIS, CEQ regulations (40 CFR 1508.25) require EPA to consider: three types of actions (connected actions, cumulative actions, and similar actions); three types of alternatives (no action, other reasonable course(s) of actions, and mitigation measures not in the proposed action); and three types of impacts (direct, indirect, and cumulative). Environmental justice concerns should be identified and analyzed within the context of all actions, alternatives and impacts. Exhibit 4 provides examples of how environmental justice issues could arise and/or be considered for each of these variables.

3.2.7 Mitigation Measures

Regulations require that mitigation measures be developed to address environmental effects, including cumulative impacts, threatened by proposed actions (40 CFR 1502.14(f) and 1502.16(h)). In addition, mitigation measures should be developed specifically to address potential disproportionately high and adverse effects to minority and/or low-income communities. When identifying and developing potential mitigation measures to address environmental justice concerns, members of the affected communities should be consulted. Enhanced public participation efforts should also be conducted to ensure that effective mitigation measures are identified and that the effects of any potential mitigation measures are fully analyzed and compared (see Chapter 4). Mitigation measures may include a variety of approaches for addressing potential effects and balancing the needs and concerns of the affected community with the requirements of the action or activity. For example, potential mitigation measures for addressing disproportionately high and adverse effects could include:

1. Reducing pollutant loadings through changes in processes or technologies.

2. Reducing or eliminating other sources of pollutants or impacts to reduce cumulative effects.
3. Planning for and addressing indirect impacts prior to project initiation (e.g., planning for alternative public transportation alternatives if the project may result in increased population growth).
4. Providing assistance to an affected community to ensure that it receives at least its fair (i.e., proportional) share of the anticipated benefits of the proposed action (e.g., through job training, community infrastructure improvements).
5. Relocating affected communities, upon request or with concurrence from the affected individuals.
6. Establishment of a community oversight committee to monitor progress and identify potential community concerns.
7. Changing the timing of impact-causing actions (e.g., noise, pollutant loadings) to reduce effects on minority communities or low-income communities.
8. Conducting medical monitoring on affected communities and providing treatment or other responses if necessary.

If mitigation measures are determined to be necessary to reduce disproportionately high and adverse effects on minority and/or low-income communities, and/or tribal resources, then the measures should be committed to in the FONSI or ROD. This provides an additional avenue for public notice and involvement. Other steps that can be considered to ensure that mitigation measures are effective and are implemented include the following:

- Establishing the mitigation measure as a requirement in the permit or authorizing document.
- Requiring financing at the outset of the project for both implementing the measure and monitoring its effectiveness. Ensure clearly defined monitoring guidelines are in place.
- Requiring monitoring reporting, which should be made available to the public.

- Identifying clear consequences and penalties for failure to implement effective mitigation measures.

3.2.8 Decisions

The two NEPA decision documents identified in CEQ regulations are: 1) a ROD following an EIS and, 2) a FONSI following an EA. All EPA NEPA decision documents should include a concise summary of all steps undertaken to identify environmental justice concerns and the results of those steps. In cases where environmental justice concerns are identified, the decision documents should fully discuss these concerns, explain all alternatives and mitigation options that were analyzed, and explain how environmental justice concerns factored into the decision. In cases where effects to tribal lands or resources have been identified and the Indian Tribe and EPA disagree as to the preferred alternative or mitigation measures, the Indian Tribe may request that the EPA initiate a dispute resolution process to resolve this conflict. In addition, public participation efforts related to environmental justice concerns should be documented in the decision document. Finally, mitigation measures that are evaluated, disclosed to the public, and chosen in conjunction with the alternative to be implemented should be identified and discussed. If no concerns are identified, this finding should be stated along with the basis of EPA's conclusion.

4.0 PUBLIC PARTICIPATION

Adequate public participation is crucial to incorporating environmental justice considerations into EPA's NEPA actions, both to enhance the quality of the analyses and to ensure that potentially affected parties are not overlooked and excluded from the process. Public participation under NEPA involves two-way communications, with EPA receiving information, comments, and advice, as well as disseminating information on possible approaches, analyses, and decisions. This is particularly important when there are potential environmental justice issues involved. To sufficiently and adequately address potential environmental justice concerns and communicate with potentially affected communities, the EPA NEPA analyst should include one or more persons who are familiar with environmental justice issues and appropriate communications strategies. It is important that EPA take

steps to encourage and facilitate more active participation by low-income communities and minority communities in its NEPA process. This goal can be accomplished through careful identification of target audiences and aggressive community outreach beyond the traditional forms.

There are established procedures for public participation in NEPA actions and decision-making processes (as in other federal actions). However, these procedures have not always been successful in informing or gaining participation by minority communities and low-income communities. Although they may be most affected, they may be the least informed, simply because of the means of communications used; this can be for any number of obvious reasons, such as language, culture, educational level or geographic location. In most cases, relatively simple approaches--well within the purview of "standard" public participation techniques--can overcome most barriers to informing and seeking involvement of interested or affected communities. This in turn can ensure that federal decisions are consistent with Executive Order 12898 and enhance the actual and perceived fairness of federal actions.

The first subsection below briefly describes public participation that is required during the NEPA process by CEQ and EPA regulations. The next subsection then identifies a number of the special concerns and unique issues that may arise in addressing environmental justice issues, and identifies several mechanisms that may be used in EPA's NEPA process to address those special concerns and issues.

4.1 Public Participation Under NEPA

Public participation is one of the hallmarks of NEPA, and is reflected in CEQ's and EPA's NEPA regulations. According to 40 CFR 6.400(a), "EPA shall make diligent efforts to involve the public in the environmental review process...." There are several clearly defined steps in public participation under NEPA, and these are described below.

Scoping. CEQ regulations require "scoping" following the publication of a notice of intent to prepare an EIS, but before the EIS is prepared. CEQ regulations define scoping as "an early and open process for determining the scope of

issues to be addressed and for identifying the significant issues related to a proposed action" (40 CFR 1501.7). In general, scoping has three broad purposes: identifying public and agency concerns with a proposed action, defining issues and alternatives to be examined in detail, and saving time by ensuring that relevant issues are identified early and drive the analyses (see 40 CFR 1500.4(g), 1500.5(d)). A public meeting is held during scoping, with notice of the meeting made in the *Federal Register*, local newspapers, and utilizing other means of announcing public meetings, depending on case-specific circumstances.

Scoping for EAs is not addressed in either CEQ or EPA regulations. In practice, EA scoping can range from a process more or less identical to that used for EISs, to relatively minimal involvement of outside parties.

CEQ has indicated that the scoping process ends "once the issues and alternatives to be addressed in the EIS have been clearly identified," usually "during the final stages of preparing the draft EIS..." (CEQ "Guidance Regarding NEPA Regulations"). It is emphasized that public participation does not end here, but continues throughout the NEPA process, as described below, and even beyond.

Public review of EISs and EAs. As with scoping, CEQ and EPA NEPA regulations clearly specify the means by which the public is involved in reviewing draft and final EISs. EPA regulations require at least one public meeting on all draft EISs (40 CFR 6.400(c)). The meeting is generally announced in the *Federal Register* and in local newspapers and by other means. Regulations also provide other means of soliciting comments and information. Comments must be solicited from other appropriate federal, tribal, state, and local agencies, and from the public, specifically including a request for comments from "those persons or organizations who may be interested or affected" (40 CFR 1503.1(a)(4)).

EPA then has to consider and address all comments received on the draft EIS in preparing the final EIS, and final EISs must include responses to comments. As with draft EISs, final EISs are noticed in the *Federal Register* and elsewhere. Again, interested parties may submit comments on final EISs prior to EPA's final decisions.

EAs must be made available to the public (40 CFR 1506.6: C.E.Q. 40 Questions, #38). A combination of methods may be used to provide notice of availability; the methods should be tailored to the needs of particular cases. Traditionally there has been limited public involvement before and during EA preparation by EPA unless there is a question of significance (*i.e.*, some question as to whether an EIS is necessary) or some particular public interest.

Public review of RODs and FONSI. Records of Decision on EISs must be disseminated to all those who commented on the draft or final EIS (40 CFR 6.400(e)). No public review is required prior to or after issuance of the ROD. Findings of No Significant Impact on EAs, in contrast, must be made available for public review before they become effective (40 CFR 6.400(d)), and this involves at least local notice and advertising. The FONSI and "attendant publication" must state that comments disagreeing with the decision may be submitted, and any such comments must be considered by EPA (40 CFR 6.400(d)).

4.2 Mechanisms to Enhance Participation

The public participation provision in Executive Order 12898 and its accompanying memorandum are designed to ensure that there is adequate and effective communication between federal decision makers and affected low-income communities and minority communities. This is consistent with the NEPA mandate to involve the public. The involvement of low-income communities and/or minority communities, however, presents some challenges to what has come to be the "normal" pattern of formal public participation under NEPA. In order to establish trust with all types of stakeholders, interaction with the affected community should:

- Encourage active community participation.
- Recognize community knowledge.
- Utilize cross-cultural formats and exchanges.

In all cases where EPA's initial screening indicates that there is a potential for disproportionately high and adverse effects on low-income and/or minority communities, the

Agency should make a concerted effort to identify stakeholders in the affected community and include the following groups and organizations in their outreach efforts:

- Environmental organizations and agencies
- Minority businesses, associations and trade organizations
- Civic associations and public interest groups
- Grassroots/community-based social service organizations
- Federal elected officials and agencies
- Homeowners' or tenants' associations, neighborhood watch groups and resident organizations
- Labor unions and organizations
- State and local elected officials and agencies
- News media, the Internet and other electronic media
- Tribal governments and Tribal organizations
- Religious groups and organizations
- Libraries, vocational and other schools, colleges and universities
- Medical community
- Legal aid providers
- Rural cooperatives
- Civil rights organizations
- Senior citizen's groups

Other sources of advice are ethnic and cultural-based environmental justice networks (e.g., Indigenous Environmental Network, Southwest Network for Environmental and Economic Justice, Southern Organizing Committee). The *People of Color Environmental Groups*

Directory⁽¹⁰⁾ is a valuable major source of information on such local groups and individuals. Similarly, Historically Black Colleges and Universities, Tribal Colleges and Universities or other higher education institutions located in areas with or serving predominantly minority or low-income areas, may be able to assist EPA in designing (and participating in) public participation strategies. Exhibit 5 identifies a number of particular communications challenges and possible approaches to overcoming these challenges in addressing environmental justice issues. These should be supplemented by case-specific advice--on challenges and on solutions--that are solicited from local experts and others familiar with both the proposed action and the affected community.

Exhibit 5. Communications Issues of Particular Concern in Low-Income and/or Minority Communities	
Challenge	Possible Approaches to Overcoming
Language or Communication barriers	<ul style="list-style-type: none"> • Provide assistance to hearing or sight impaired individuals • Provide simultaneous translation of meetings • Use local translators where possible • Translate key documents in entirety (notices, summaries, etc.) • Establish "comment line" (e.g., 800 number) for callers to leave recorded comments • Advertise meetings/process in alternative-language medium • Design communication strategy to reach all segments of population • Use facilitated meeting rather than conventional stand-up comments to encourage comments
Distance to meeting or inconvenient access (e.g., rural or cross-town)	<ul style="list-style-type: none"> • Arrange for "comment line" (e.g., 800 number) to provide remote access to meeting or to allow callers to leave recorded comments • Arrange for telephone tie-in from several locations (e.g., from several schools, religious centers)

	<ul style="list-style-type: none"> • Hold series of shorter meetings (down to 1-2 hours each) in multiple locations • Arrange for alternative transportation (possibly through proponent) • Ensure location is accessible to public transportation and identify itinerary in notices • Use local cable-channel broadcast with telephone call-in • Have proponent provide transportation vouchers • Seek advice of local groups/individuals • Arrange for satellite link-up (perhaps funded by proponent)
<p>Unfamiliar surroundings (government buildings, luxury hotel, etc.)</p>	<ul style="list-style-type: none"> • Use schools or other local facilities including religious centers, churches, temples, mosques • Have several smaller decentralized meetings, including open-air meetings (possibly with tent backup) in season • Seek advice from local groups/individuals • Use local facilitator • Establish "comment line" (e.g., 800 number) for callers to leave recorded comments or to participate from remote locations
<p>Outside normal EPA communications loops (i.e., <i>Federal Register</i>, newspapers)</p>	<ul style="list-style-type: none"> • Use pro-active approach to identify stakeholder (both groups and affected individuals). Consult with local advocates/public interest groups to identify outreach mechanisms and refer to the <i>People of Color Environmental Groups Directory</i>. • Disseminate information through alternative media (neighborhood organization newsletters, religious centers, fliers, local cable access channel, local radio broadcasts, etc.). • Co-sponsor public meetings with local community groups to nurture trust and credibility. • Make announcements to those on the mailing list; make follow-up phone calls to encourage attendance. • Direct consultation with tribal governments and public

	meetings at tribal facilities or on/near tribal lands.
Format of Meetings	<ul style="list-style-type: none"> • Use town hall type meetings. • Avoid "panel of experts" • Use small focus-group seminars or workshops. • Use community "experts" and comments as part of communication strategy • Seek advice of local groups. • Use a trained facilitator who is sensitive to environmental justice issues.
Schedule conflicts (i.e., conflict with working hours, working days)	<ul style="list-style-type: none"> • Conduct personal interviews using audio or video recording devices • Hold after-hours and/or weekend meetings or sessions • Hold meetings on successive days • Hold multiple shorter meetings at diverse times/days • Establish "comment line" (e.g., 800 number) for callers to leave recorded comments • Arrange for child-care (possibly funded by proponent)
Technically complex issues	<ul style="list-style-type: none"> • Provide sufficient background explanations beyond the usual means • Use plain language in meetings and printed material • Seek advice of local groups/individuals • Provide hands-on demonstrations/participation (e.g., tours of similar facilities/locations) • Use visual presentations (e.g., pictures, videos) • Provide two-way communication - Q & A • Use background summary reports, fact sheets, and abstracts • Provide technical and/or financial assistance to community, local organization, and/or tribal government to review,

	evaluate, and comment on the NEPA documents and provide meaningful input throughout the NEPA process.
Trust	<ul style="list-style-type: none"> • Clearly present goals of NEPA, the proposed action, the public involvement process, and what is expected to be gained from the process • Do not oversell: present uncertainties and limitations • Goals should be written and in clear language • Present experiences and track record, successes and failures

EPA-anticipated impacts and community perceptions of those impacts (and their fairness) can be very different, so both must be considered. When perceptions are the concern, an effort to involve and inform the community can go a long way toward building confidence that EPA's analyses and actions are well-intended and balanced. When actual impacts (i.e., disproportionately high and adverse human health or environmental effects) are the concern, the participation can serve to educate the Agency and help identify the means to identify alternatives and/or mitigate the impacts.

Although EPA and CEQ public participation regulations focus primarily on public meetings, there are other mechanisms that can also facilitate public input. Once community leaders and stakeholders have been identified and a dialogue established, a mailing list should be assembled so that information can be sent to this group, as well as formal announcements of a public meeting.

Another mechanism for providing information to the public is the establishment of information repositories which are accessible to members of the affected community. Locations can include libraries, churches, community centers, etc. Technical documents should contain a summary written to the lay public and translated, if necessary, into the dominant language of the affected community.

Meaningful public participation is based on the proposition that people should have a say in decisions which affect their lives in a significant way. Thus, for the public participation process to be effective, it must:

- Seek out and facilitate the involvement of those potentially affected;
- Contain the implicit commitment by decision makers to seriously consider the input of the public; and
- Communicate to participants how their advice was or was not utilized.

Minority communities and low-income communities are no different than any other in that there are nearly as many opinions as there are people. Thus, it is important not to focus exclusively on one mechanism (or one person or one group) for disseminating or soliciting information. Rather, it is important to use as many avenues as possible to solicit participation and to disseminate information. For example, when there are formal or informal representatives that purport to speak for a wider population, it is always advisable to seek divergent opinions.

Dr. Robert Bullard, Director of the School of Arts and Sciences at Clark Atlanta University, provides a framework for public participation when addressing environmental justice concerns during the NEPA process. Dr. Bullard points out that effective public involvement strategies have four common characteristics: inclusiveness, representation, parity, and communication. Inclusiveness refers to the assurance that all affected communities and stakeholders are represented and involved in the decision-making process. In terms of representation, he points out that it is crucial that the persons who are representing a specific community or stakeholder group truly reflect that community's, stakeholder's, and constituent's views, values, and norms. Parity involves all stakeholder groups having equal opportunity and capacity to provide input and full participation, as well as an equal voice in the decision-making process. Dr. Bullard further points out that an effective communications strategy accounts for different groups weighing and acting upon government actions and policies differently. An effective communications strategy recognizes, respects, and values cultural diversity of communities and stakeholders that represent a specific race, ethnic group, gender, age, geographic region, and a host of other characteristics.

As mentioned above, a recommended approach to ensure adequate public participation by minority and/or low-income communities when the screening analysis indicates there may be disproportionately high and adverse effects is to include a person familiar with environmental justice public participation issues on the "project review team." CEQ "Guidance Regarding NEPA Regulations" recommends that an interagency project review team be used when appropriate, with the team functioning as a source of information, a coordination mechanism, and an expert review team. When environmental justice issues must be faced, the review team should consult with the local community (including but not limited to organized groups concerned with environmental justice) during and following scoping, and should provide specialized expertise to EIS preparers.

The following are additional mechanisms for enhancing participation in the NEPA process: 1) allow public review of RODs; 2) government-to-government consultation with tribal governments, including formal requests for Indian Tribes to seek participation as cooperating agencies; 3) Community Advisory Boards for the development of NEPA documents; 4) community consultants; and 5) technical assistance to affected communities to enhance understanding of proposed action, technical documents, and full range of potential alternatives and mitigation measures.

In general, the effort expended in actively soliciting community involvement after the initial screening process should reflect the potential significance of the effects. As noted above, however, there should be some effort to communicate with stakeholders in all cases, including EAs, where the screening analysis identifies potential disproportionately high and adverse effects. Although the health or environmental impacts analyzed in EAs may not be "significant," from the NEPA standpoint, they may be perceived as significant by affected parties. Although this concern would not trigger an EIS, it should trigger more EIS-like scoping and public participation prior to and following EA preparation. To the extent practicable and consistent with regulations, an EIS-like public participation process should be undertaken for EAs when social or economic impacts will be or are perceived to be substantial, even when the impacts are not expected to be significant.

5.0 METHODS AND TOOLS FOR IDENTIFYING AND ASSESSING

DISPROPORTIONATELY HIGH AND ADVERSE EFFECTS

A fundamental step for incorporating environmental justice concerns into EPA NEPA compliance activities is identifying minority and/or low-income communities that may bear disproportionately high and adverse effects as a result of a proposed action. Once these minority and/or low-income communities are identified and located, the potential for disproportionately high and adverse effects to these communities must be assessed. It is important to understand where such communities are located and how the lives and livelihoods of members of these communities may be impacted by proposed and alternative actions. Minority communities and low-income communities are likely to be dependent upon their surrounding environment (*e.g.*, subsistence living), more susceptible to pollution and environmental degradation (*e.g.*, reduced access to health care), and are often less mobile or transient than other populations (*e.g.*, unable to relocate to avoid potential impacts). Each of these factors can contribute to minority and/or low-income communities bearing disproportionately high and adverse effects. Therefore, developing an understanding of where these communities are located and how they may be particularly impacted by government actions should be a fundamental aspect of the EA and EIS development process.

Currently, EAs and EISs generally evaluate and compare potential environmental, ecological, economic and/or human health risk impacts among and between broadly defined affected areas and populations. Potential impacts to smaller populations, individual communities, neighborhoods, census tracts, or environments (*e.g.*, single lake or watershed within a larger affected area) are not generally isolated, or disassociated from total impacts.

Minority and/or low-income communities are often concentrated in small geographical areas within the larger geographically and/or economically defined population center targeted for study. Minority communities and low-income communities may comprise a very small percentage of the total population and/or geographical area. Therefore,

the assumptions and inputs used in conjunction with traditional analytical tools for studying potential impacts under NEPA, and the results of the analyses, may not fully reflect the impacts that may be borne by these smaller communities or populations. An analysis of disproportionate impacts will develop an understanding of how the total potential impacts vary across individual communities. This allows analysts to identify and understand what portion of the total impacts may be borne by minority or low-income communities, to assess whether they are disproportionately high and adverse, and to develop alternatives and mitigation measures if necessary.

As described in Chapter 3, the first step in identifying the potential for environmental justice concerns is to characterize the population affected by the proposed action in terms of racial and ethnic composition and in terms of relative income distribution. The composition of the population should then be compared to the characteristics of the population (*e.g.*, percentage of minority populations residing near a proposed project versus the percentage of minority populations located within a single or multiple-county area surrounding the proposed project). Populations surrounding the proposed project should be characterized in terms of income distribution levels, as well as in terms of racial and ethnic diversity.

Many of the potential effects that may be borne by minority and/or low-income communities may be analyzed or assessed using the same analytical tools that are currently used in the development of EAs and EISs. However, once a potential environmental justice issue is identified, these tools may need to be modified or more likely, the scope of the analyses may need to be narrowed to focus on a smaller affected area or population.

Several types of analytical tools are currently available and are being refined and/or modified to assist analysts and decision makers in identifying potential environmental justice concerns and assessing potentially disproportionately high and adverse effects on minority and low-income communities. The following sections provide an overview of some of the available tools and the types of analyses that may be useful for identifying and assessing disproportionately high and adverse effects (by evaluating both total effects and effects on a smaller scale). It is not an

exhaustive listing of available tools, since many tools for identifying and assessing environmental justice concerns are still being developed, and it is not meant to promote or endorse one type of tool or analysis over any other. The application of any tool is dependent upon the type of study, the particular attributes of the area under study, and the data available to undertake the study.

5.1 Locational/Distributional Tools

Maps, aerial photographs, and geographical information systems (GIS) can be used to locate geographical areas where potential environmental justice issues may exist. Local maps and aerial photographs may provide a "snap shot," or general overview, of the locations of minority or low-income populations or communities and the proximity of the proposed project to these populations or communities. They also can identify key natural resources that may be affected. Although such tools are relatively simplistic, they may be useful for identifying distinct communities within a geographical area surrounding a candidate site, and for identifying clusters of facilities or sites that may contribute to cumulative impacts to a given region or community. By consulting maps or photographs that depict the locations of minority or low-income communities, as well as maps of the same geographical area that depict the locations of hazardous waste facilities, Superfund sites, Toxics Release Inventory facility sites, and/or wastewater discharges, analysts and EPA decision makers can gain a general understanding of the spatial relationships between the proposed project and the surrounding communities. These tools can assist the EPA NEPA analyst in identifying existing sources of environmental pollution and their proximity to minority and/or low-income communities.

By consulting maps or photographs that depict the locations of minority or low-income communities, as well as maps of the same geographical area that depict the locations of hazardous waste facilities, Superfund sites, Toxics Release Inventory facility sites, and/or wastewater discharges, analysts and EPA decision makers can gain a general understanding of the spatial relationships between the proposed project and the surrounding communities. Aerial photographs can be used to effectively depict the boundaries of an identified community and the spatial

relationship that exists between the community and natural resources and known pollutant sources.

Geographic information systems provide a much more powerful tool for identifying and locating populations of concern. GIS technologies are useful for characterizing environmental justice issues by identifying the locations of minority communities that potentially may be affected by proposed actions and providing a visual understanding of how potential impacts may be distributed within a geographical area. GIS provides the technology for displaying and overlaying locational information and population and site characterization information on one or more maps. GIS allows for the visual display of vast amounts of spatially oriented information. In addition, GIS systems can be used to display alternative "what if" scenarios and provide for relatively quick and easy general comparisons of the potential impacts presented by alternative locations.

Several EPA Headquarters and Regional offices are using and/or investigating the use of GIS technologies for identifying and analyzing environmental justice issues. GIS systems such as ARC/INFO and Landview II are geographic references or computerized atlases. These systems can create maps using digitized geographical boundary files such as the U.S. Census Bureau TIGER/Line '92 files, and other commercially available digitized boundary files (e.g., zip code boundaries, county boundaries, water body boundaries) to display locational information and geographical areas. GIS systems also can incorporate, and graphically display on computer-generated maps, other population and demographic information that is available in digitized format. Landview II includes 1990 demographic and economic data from the Bureau of Census, including population and housing characteristics and summary information on income, education levels, employment, race, and age. The census data are available in two databases, STF1A and STF3A, which contain digitized data files. The census databases are then spatially linked to the TIGER files that contain geographic and political boundaries. Each county in the census database is divided into several census tracts that are subdivided into census blocks. The blocks are aggregated into block groups containing between 250 to 550 housing units. This level of data aggregation allows the user to identify locations of

relatively small, homogeneous communities and to visualize, on the computer screen, the relative proximity of these communities to the proposed project and mitigation activities.

GIS allows users to easily display, on a single map, general locational and demographic information (e.g., zip code boundaries, proposed facility site locations, pollutant concentrations, income level, ethnic background, population density). GIS also will allow a user to display data in terms of policy or decision criteria. For example, income distribution data for individual census tracts may be segregated by percent of population below the poverty level (e.g., census blocks shaded differently to correspond to areas where 0 - 25 percent of the population is below the poverty level, 25 - 50 percent is below the poverty level, etc.). GIS also can integrate additional census information on education, employment, race, and age to produce graphic depictions of all of this information on a single map to obtain a comprehensive profile of the communities surrounding the proposed project. More than one project can be displayed on a single map to allow for a comparison of population characteristics surrounding the proposed project. Again, the maps generated by the GIS are useful tools for identifying minority and/or low-income communities that should be targeted for further study due to potential environmental justice concerns.

Although the availability of census demographic information in digitized format can significantly enhance NEPA analytical capabilities, and can be particularly useful for environmental justice analyses, the EPA NEPA analyst should keep in mind that there are limitations associated with the accuracy of census information due to the manner in which the data are collected and tabulated. Census data are useful for screening analyses, but results should always be validated through public participation mechanisms, other data sources, or by touring the community and talking with local officials and community leaders.

Many other types of information pertinent to NEPA project evaluations also are available for use in GIS systems. For example, EPA has made available portions of the Toxics Release Inventory (TRI) database (including facility locations), the Biennial Reporting System (BRS) database, the Aerometric Information Retrieval System (AIRS), the

CERCLA Information System (CERCLIS), and the Permit Compliance System (PCS), in digitized data files for use in GIS applications. DOT's chemicals in transit information is also available for GIS applications.

To enhance the applicability of GIS technologies to NEPA assessments, including the assessment of potential cumulative impacts from existing and proposed projects, the geographical and demographic information provided in Census databases can be integrated with other available EPA information (e.g., facilities located within particular zip codes or counties that reported releases or emissions of a particular chemical in TRI reports, locations of NPL sites, etc.) and integrated with other NEPA factors using digitized data sets on soils, power lines, roads, streams, sources of electricity, locations of threatened and endangered species, and existing archaeological sites. These additional data sets are readily available from the U.S. Forest Service, the U.S. Geological Survey, the Department of Commerce, and state and local government agencies. Additional maps depicting community-specific issues (e.g., locations of subsistence farmers and locations of water bodies supporting subsistence fishing activities) also can be compiled, digitized and incorporated into a GIS system to further depict and analyze more specific environmental justice issues and concerns.

Other GIS, or computer mapping, systems that may enhance NEPA analyses of environmental justice concerns include CAMEO (Computer-Aided Management of Emergency Operations), ALOHA (Aerial Locations of Hazardous Atmospheres) and AILESP (American Indian Lands Environmental Support Project). CAMEO includes chemical-specific information, facility-specific information from EPA's Chemical Inventory database and TRI database, and transportation information. CAMEO integrates MARPLOT, a mapping application tool that generates maps from U.S. Bureau of Census TIGER files. ALOHA is a modeling tool for estimating the movement and dispersion of gases and estimating pollutant concentrations downwind from the source of a potential spill or emission. ALOHA files can be saved and used in a format compatible with CAMEO. AILESP includes permitted facilities on or near Indian lands from various EPA databases (e.g., AIRS, BRS, NCDB, PCS, RCRIS, TRI, CERCLIS), pounds of chemicals released, 1994 spill

and one time release data, pesticide use by county, toxic weighting factors for TRI chemicals, two year inspection and compliance information, 1990 population and census statistics, and stream reaches with fish advisories, contaminated sediments and contaminated fish tissue.

5.2 Ecological and Human Health Risk Assessments

Executive Order 12898 provides for agencies to determine if a proposed action will result in disproportionately high and adverse effects to minority or low-income populations. Due to the fact that the characteristics of these populations may differ significantly from the characteristics of the larger affected population, analyses should address both the minority or low-income population and the comparison populations. See Chapter 2 for a discussion of the environmental and socioeconomic factors that should be considered in identifying and assessing disproportionately high and adverse effects.

EPA has a formal risk analysis process which consists of two related, but separate, processes: risk assessment and risk management. Risk assessment characterizes the likelihood for a chemical or substance to cause adverse health effects to humans and can provide a means for assessing the possible impacts on a population, if exposure occurs. Risk assessment provides an estimate of the probability that human exposure to a chemical agent will result in an adverse health effect to the exposed individual, or an estimate of the incidence of the effect upon an exposed population. Risk management is the process whereby it is decided what actions are appropriate, given an estimate of potential risks and due consideration to other relevant factors. Information developed in the risk assessment process is used to guide decision makers in determining the appropriate action to take within the risk management process. When making risk management decisions in the context of environmental justice concerns, a number of factors should be considered along with human health risk calculations or evaluations. These include social concerns, economic concerns, and acceptance of the proposed action by the affected communities. Within the context of risk management, there is an opportunity to consider relevant environmental justice issues. In the risk management process, decisions are made regarding acceptable levels of exposure and risk.

Risk assessment, as conducted by EPA, conforms to the Agency's published guidelines that include four distinct parts: Hazard Identification, Dose-Response Analysis, Exposure Assessment, and Risk Characterization. These four parts provide the analytical tools for identifying disproportionately high and adverse effects. During the risk management process, criteria must be developed to guide the weighing of information. These criteria provide the basis for risk-based decisions with regard to disproportionately high and adverse effects. For example, risk assessments usually do not account for exposure traits of racial and ethnic groups or accurately account for actual environmental harm to human health where the population density is low (*e.g.*, rural communities, Indian Country). Human activity patterns governed by customs, social class, and ethnic and racial cultures may be introduced and considered during the risk management process to allow for the identification of disproportionately high and adverse effects.

To ensure that environmental justice concerns are considered within the risk management process, risk assessments should be conducted to determine exposure pathways and potential effects and the affected community should be involved in the development and implementation of the process. This can then be overlaid with information obtained from locational analyses using GIS and census data during the risk management process to identify minority or low-income populations that are located within the identified exposure pathways. Racial, ethnic, and cultural information can then be used to further refine the risk management process to account for disproportionately high and adverse effects.

To enhance the analysis of disproportionately high and adverse effects within EPA's health assessment studies, several efforts are underway to make relevant health and exposure information available to these studies. EPA's Office of Research and Development is currently developing the National Human Exposure Assessment Survey (NHEXAS). This survey is designed to generate a human exposure database to address some of the geographic and demographic questions relevant to environmental justice issues. NHEXAS will address exposure concerns by providing information on the magnitude, extent, and causes of human exposure.

EPA's Office of Policy, Planning, and Evaluation is currently developing an environmental justice database that will integrate health effects data from the National Health and Nutrition Examination Survey III (NHANES-III), demographic data from the 1990 Census, environmental data from air monitoring stations, and the Toxic Release Inventory database. This database integration will assist EPA staff in developing disease correlations with air exposure data in high impact populations.

Ecological assessments conducted as components of EAs and EISs generally involve identifying the natural resources (e.g., air, water, soils) that will be used by proposed project or activity and the potentially affected environments (e.g., watersheds, wetlands, wildlife habitats) that may be impacted by the proposed project (including alternatives). After a general cataloging and description of the surrounding environmental and ecological resources is compiled, the potential changes and impacts of the proposed action and alternative actions are assessed. Often, these analyses do not fully substantiate the beneficial or adverse effects on the surrounding geographical area or communities within the area. Instead, impacts may be described generally, with an assumption that they are distributed equally across all communities or residents within the affected region or area. As a consequence, the analysis may overlook or ignore environmental justice concerns. If adverse impacts are not quantified, then special consideration should be given to whether potential impacts could be borne by minority communities or low-income communities residing within the larger area and, if necessary, separate analyses should be designed and conducted to assess this. As discussed above, GIS systems can sometimes be used to identify such populations and to characterize the environments where the populations reside. In addition, county and state planning agencies and housing authorities may be useful sources of information for characterizing the unique aspects and vulnerabilities of these populations.

If environmental, ecological, or human health impacts to the affected geographical area are quantified, the distribution of such impacts should be assessed. The study should attempt to estimate the proportion of impacts borne by low-income and/or minority populations within the area of a project's impact compared to the general population in

and around the project, or the project's region of influence. While traditional risk modeling may not always be used in the NEPA process, impact assessments and risk management tools should be tailored to reflect the characteristics of these communities and study assumptions should reflect the characteristics of the individuals residing in low-income communities and minority-populated communities (*i.e.*, model assumptions should reflect the general health of these individuals and their general living conditions and unique locations relative to pollutant sources). When tailoring risk management tools to consider the distribution of impacts to low-income and/or minority communities, differential patterns of subsistence consumption of natural resources should be considered, including differences in rates of consumption for fish, vegetation, water, and wildlife among ethnic groups and among cultures. Further, it should be recognized that land and water resources not predominantly used by the general population may be important sources of consumption, economy, cultural use, and/or recreation for minority and/or low-income communities. Degradation of these resources may result in direct and disproportionately high and adverse effects to minority and/or low-income communities.

5.3 Socioeconomic Analyses

The analysis and understanding of potential socioeconomic impacts is also important. CEQ regulations note that economic or social effects alone do not trigger an EIS (40 CFR §1508.14). However, if environmental justice concerns are identified during the screening analysis or during the development of an EA, the potential interrelated socioeconomic impacts to both the total affected population (or a "control" population) and to the low-income and/or minority communities of concern should be evaluated, to the extent practicable. Cultural or Social Impact Assessments are additional tools that can be used for analyzing specific socioeconomic impacts to a community that shares a common cultural or spiritual environment.

In the development of EAs and EISs, deterministic models are generally used to predict potential impacts that a particular action may have upon particular economic indicators (*e.g.*, the level of employment and changes to income distribution or property values) for the community

surrounding the proposed project. Standard models provide for analyses of the potential effects that an action may have upon the local economy in both the short term, due to transient or temporary activities (*e.g.*, construction, facility planning and startup activities), and the long term, due to sustained impacts to the area (*e.g.*, permanent employment opportunities, reduction in housing quality, degradation of existing environment). Generally, NEPA modeling activities measure potential shifts in indicators such as income distribution and employment levels across general income distribution categories (*e.g.*, percentage change in annual income to portion of affected population earning less than \$15,000, between \$15,000 to \$20,000, etc.). Standard socioeconomic models also can be used to predict impacts that proposed actions and alternatives may have upon available housing stock, housing quality, and property values.

Generally, standard socioeconomic models are employed to predict shifts and changes in particular socioeconomic indicators such as employment, income levels, and housing quality upon a large geographical area or population center, often a standard, pre-defined economic trade area. The data and information provided as inputs to the model and assumptions made in employing the model (including economic conditions and multipliers) broadly characterize the entire population of the large geographical area or population center surrounding the proposed project. The results of these modeling efforts may include potential impacts to various categories within the overall population characterized by income level or by housing category. However, these models generally do not allow (or at least have not been used so as to allow) for a distributional analysis of potential impacts to specific communities, individual populations, or to small geographical areas.

To predict or characterize more accurately the potential disproportionately high and adverse effects to minority or low-income communities and account for potential environmental justice concerns, standard socioeconomic models currently used for EAs and EISs may have to be modified or specifically tailored to account for an array of new variables, such as subsistence living, treaty-protected resources, cultural use of natural resources, sacred sites, dependence on public transit, community cohesion, and a relatively unskilled labor base. Environmental justice issues

and concerns may be integrated into some traditional socioeconomic analyses by first employing scoping activities and screening tools to identify potential minority and/or low-income communities prior to the employment of specific modeling techniques. It then may be possible to tailor modeling assumptions and input data on specific populations or targeted communities, rather than apply standard modeling techniques to large economic trade areas or standard metropolitan areas and using average input parameters that may not reflect adequately the characteristics of minority or low-income communities (*i.e.*, alter model assumptions to characterize the population affected by the environmental justice concern, rather than characterize the average individual in the entire study area). As noted above, Census databases contain demographic information (*e.g.*, income levels, race, age, employment levels) at the census tract and census block levels. Other potential sources of information include tribal, state and local planning agencies, and state housing, commerce, and welfare agencies. EPA analysts should keep in mind that some information on the characteristics of local communities and environments may be available only from community leaders, local government offices, and/or members of the community. Some information may be available from transcripts of public concerns raised at hearings for other government projects within the same region. In some cases, analysts may need to conduct interviews of local community leaders and members of the targeted population.

One option for modifying or tailoring socioeconomic analyses to identify and evaluate environmental justice concerns is to develop index or ranking systems for identifying and scoring potential disproportionately high and adverse effects to minority and/or low-income communities. Such an index or ranking system could be applied to specifically defined or targeted areas and used as a screening tool to identify environmental justice concerns in communities surrounding one or more candidate locations. Candidate locations that result in high index scores or rankings can either be dropped from consideration, targeted for additional and more thorough socioeconomic and risk analyses to investigate further potential disproportionately high and adverse effects, or development of additional alternative actions or projects designed to mitigate identified impacts.

An environmental justice screening index may be as simple as defining several levels or categories of potential impacts (*e.g.*, changes in employment levels, changes in income levels, and changes in overall health levels) or defining and scoring several socioeconomic indicators (*e.g.*, dependence on subsistence farming or fishing, percent of population below poverty level, average property value) and weighing each category of impact as to its importance to contributing to environmental justice issues. Decision criteria (*e.g.*, undertake further detailed social impact analyses, drop candidate location from consideration) could then be set for different ranges of index scores or rankings. The index also may combine preliminary information on potential economic impacts with information on other potential impacts (*e.g.*, environmental degradation, air emissions) to assign decision criteria for additional targeted analyses or studies.

EPA Region 6⁽¹¹⁾ developed a relatively sophisticated ranking scheme to determine whether an environmental justice indicator exists. The formula provides a means for determining whether an environmental justice situation exists and includes factors such as population exposed, degree of impact and degree of vulnerability.

Region 6 evaluates sites using an environmental justice formula and ranks facilities or actions on a scale of 0 to 100. Regional officials point out that although higher scores can indicate greater potential environmental justice concerns, the population density, percent minority population, and percent of economically depressed household data are the more important analytical factors. When evaluated independently, they often provide greater insight into potential environmental justice concerns and can be used alone to rank sites. Also, the user should realize that even a location with an index ranking of zero can have significant environmental justice concerns. For example, an unpopulated area will rank a zero, but if owned and/or used by minority and/or low-income groups, the site may have significant environmental justice importance. Recent examples of EPA's use of the EJ index include the draft EIS for Eagle Pass Mine, in Maverick County, Texas, and the Supplemental Draft EIS for Expansion of the Oak Hill Surface Lignite Mine into the DIII Area, Rusk County, Texas. Utilizing the EJ index on a scale of 1 to 100 wherein

higher values indicate more concern, neither EIS warranted a closer examination into EJ issues.

APPENDIX A

Council on Environmental Quality Guidance for
Addressing Environmental Justice
Under the National Environmental Policy Act

(not included on this Internet version of EPA's guidance)

APPENDIX B

Regional Contacts

Region 1

Rhona Julien, EJ Coordinator (617) 565-9454

Betsy Higgins-Congram, EPA Environmental Review
Coordinator (617) 565-3422

James Sappier, Indian Program Coordinator (617) 565-
3935

Susan Coin, NEPA Coordinator (617) 565-3577

Region 2

Melva Hayden, EJ Coordinator (212) 637-5027

Robert Hargrove, EPA Environmental Review Coordinator
(212) 637-3495

Christine Yost, Indian Program Coordinator (212) 637-
3564

Bob Hargrove, NEPA Coordinator (212) 637-3504

Region 3

Reginald Harris, EJ Coordinator (215) 566-2988

John Forren, EPA Environmental Review Coordinator
(215) 566-2721

Roy Denmark, NEPA Coordinator (215) 566-2782

Region 4

Connie Raines, EJ Coordinator (404) 562-9671

Heinz Mueller, EPA Environmental Review Coordinator
(404) 347-7292

Mark Robertson, Indian Program Coordinator (404) 462-
9639

Heinz Mueller, NEPA Coordinator (404) 562-9611

Region 5

Karla Johnson, EJ Coordinator (312) 886-5993

Mike McMullen, EPA Environmental Review Coordinator
(312) 886-7342

Ketutis "Casey" Ambutas, Indian Program Coordinator
(312) 353-1394

Mike McMullen, NEPA Coordinator (312) 886-7342

Region 6

Shirley Augerson, EJ Coordinator (214) 665-7401

Mike Jansky, EPA Environmental Review Coordinator
(214) 665-7451

Ernest Woods, Indian Program Coordinator (214) 665-7454

Mike Jansky, NEPA Coordinator (214) 665-7451

Region 7

Althea Moses, EJ Coordinator (913) 551-7649

Ralph Langermeier, EPA Environmental Review
Coordinator (913) 551-7367

Kim Olsen, Indian Program Coordinator (913) 551-7539

Ralph Langermeier, NEPA Coordinator (913) 551-7367

Region 8

Elisabeth Evans, EJ Coordinator (303) 312-6053

Carol Campbell, EPA Environmental Review Coordinator
(303) 312-6705

Sadie Hoskie, Indian Program Coordinator (303) 312-6343

Carol L. Campbell, NEPA Coordinator (303) 312-6897

Carol Campbell, NEPA Coordinator (Montana) (303) 312-
6705

Region 9

Willard Chin, EJ Coordinator (415) 744-1204

Dave Farrel, EPA Environmental Review Coordinator
(415) 744-1584

Clarence Tenley, Indian Program Coordinator (415) 744-
1607

Dave Farrel, NEPA Coordinator (415) 744-1584

Region 10

Joyce Crosson-Kelly, EJ Coordinator (206) 553-4029

Ruth Siqueza, EPA Environmental Review Coordinator
(206) 553-2143

Kathleen Veit, Indian Program Coordinator (206) 553-1983

Ruth Siguenza, NEPA Coordinator (206) 553-2143

Headquarters

EJ Coordinators

Angela Chung, OA (202) 260-4724

Will Wilson, OAR (919) 541-2551

Mary O'Lone, OGC (202) 260-2301

Marylouise M. Uhlig, OPPTS (202) 260-2906

Janice C. Bryant, OPPE (202) 260-2730

Janice Berry-Chen, ORO (202) 260-6188

Sherry Milan, OECA (202) 564-2619

Doretta Reaves, OCEPA (202) 260-3534

Rosezella Canty, OCR (202) 260-4567

Leo Cox, OW (202) 260-3475

Dana Brewington, OSWER (202) 260-0221

Lawrence Martin, ORD (202) 260-0673

APPENDIX C

References

Council on Environmental Quality. March 1998. Guidance for Addressing Environmental Justice under the National Environmental Policy Act (NEPA).

Council on Environmental Quality. January 1997. Considering Cumulative Effects Under the National Environmental Policy Act.

Council on Environmental Quality. November 17, 1980. Guidance on Applying Section 404(r) of the Clean Water Act to Federal Projects Which Involve the Discharge of Dredged or Fill Materials into Waters of the U.S., Including Wetlands.

Council on Environmental Quality. March 23, 1981. Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, as amended. 46 Fed. Reg. 18026.

Earnhardt, Melany. 1995. Using the National Environmental Policy Act to Address Environmental Justice Issues. Clearinghouse Review.

Environmental Justice Resource Center. *People of Color Environmental Groups: 1994-1995 Directory*. Prepared by Robert D. Bullard, Clark Atlanta University, Atlanta, Georgia.

Executive Order 12898 on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations with accompanying Memorandum. February 11, 1994.

Executive Order 13007 on Indian Sacred Sites. May 24, 1996.

Interagency Working Group on Environmental Justice (IWG). Draft Guidance for Federal Agencies on Key Terms in Executive Order 12898. August 8, 1995.

National Enforcement Training Institute. December 1996. Environmental Justice Training for Enforcement Personnel: Trainer's Manual.

The National Environmental Policy Act of 1969 as amended. 42 U.S.C. 4321-4347. January 1, 1970.

Ross, Heather E. 1994. Using NEPA in the Fight for Environmental Justice. *William and Mary Journal of Environmental Law*. Volume 18:285.

U.S. Environmental Protection Agency. 1996. The Model Plan for Public Participation.

U.S. Environmental Protection Agency, Office of Federal Activities. October 3, 1984. Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. General Accounting Office. June 1, 1983. Siting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities.

1. ⁰ Throughout this guidance, the term "disproportionately high and adverse effects" is used interchangeably with the longer phrase "disproportionately high and adverse human health or environmental effects on minority populations and low-income populations." This is done purely for editorial ease.

2. The term 'treaty-protected resources,' as it is used in the guidance, includes those resources that are protected by treaty, statute and/or executive order.

3. On May 24, 1996, the President issued Executive Order 13007 on Indian Sacred Sites to 1) accommodate access to and ceremonial use of Indian sacred sites, and; 2) avoid adversely affecting the physical integrity of such sacred sites.

4. For consistency throughout the document, the guidance will use the term "Indian Tribe" when referring to federally recognized tribes and "indigenous population" or "community" when generally referring to Native American, American Indian, Alaska Native, and/or Native Hawaiian peoples. Under environmental justice, the Agency's policy is to interact with both the tribal government on a government-to-government basis, as well as with any affected or interested indigenous person(s) as public stakeholders.

5. A distinction must be made between Native American communities that live within their own governmental jurisdictions and those that do not. The CEQ regulations recognize the government-to-government relationship between the federal government and tribal governments, and encourage federal agencies to involve tribal governments in the NEPA process when a proposed project may affect a tribe or tribal lands. See sections 1501.2 [Apply NEPA Early In The Process]; 1501.7(a)(1) [Scoping]; 1502.16 [Environmental Consequences]; 1503.1(a)(2)(ii) [Inviting Comments]; 1506.6(b)(3)(ii) [Public Involvement]; and 1508.5 [Cooperating Agency]. Native American programs include those Federal programs which are to be guided, as appropriate, by the government-to-government relationship, the Federal trust responsibility to federally recognized Indian Tribes, and the role of tribes as governments within the Federal system.

NEPA Compliance Coordinators should consult with the regional Indian Program Coordinator and should request that the Indian Tribes seek participation as a cooperating agency when a tribal government, land, resources, or interest may be affected by a project. While such cases may or may not trigger an environmental justice review, EPA must act consistent with the federal government's trust

responsibility to federally recognized Indian Tribes. Each case should be decided individually; if questions arise please consult with the American Indian Environmental Office and the Office of Federal Activities.

6. ⁰ The IWG key terms guidance describes differential patterns of consumption of natural resources as relating to "subsistence and differential patterns of subsistence, and means differences in rates and /or patterns of fish, water, vegetation and/or wildlife consumption among minority populations or low-income populations, as compared to the general population."

7. ⁰ It should be noted that the factors the IWG is providing for assessing environmental hazard were not necessarily developed in the context of NEPA analyses. These factors are, however, similar to the factors used in determining "significant" physical or natural environmental effects under NEPA.

8. Guidance on the terms "minority population" and "low-income population" is contained in Appendix A.

9. See CEQ "*Environmental Justice Guidance Under the National Environmental Policy Act*" page 10, Helpful Information to Inform the Public During the Scoping Process.

10. Environmental Justice Resource Center. *People of Color Environmental Groups: 1994 - 95 Directory*. Prepared by Dr. Robert D. Bullard, Clark Atlanta University, Atlanta, Georgia. 1994.

11. ⁰ U.S. EPA Region 6, Office of Planning and Analysis. "Computer Assisted Environmental Justice Index Methodology." July, 1994.

Office of Federal Activities

Search	EPA Home	Site Map	OECA	Feedback
------------------------	--------------------------	--------------------------	----------------------	--------------------------

Michelle, Kayce (UTC)

From: Will Bloch [REDACTED]@gorge.net]
Sent: Friday, August 27, 2010 10:10 AM
To: EFSEC (UTC)
Subject: Draft EIS re. Whistling Ridge Energy Project
Attachments: Whistling Ridge comments.doc

Attached please find my comments on the Draft Environmental Impact Statement prepared by the EFSEC and BPA regarding the Whistling Ridge Energy Project.

Thank you.

Will Bloch
[REDACTED]@gorge.net
509-493-[REDACTED]

**BEFORE THE STATE OF WASHINGTON ENERGY FACILITY SITE
EVALUATION COUNCIL (WEFSEC)**

In the Matter of Application
No. 2009-1

Comments by
Will Bloch,
private citizen

Whistling Ridge Energy LLC

Whistling Ridge Energy Project

Commenter Details

I am a retired biochemist and my wife (Dell Rhodes) is a retired psychology professor, both residing at 75 El Camino Real, White Salmon, WA, 98672 (509-493-3572; willbloch@gorge.net; Dell.Rhodes@reed.edu). One of Dell's academic specialties was cognitive neuroscience; this fact is relevant to the analysis below. We have lived at this address for about 9 years, having chosen to retire here in order to be close to the extraordinary natural environment in the Columbia Gorge and on the surrounding ridges and peaks. A photo simulation of the wind-farm visual effect at the top of Strawberry Mountain, immediately above our house, (accessible at the Whistling Ridge Project website, though not included in the Draft EIS document) shows considerable impact. However, the farm would not be visible from our residence. As retirees, we have absolutely no economic dependence, direct or indirect, on the outcome of the current site evaluation.

Summary Recommendation and Justification

We urge that the WEFSEC not allow this project to proceed at the present time. Our principal reason is that the May 2010 Draft EIS is fundamentally and legally deficient in applying well known principles of perceptual psychology to the assessment of the visual and auditory impacts of the proposed wind farm. Furthermore, the Whistling Ridge Energy Project would create an essentially permanent, potentially radical, change in the scenic features which motivated the establishment of the Columbia River Gorge National Scenic Area (CRGNSA), recognized nationally and internationally to contain one of the great landscapes of the world. As the WEFSEC currently lacks any rules for factoring cumulative effects into their siting decisions, approval of this major commercial assault on Gorge scenery would almost certainly prejudice in favor of approval of any future wind-

farm proposals flanking the Gorge, if only out of respect for due process (avoidance of arbitrariness). The result would be the effective gutting of the CRGNSA by non-legislative means. Although dismantling of the CRGNSA has been a long-term goal of local conservatives, including many political leaders in Skamania and Klickitat Counties, it seems almost certain that such an outcome would distress a significant majority of local residents, as well as many other Washington residents and even more Gorge-lovers worldwide.

Standing of Visual-Resource Impact in Influencing This Decision

From the mere fact that the WEFSEC devoted a significant fraction of the Draft EIS to Visual Resources and commissioned an ambitious photo simulation of the predicted effect of the wind turbines on approximately 20 views in and flanking the Gorge, it would appear that the WEFSEC recognizes the importance of visual impact to its evaluation. However, project proponents, and Jason Spadaro in particular, have kept up a steady public drumbeat to the effect that scenic impact is irrelevant because the project lies outside the CRGNSA. This position is a spectacular example of the Fallacy of the False Inverse, which should be familiar to anyone with a legal, mathematical, or philosophical background. The Fallacy goes like this: it is a true statement that if the project lay within the CRGNSA boundaries, it would be subject to view-impact regulation; therefore it is true that since the project lies outside the CRGNSA boundaries, it is not subject to view-impact regulation [the second conditional statement is the logical inverse of the first one]. The problem with this deduction is that the rules of logic dictate that the inverse of a true conditional statement is not necessarily true.

The following common-place example helps one understand why the inverse of a true statement may be false. It is true that all Ford cars have four wheels on the road. The inverse of this statement is the following: cars that are not Fords do not have four wheels on the road. The latter is clearly false, because Chevys, Cadillacs, VW's all have four wheels on the road. Back to the present case: the proponents' position is not only fallacious as a matter of logic; it is wrong legally. The lawful authority of the WEFSEC to determine the impact of the Whistling Ridge Energy Project on scenic values inside and outside of the CRGNSA exists independently of the authority of the Gorge Commission in this matter. Both the Gorge Commission and the WEFSEC "have four wheels on the road". The standards that the WEFSEC applies in order to minimize wind-farm visual impact may not be the same

as the CRGNSA rules, but that does not make them any less permissible or necessary. Quite independently of what the Gorge Commission does, the WEFSEC is empowered and charged to apply to an energy project any sort of scenic criteria it determines to be in the public interest. The WEFSEC should not be deflected from its public responsibility by illogic in the propaganda campaign of project proponents.

As the WEFSEC is tasked with considering all impacts of energy projects within the state, it must consider the possibility that the most important impact may be to visual resources in cases where the baseline value of the latter is very high. As the Draft EIS points out, view impact is more subjective than most other impacts; but that does not make it any less important. The CRGNSA is an entity created by the US Congress in recognition of the immense scenic values in the Gorge. Public awareness of and support for Gorge scenic values certainly is even stronger today than it was when the CRGNSA was established. These facts obligate the WEFSEC to high-prioritize the preservation of visual resources in this case.

Deficiencies in the Draft EIS Section on Visual Resources

There appear to be at least three weaknesses to this section of the document.

(1) In outlining the theoretical components of visual-impact analysis, the Draft EIS does not consider three elements of perceptual psychology which will aggravate the visual impact of any wind farm, especially in the Gorge.

(a) In evaluating scenery the mind pays special attention to skylines: the shapes and complexity of the profiles of ridges and peaks. Anything which interrupts a smooth contour is immediately homed in on to assess whether it is a natural or unusual feature. This attentional focus probably is hard wired [possible adaptive value: spotting predators/prey on the horizon] and not subject to habituation or extinction. From this perspective, nothing could be more jarring than a row of wind turbines atop a ridge; they completely interrupt the visual flow of the ridge line. We shall not get used to the interruption over time. The same row of structures against the background of a hillside would be less conspicuous. However, according to conventional wisdom, wind farms in mountainous country must be on top of the ridges, where they also have the greatest potential to distract.

(b) The text states that at higher rotation velocities (i.e., in strong winds), turbine blades would become blurred essentially to the point of

invisibility, reducing visual impact. This assessment ignores some hard-wired brain circuitry, which is primed to seek out and focus on motion [possible adaptive value: spotting moving predators/prey against a complex, camouflaging visual background]. Modern turbines have relatively low maximum velocities, slow enough that viewers will find their attention drawn toward their rotation even in strong winds. That is certainly my experience with the wind farms along US 97 east of Maryhill. If I detect any motion, my mind wants to watch the turbines, not the road. The same attentional concern has led many cities to ban dynamic billboards as traffic hazards. [It also should be pointed out that the prediction of visual blurring is engineering nonsense. At such a high velocity, the rotors would self-destruct.]

(c) Psychologists understand well an optical illusion which we all have experienced, the so-called "moon illusion". As the moon rises above or approaches the horizon, the mind amplifies its apparent size in the visual field. If you take a digital photo of a moonrise or moonset and compare the resulting image to what you think you are seeing, the discrepancy can be quite a shock. A basic mental process, like the two phenomena described above, underlies the moon illusion and will make wind turbines on the horizon look larger than they really are. As a result, the photo simulations used in the Draft EIS to evaluate wind-turbine visual impact systematically underestimate the perceived size of the turbines to human viewers.

There is nothing soft about the science describing the three perceptual phenomena above. Research psychologists know how to quantify them and easily could verify their importance in the present context by performing the appropriate experiments at existing wind farms.

(2) The Draft EIS uses two arguments to downplay the significance of wind-farm visual impact, arguments so arbitrary and lacking in common sense as to make one wonder whether the EIS sponsors, the WEFSEC and the BPA, already have their minds made up to approve the project.

(a) It is suggested that since the Whistling Ridge area has only about 140 sunny days a year and sunny days are the only ones when the turbines will present a visual contrast to the background sky, the net visual impact of the facility will be minimal. This is nonsense for any number of reasons. The sunny days are concentrated in the summer. That is when there are the most daylight hours in which to enjoy the views. That is when the Gorge population is swollen by visitors, many of whom have come explicitly to enjoy the views. That is when residents spend the most time outdoors, much

of it including enjoyment of the views. Therefore that is when the most Gorge-viewing person-hours occur. Most of us spend little time savoring the view when the Gorge presents a thousand shades of gray, and experience heightened expectations that clear weather will allow us to enjoy the natural environment. View pollution is most likely to bring us down when we want the outdoors to recharge our spiritual batteries, in good weather.

(b) It is suggested that because the local scenery near Whistling Ridge already is significantly degraded by high-tension power lines and towers and by clear-cuts, the additional visual impact of wind turbines will be mitigated by the high background visual degradation. This is essentially the classic argument of polluters that since the environment already is degraded by others, they should have their own license to pollute. Now we don't like to look at clear-cuts and power lines any more than the next guy does. However, we've also learned over the decades that clear-cuts grow out remarkably rapidly to the point that their view is not as jarring as that of a fresh clear-cut; relative to a fresh clear-cut, turbines are forever. Furthermore, we've been indoctrinated that a clear-cut simply models the natural phenomenon of a lightning-caused burn, so looking at a clear-cut induces a warm and fuzzy feeling inside. As for power lines and towers, they do not project nearly as far into the sky as wind turbines will; and they do not move. The lines they trace in the sky are much thinner than a wind tower. Their color tends to blend with the background; the bright white of wind towers is intended explicitly to be seen. Most of them do not occupy ridge lines.

(3) The visual-impact meat of the Draft EIS is contained in the marvelous set of photo simulations of representative views of the proposed wind farm. This dataset has one advantage and one disadvantage compared to the parallel presentation of the simulation data in the Whistling Ridge website put up by Broughton/SDS. The accompanying cartoon versions of the pictures greatly improve one's interpretation of the photos. On the other hand, the Draft EIS includes and discusses only 13 of the views, whereas the website shows 21 different views. [Neither presentation accounts for the missing views numbered 6 and 9 in the series, stimulating inevitable speculation about what those perspectives showed.]

The creator and editor of such a photo dataset have tremendous power over the impressions it fosters, through selection of the exact scenes photographed and through selection of the subset of photos to be analyzed. There is some sign of both kinds of biasing in the complete dataset and in

the Draft EIS. For example, the images of views #7 (Mill A), #17 (Providence Hospital), #20 (OR 35), and #21 (Kollock-Knapp and Scoggins Roads) include foreground (power lines, buildings, or trees) which tends to obscure and de-emphasize the wind-farm view. Selection of a different viewing spot in the same vicinity would have increased dramatically the subjective impression of visual impact. The Mill A case is especially obvious, because the Draft EIS commentary employs the considerable baseline visual pollution of a power line in the foreground to decrease the significance of scenery degradation by the wind farm. Now most views of Whistling Ridge from the Mill A community do not include power lines or towers in the foreground. A photo simulation from a more typical Mill A front yard would have to lead to a conclusion of large to extreme, not “low to moderate”, Viewer Sensitivity. This biased scene selection must be particularly galling to Mill A residents because this community undoubtedly would feel the greatest impact of visual and sound pollution by the Whistling Ridge Project.

The editor of the May 2010 Draft EIS also chose not to present and analyze views #2 (Strawberry Mountain), #21 (Kollock-Knapp and Scoggins Roads), and #22 (Cook-Underwood and King Roads), even though these images, available on the Whistling Ridge Project website, show some of the greatest wind-farm visual impacts in the entire dataset. These examples reinforce the impression that the sponsors of the EIS already know what conclusions they want to reach.

Visual Pollution: How Much Is Too Much?

Despite any bias which might have influenced design and analysis of the photo-simulation dataset, the May 10 Draft EIS concludes that 7 of the 13 views analyzed showed “moderate” Viewer Sensitivity; 5 showed “low-to-moderate” or “moderate-to-low” Viewer Sensitivity; only one, #19 (Columbia River Highway) showed “low” Viewer Sensitivity. Obviously these findings are not expected to define the bounds of view degradation which the wind farm might cause throughout the affected area; for example, there are no views from within structures through windows facing Whistling Ridge, from the Columbia River itself or from within the Mark Hatfield Wilderness. [The framing of a scene by a window can induce a particularly strong version of the moon illusion, and in any case eliminates a lot of visual background which might de-emphasize a wind-farm image.] Instead, these are representative findings from which one can infer that the turbines would

impact to varying degrees the views from a large fraction of the local land and water surface, in all directions.

The Draft EIS concludes that degradation of Visual Resources is not significant enough to affect the acceptability of the Whistling Ridge Energy Project, despite the fact that the US Congress has designated this area one of great scenic value; apparently “moderate” impact is not a serious concern. A poll of area inhabitants on both sides of the Columbia (especially the older ones) probably would show that many of them treasure their views of the River and the Cascades as much as they do the outdoor activities which also draw many to settle in the area. How much Viewer Sensitivity would one have to show in order to conclude that wind-project visual pollution might suffice to sink this project? The Draft EIS does not discuss a threshold level of visual pollution, avoiding any need to defend such an evaluation and rendering completely arbitrary any decision on this point. Hence, all a critic can do is to invoke the Golden Rule. How much Viewer Sensitivity of visual pollution seen from your front yard would it take for **you** to conclude that the impact is unacceptable? When is “moderate” not enough?

How should the WEFSEC react to this concern in a way which does not sink all wind-farm proposals? Simply keep wind farms away from areas generally recognized as having extreme scenic value. This criterion leaves much of central and eastern Washington still suitable for wind farms.

Sound Pollution

Why I use the term, “sound pollution”, rather than “noise pollution”, will become evident in a moment. The Draft EIS section on Noise is so detailed, technical, and data-driven that my first impression was to drop an original concern that this might be a crucial environmental issue, at least for the residents of Mill A and Willard, the communities most impacted by the entire proposed array of about 50 wind turbines. However, this reaction was reversed by the section’s discussion of the “beats” which can be heard as a result of positive and negative interference within a group of turbines, of low-level periodic sounds from the passage of each turbine’s rotor blades past the wind tower. These beats can be louder than the point-source noise and can contain rhythmic complexity not present in the latter.

My basic concern is the mental phenomenon of the “dripping faucet”, or “ticking clock”. Sometimes, especially at night, our sensitivity to tiny sounds is enhanced [probable adaptive value: detection of predators creeping through the underbrush]. Once awakened, the mind can so focus on intermittent sound, fainter than ambient noise, that sleep becomes impossible. Some irregularity or complexity in a periodic faint sound probably enhances the attentional effect that awakens us; having become sensitized to an intermittent sound, the mind keeps waiting for the next event. This form of auditory alertness is hard to overcome voluntarily. Indeed, efforts to overcome it often seem to amplify the offending sound.

Here we have an aural phenomenon which audio engineers would dismiss as insignificant because the physical magnitude of the triggering noise is so low, in both absolute and relative terms. Furthermore, it varies widely among individuals and even for a given individual on different nights, probably depending in large part on other sources of discomfort which disrupt deep sleep. Finally, if it arises from audio interference among nearby wind towers, it will vary widely among different residences in a single community. However, the resulting sleep deprivation can devastate human physical and mental health. I experienced the phenomenon recently with a motel-room electric clock, cleverly designed to emit an artificial ticking sound with a one-second period. I had to unplug the clock to get back to sleep. My wife, normally much more sensitive to sleep interruption than I, slept through the whole episode and claimed the next morning not to hear the ticking (which, indeed, was much less evident to me in daylight).

If the WEFSEC needs any more prompting to take sound pollution seriously, it should check out an article in the July 31, 2010 edition of the NY Times Online by William Yardley (“Turbines Too Loud for You? Here, Take \$5000”). It describes the difficulty Oregon citizens near Ione, OR have had with wind-tower noise, aggravated by the absence of an effective enforcement mechanism for state noise laws. Washington State should not allow residents’ lives to be blighted by nearby new wind developments – what amounts to an arbitrary and often uncompensated taking. If necessary, new wind developments in Washington should be placed on hold until the nature of sound pollution is more fully understood and rules are established to protect the neighbors of wind farms.

How should the WEFSEC react to this concern in a way which does not sink all wind-farm proposals? Start by avoiding sites close to

communities and preference sites where there is no serious objection from the neighbors. These conditions probably are met for many wind farms on agricultural land in central and eastern Washington, where population density is very low and the few wind-farm neighbors welcome the compensation for site leases. More technical evaluation of wind-turbine "beat" acoustics also is advisable, especially to determine for sure whether there is any reason for concern in the areas of Willard and Mill A with maximum population density, on the order of a mile distant from the wind farm. It also would be valuable to know how wind direction and velocity affect propagation of this kind of sound, as Willard and Mill A are upwind during the most common wind conditions.

Environmental Justice

The section of the May 2010 Draft EIS on environmental justice is completely inadequate. The section starts by correctly stating that federal regulation requires that an EIS consider disproportionate impacts on ethnic minorities and low-income populations. It then proceeds to ignore the low-income part of the criterion and dismiss the possibility of environmental injustice because no significant minority populations exist in the vicinity of the proposed project. The separate Socioeconomic section treats the entire three-county area affected in any way by the project, ignoring the unevenness of income distribution (and project impact) across the area.

However, it is clear that Willard and Mill A will feel any environmental impact of the Whistling Ridge Project much more than any other community or neighborhood, thanks to a combination of nearness to the turbines, exposure to the largest number of turbines, dependence on the road needed to supply the construction site, and population density. Furthermore, it is quite likely that an economic study of Mill A and Willard would show that these communities qualify for low-income designation. In fact, at least one such survey has been done for a local utility district; the sampled fraction of the Mill A population was found to be low-income relative to the average for Skamania County, itself low-income by state standards. The WEFSEC needs to conduct an economic survey of the entire Willard and Mill A populations.

Placed in a broader socio-economic context, if Willard or Mill A qualifies as a low-income community, the economic imbalance of this project would be spectacular. The holding company backing the Whistling Ridge project is owned by the richest family in the Gorge. The real impetus

for the project is not any passion for green energy, but the need for SDS/Broughton, by far the largest private land-holder in the Gorge, to get some decent economic return from its large unproductive acreage. The richest folks around could end up feeding on the environmental discomfort of some of the least well-off ones. Because it owns the proposed wind-farm site, it does not even have to offer locals any financial compensation.

I do not want to be misinterpreted here. There is nothing wrong with economic success or the accrual of family wealth and political influence over decades of living and working in the area, in a trajectory which has included considerable public service and philanthropy as well. Many Gorge residents owe their livelihood and, to some degree, their quality of life to the Stevenson family. SDS/Broughton may have evolved to the status of “too big to fail”, as far as the local economy goes. Counterbalancing this corporate economic and political power, Washington State (through the agency of the WEFSEC) is the major entity with the power and mandate to assure that an economically disadvantaged subset of the population does not pay the principal price for rescuing SDS/Broughton from any current economic difficulties or unwise investment decisions.

Impact of the Construction Process

The Draft EIS concentrates on the effects of the completed project. Its treatment of the impact of the construction process on the surrounding communities, especially the economically disadvantaged communities of Mill A and Willard, is inadequate. The construction process would require the trucking of a very large number of very large loads to the wind-farm site, over narrow, winding Cook-Underwood Road, which the residents of Mill A, Willard, and Underwood use to get to work, school, shopping, and public services. The same route is used by outsiders to get to work at the Willard fisheries facility. It is quite likely that segments of the affected road would be closed (in both directions) to non-construction traffic as wind-tower components move over them. The traffic obstruction would extend beyond the Cook-Underwood Road. The trucks must get to the Cook-Underwood Road from I84 (probably via Boardman) or from a Bingen staging area supplied by river barge or train. So many truckloads are needed to complete a project of this magnitude that the disruption could go on for a long time. Some local residents live close enough to the economic edge that many months of impaired transportation could spell financial disaster for them.

The special transportation requirements of this project are so extreme that the EIS should be revised to include a detailed quantitative breakdown which allows the public to understand how intensively (and for how long) public use of the Cook-Underwood Road and the affected section of WA14 will be reduced: how many loads per day, how many loads (and days) total, how much closure time is needed for each load over each critical segment of the route. The current version of Section 3.11 of the Draft EIS suggests that local road closures will not exceed 20 minutes at a time and that traffic disruption from component shipping will last no more than 3 months. However, no supporting data are provided for these estimates.

A complete EIS also would need to make clear (a) what hours of the day would be used for component movement over roads [presumably night-time transport would be ruled out by noise regulations in Underwood]; and (b) how large the backups in local traffic could be during component transit. The public also needs to know (a) whether (or where) traffic in both directions would have to be stopped as a truck passed; and (b) whether empty trucks, themselves quite large, also would require the halting of oncoming traffic.

The traffic issue is just one more example of what is wrong about siting a wind farm so close to population centers, aggravated in this case by the marginal state of the affected local arterials. This problem would be much less serious for a wind farm located in the wide open spaces of central and eastern Washington.

No NIMBY Here; Need for Statewide or Region-wide Planning

A significant part of the well financed propaganda campaign in favor of the Whistling Ridge Energy Project has been the claim that opponents represent well-off locals who refuse to accept any environmental burden to go with their enjoyment of a high standard of living: chardonnay liberals. The term, "Not In My Back Yard", or NIMBY, often is used to tar opponents with an image of affluent self-indulgence.

The image simply does not work here, and not just because project opponents in Willard and Mill A do not meet any American standard of being "well off". It also ignores the fact that a majority of project opponents live outside the area, simply because the Gorge population is rather small. People all over the country and the world care deeply about the Gorge and

would hate to see such massive man-made structures as windmills degrade its scenery. Establishment of the CRGNSA made clear that the Gorge is not “my” backyard or the domain exclusively of its residents; it is the nation’s and even the world’s backyard. In asking the WEFSEC to keep this perception in mind, critics of the Whistling Ridge Energy Project are serving a public interest. Finally, “NIMBY” does not apply in this case because in many parts of the Northwest, largely in the under-populated rural center and east, hosting a wind farm is not thought by the locals to impose environmental costs. The scenery is not distinguished and is so completely agricultural that there barely are any remnants of the original natural landscape and plantscape. The rural population is so dispersed that wind farms can be sited well away from any communities. Why should the WEFSEC approve a facility in an area where there is strong opposition and reasonable concern about environmental impacts, when there is so much publicly acceptable acreage, also close to electric transmission lines, elsewhere in the state?

An inescapable consequence of the current politicking is that the WEFSEC should develop a pro-active energy plan, preferably in collaboration with the appropriate Oregon governmental agency, instead of reacting to each separate siting proposal as though it existed in isolation. The whole process could become a lot less adversarial and political, and do a much better job of meeting state/regional needs, if all reasonable sites for various forms of electricity generation were identified and prioritized. Energy planning would include (1) energy demand projections over time and space and (2) capacity estimates for acceptable sites, in order to understand how much environmental compromise might be needed over time. Planning should be regional rather than state-by-state, simply because demand for electricity generated anywhere in this area is distributed across at least two states.

Planning also should test scenarios for the maturation of large-scale photovoltaic electricity generation. Continuation of the recent and ongoing increase in solar-panel manufacturing capacity and reduction in solar-panel price should create a situation soon (on the time scale of wind-project lifetime) in which photovoltaic electricity generation is fully competitive with wind generation. Photovoltaic farms, perfect for the large amount of agriculturally underproductive or unproductive land in central and eastern Washington and Oregon, would avoid or minimize both the long-distance visual pollution and the potential sound pollution of wind farms. They are

silent. They do not have to occupy ridgelines. They will not trigger the moon illusion. Even with automated tracking, solar panels do not move at a perceptible rate. They do not have to possess long-range visibility in order to protect aircraft. Wind power almost certainly is a transitional technology, fated to give way to photovoltaic generation in the long haul, if only (but not just only) because the easily distributed nature of photovoltaic generation eliminates any need for additional transmission capacity.

Integrated, long-term, energy planning also is the only way for the WEFSEC to avoid authorizing so many local wind projects that the scenery along the entire Gorge is irrevocably disrupted by an army of wind towers. Once you have approved a pioneering project like Whistling Ridge, it becomes difficult to deny the next one without risking legal attack on the grounds that you are behaving arbitrarily and politically. However, with a fully researched and vetted state or regional plan in place, the objective grounds for supporting or rejecting any future proposal become clear in advance.

Long-term energy planning also is the best way to silence the current rash of *ad hominem* and false attack ads which accuse project opponents of being against green energy. An implicit message of such ads is that any state politician or agency supporting a go-slow approach also will be accused of being against green energy. It is very hard for even dedicated and competent public servants to make the best choices for the region when they risk political attack if they buck the bucks.

Of course there will be political conservatives and individual developers who will challenge energy planning, or indeed any governmental limitation on what they do on their own property. These same people do not seem to object to the federal and state green-energy subsidies currently needed to render their projects profitable, and probably will resist moves to reduce/eliminate the subsidies as energy prices rise and equipment prices fall, even though the subsidies clearly are intended only to lubricate the transition to green power in a political environment which still favors fossil fuels and nuclear energy even more.

Need for Technical Input from Cognitive Psychologists

One recurring theme of the preceding analysis is that modern perceptual psychology, a vital and rapidly evolving field, can inform our

understanding of environmental impacts. At least in the cases of view and sound pollution, the analytical treatments in the May 2010 Draft EIS simply ignore accepted scientific wisdom, much of it not even that new. Such an omission, of course, increases the legal vulnerability of the environmental-assessment process.

As part of its need to de-politicize environmental assessment, the WEFSEC should commission a panel of consultants trained in contemporary psychology to seek consensus positions on relevant cognitive issues like those raised here.

Acknowledgment

These comments have benefited from the insights of Randall C. Nelson, Underwood WA, Barbara Robinson, Rowena OR, and my wife, Dell Rhodes. However, one should not infer that they necessarily agree completely with what is written above.