

Comment Submission 16



United States
Department of
Agriculture

Forest
Service

Pacific
Northwest
Region

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File Code: 2580

Date: April 8, 2002

Mr. Robert Beraud
Wallula Project Comments
BPA Communications Office KC-7
Bonneville Power Administration
P.O. Box 12999
Portland, OR 97212

Dear Mr. Beraud:

We have reviewed the Wallula Power Project and McNary transmission line Draft Environmental Impact Statement (EIS). Specific comments are included in an enclosure to this letter.

We want to extend our sincere thanks to your agency for the ground breaking air quality cumulative effect analysis carried out in preparation for this and other environmental reviews. This work will have far reaching significance in the years to come. Not to take away from this excellent work, we believe that it is essential to include in this analysis the existing emitting energy sources that are currently connected to your transmission grid – without that a full assessment of your energy development environmental impacts cannot be made.

In the broadest sense, our concerns over this project center on the reality that this project is, in a sense, just the tip of the iceberg. Previous decisions have resulted in a power transmission grid infrastructure that is a magnet for energy related industrial development in the Columbia Basin, as well as along the Columbia River west of the Cascades. In the air quality or environmental protection sense this is a very real problem. The Columbia Basin air shed in winter and the transition seasons, is often stagnant and very poorly suited to dispersion of pollutants. This basin is rimed with protected class I areas, and equally significant, the Columbia River Gorge National Scenic Area is the primary drainage for the seasonally polluted stagnant air that collects in the basin. During scoping we called attention to the pre-existing problems with visibility impairment and ecosystem disturbance, as well as concern about archeological resources impacts. This draft document covers the visibility issue directly, but in places attempts to minimize and obfuscate that issue. The ecosystem disturbance and archeological resource issues are not treated or discussed in any substantial way.

Most importantly, this EIS does not embrace mitigation (full emission offsets). We request that this source, as well as those coming in the future, be fully mitigated thru offsets. The Boardman Coal Fired facility is one of the largest, if not the largest remaining uncontrolled source in the Western United States – a obvious candidate since it will have to be controlled eventually, and that source and the environmental issues will be far more difficult and expensive to deal with in the future.

16-1



Mr. Robert Bernaud

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We appreciate the opportunity to comment, as well as your recognition of your stewardship role in protecting these precious Pacific Northwest resources for future generations.

Sincerely,

/s/ Lisa E. Freedman
LISA E. FREEDMAN
Acting Director, Natural Resources

Enclosure

cc: Allen Fiksdal Manager, EFSEC, P.O. Box 43172, Olympia, Wa 98504-3172

Enclosure:

Comments on the Wallula Power Project Draft Environmental Impact Statement.

Except for some initial overarching thoughts these comments are made in the same sequence the topics are covered in the draft EIS.

1. As is well known the projects review under NEPA requires cumulative effect treatment. In a limited way a cumulative effect treatment of the regional haze issue has been accomplished and has been documented in this draft, however failing to include existing emitting energy sources in which BPA directly or indirectly contributed thru construction of power transmission grid substantially understates the cumulative air quality impacts resulting from Bonneville Power Administrations energy development relationships and activities. The Wallula Power Project, as well as many others, is attempting to locate in the Columbia Basin to a large extent because of the confluence of gas pipelines and a BPA managed power transmission grid. This transmission grid is directly or indirectly responsible for the location of a number of other industrial facilities in the Columbia Basin. Therefore BPA decisions in the past, present, and potentially in the future have effectively and significantly contributed to the development of infrastructure responsible for an indeterminate, but significant amount of air pollution contributing to unacceptable levels of regional haze and acid deposition effecting both the eastern slopes of the Cascades Class I areas and the Columbia River Gorge – all federally managed and protected areas. This draft EIS indicates (page 3.2-3) that Class II areas allow moderate, controlled emission growth. In fact the rapid and well above moderate level of energy related industrialization in the sub region along or close to the Columbia River from Wallula to Goldendale is moving this small area into what amounts to the Clean Air Act definition of a Class III area. A similar situation exists along the Columbia River to the West of the Cascades. A Class III area is one where higher levels of air quality degradation are intentionally allowed. No Class III areas have been legally designated anywhere in the US and it is certain that such a designation would not be appropriate in a region where 20 Class I areas exist as well as in the immediate meteorological entry regions of the Columbia River Gorge National Scenic Areas. The Wallula EIS brings this very troubling issue and dilemma to the table and it must be confronted and dealt with. The level of air quality related mitigation suggested in this draft EIS is woefully inadequate compared to the problem. 16-2
2. There is insufficient evidence that the PM10 non-attainment issue is primarily a wind blown dust issue. This is an assumption based on incomplete information. The analysis in this document discounts, or fails to treat the additional loading from the secondary formation of fine and coarse particulate from the gaseous portion of this facilities plume, as well as from existing sources, as added contributors to this problem. With the high ammonia background in this area and the stagnant moist winters the rate of secondary formation of particulate is high and very likely will contribute to the non-attainment problem, as well as the regional haze and the acid deposition issue. Offsetting just the primary particulate is not sufficient – a significant part of the gaseous emission stream of this facility contributes to both fine and coarse particulate – therefore the gaseous emissions from this facility should also be fully offset. 16-3

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| <p>3. Prior to development of this draft document BPA and their consultant were made aware that air pollution related ecosystem disturbance is occurring in the Columbia River Gorge and along the eastern slopes of the Cascades leading up to and inside the Mt Hood Class I wilderness. Both the BPA cumulative effect air quality analysis, the well-known climate of the Columbia Basin winter, and the USDA Forest Service lichen monitoring information support the conclusion that this ecosystem disturbance is in large part from winter stagnation related pollution events in the Columbia Basin. This draft EIS fails to recognize that this new facility will further acerbate this problem. This further supports the need to fully mitigate the emissions from this facility thru offsets. The document does acknowledge current impaired regional air quality (1.7.2), but fails to adequately recognize energy development, past and present as a major contributor.</p> | <p>16-5</p> |
| <p>4. In paragraph 1.7.2 the point that emission increases associated with new power plants do not exceed significant impact levels is misleading and is not relevant. Once a Federal Land Manager has certified impaired conditions exist, as has been done and is acknowledged in the draft EIS, EPA policy (OAQPS Calcagni letter, Sept 10, 1991) requires full cumulative effect analysis of Air Quality Related Values in Class I areas regardless of Class I increment or significance levels. These same errors in interpretation of PSD requirements are found later in section 3.2.1.</p> | <p>16-6</p> |
| <p>5. As a result of the discussion above the conclusion in section 1.8 regarding PSD and BACT can't be supported. The permitting of this source, and others to come in this sub region should not be considered routine and minor.</p> | <p>16-7</p> |
| <p>6. In Section 2.2.1 in the discussion about the relationship between BPA and the applicant (Wallulla Generation) it is implied and very obvious this company has picked this location to facilitate the marketing of their product using BPA's transmission grid – to many locations across the Western US. It is very difficult to justify the high concentration of industrial development, and the associated environmental problems, in the entry region of the Columbia River Gorge National Scenic Area—for energy that will be used in distant locations – and then resist reasonable requests and efforts to adequately mitigate the problem.</p> | <p>16-8</p> |
| <p>7. In section 3.2.1.1 the discussion about climate as it relates to air quality is inadequate. A few paragraphs discussing local wind and relative humidity conditions in the vicinity of the facility does not do justice to the long range transport of air pollution hundreds of miles from the source. The climatic conditions in the Columbia Basin in winter frequently favor very poor dispersion of pollution and enhance the formation of secondary fine particulate and acidic particles. These issues need full disclosure and discussion in this section.</p> | <p>16-9</p> |
| <p>8. The feedlots immediately adjacent to this facility are major sources of ammonia – as is the SCR control technology that is intended to control NOx from this facility. The presence of ammonia, a primary precursor of fine particulate formation, in the plume from this facility will rapidly convert the sulfur and nitrogen gases to pm2.5 fine particulate. Just recently the courts have validated the EPA fine particulate pm2.5 standard – it is now law. There is no recognition or analysis anywhere in this document that covers this sources contribution or the cumulative contribution to this NAAQS standard, which has been anticipated for several years.</p> | <p>16-10</p> |

9. In section 3.2.1.4 the discussion of existing air quality focuses only on Walla Walla County. The Columbia Basin is one large air shed that makes political boundaries somewhat irrelevant. In the cumulative sense the existing conditions in the entire basin will be impacted by the concurrent energy related industrial development that is taking place. There has been no speciated fine particle monitoring in this basin beyond the IMPROVE sampler at Wishram. This suggests that, except in a very cursory and coarse sense, we do not know what the existing air quality conditions are in the basin – a network of pre-construction speciated fine particulate monitoring to make that determination seems justified. 16-11
10. The information provided beginning on page 3.2-15 thru the top of page 3.2-19 regarding Class I analysis is very poorly represented and inappropriate. In some cases it is simply wrong, in some cases out of date, and in general poorly done and misleading. A NEPA document is intended to reveal and disclose facts and impacts—not attempt to minimize, discount, and confuse. Specifically: a) the comment that CRGNSA analysis is provided only for informational purposes misleads the reader – a process has been established outside Clean Air Act rules for protection of the Gorge air shed – the reader of this document is never made aware of this special CRGNSA protection effort. b) The assertion that pollutant impacts are less than Class I area significant impact levels has no relevance in a NEPA analysis. What is significant is that in Class I areas with established pre-existing impacts no major source is excused from significance. c) The information on pollutant concentrations effects on plants is out of date – BPA and there consultant were made aware of documented air pollution related ecosystem disturbance in the CRGNSA from existing air pollution levels. This information is not revealed or treated anywhere in this document. d) The information presented on sulfur and nitrogen deposition does reveal the existing loading exceeds acceptable levels, but instead of highlighting this concern it incorrectly suggests that a little bit more from this one source has no significance. e) The regional haze discussion suggests that a source’s impact must be perceptible to be of concern. That is not correct -- if every source is allowed a perceptible impact visibility conditions will rapidly deteriorate and programs to improve visibility and regional haze for future generations would fail completely. Further this analysis did not compare this sources regional haze increase against the natural background as is recommended in the FLAG report. The comparison in table 3.2-12 indicates a comparison for the gorge was against an average background – 41.8 (1/Mm) represents moderate visibility impairment which by itself is well above acceptable levels – this is a major deviation from standard modeling protocol for regional haze analysis. Comparing the project increase of 1.4 against a reasonably clean background of 20-25 (1/Mm) would exceed the 5% change in extinction criteria and equally important there is no information presented about the frequency that this would occur. The regional haze analysis information presented for the Mt. Hood Class I area is similarly flawed with an inappropriately high background compared against the sources contribution and no information on the frequency of high impact days. This kind of analysis misleads the layperson reader and is inappropriate in a NEPA document. 16-12
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| 11. In section 3.2.5 under the title Significant <u>Unavoidable</u> Adverse Impacts reveal adverse cumulative impacts. These impacts are <u>avoidable</u> with appropriate mitigation. | 16-17 |
| 12. In section 3.14.4 the claim is made there will be no significant unavoidable adverse impacts to cultural resources. From a tribal point of view as well as in many federal statutes the protection and preservation of cultural resources is required. In this case visual quality (or regional haze), ecosystems, and cultural artifacts such as rock art are all considered cultural resources and are either already impacted or at significant risk from air pollution in the Columbia River Gorge. This source adds to that problem. This cultural resource issue was raised prior to publication of this draft document, but other than a brief sentence in section 3.17.8 has received no meaningful treatment. On page 3.17-9 mitigation of impacts to cultural resources is discussed, but in a very vague way. It is very important to note that in the case of archeological resources prevention of impacts is the only reasonable approach. As above these issues add to the weight of evidence supporting full mitigation of this sources impacts. | 16-18 |
| 13. In section 3.17 it is stated that to meet electrical supply needs an additional 6,000MW to 8,000MW are needed over the next ten years. It is proposed that a significant portion of this need will supplied in the meteorological entry regions of a national scenic area with documented existing air pollution problems—without any offer or recognition of the need to mitigate. | 16-19 |
| 14. Also in section 3.17, to BPA's and EFSEC's credit the need for cumulative effect analysis is recognized. In the true NEPA sense of the concept of cumulative effect analysis however this need has not been met. The previous decisions made by these agencies (which resulted in development and expansion of the electrical transmission grid and construction of a number of emitting energy sources) are also contributors to the cumulative effect of air pollution loading on protected resources. The decision to not include existing energy sources connected to the BPA grid is very unfortunate – the full cumulative effect of decisions resulting from this NEPA analysis, and those preceding it, are not revealed in this document. | 16-20 |
| 15. The issue discussed above in 14. is further compounded by the incorrect analysis methods revealed in section 3.17.2.2 that the cumulative regional haze analysis was not done according to the established FLM (FLAG) recommended protocol – measuring class I impacts against the natural background. It is important to note that the regional haze rule goal of managing for natural conditions in class I areas is also EPA policy. It actually is not clear what standard was applied in the regional haze analysis – on page 3.17-9 it states the cleanest 20 th percentile was used and on the bottom of the next page it says the cleanest 5 th percentile was used. This inconsistency needs clarification. The cleanest 5 th should be used for Class I light extinction impact determinations and the 20 th percentile is appropriate for the Columbia River Gorge. For Class I areas the FLAG document also contains estimate of natural background which can be used. Any other protocol would not be acceptable. | 16-21 |

**Responses to Comment Submission 16,
Letter from Lisa A. Freedman, U.S. Department of Agriculture, Forest Service**

- 16-1. The concept of requiring supplemental emission offsets to address AQRV issues beyond NAAQS and PSD compliance raises complex issues. The draft PSD permit specifies emission controls and emission offset requirements for the project. Although the FLAG guidance used by the federal land managers may include visibility impact criteria that are more stringent than those used by EFSEC and EPA to process the PSD application, there is no requirement to use the FLAG criteria for environmental assessments in the Final EIS. The visibility impact criteria used in the Final EIS are limited to those mandated by EPA under the PSD regulations. The Final EIS does not consider emission controls for criteria pollutants other than those specified in the draft PSD permit.
- 16-2. Section 3.17 of the Draft EIS has been revised to clarify that Bonneville's regional power plant modeling project did not attempt to quantify emissions and impacts caused by non-power plant sources. Section 3.2 clarifies that existing background visibility is already impaired compared to natural background concentrations (as defined by the FLAG guidance for natural background extinction coefficients) and that background sulfur and nitrogen emissions have caused ecosystem degradation. Please see Chapter 3 of this Final EIS for updated text.
- 16-3. Thank you for your comment.
- 16-4. Section 3.2 of the Draft EIS has been revised to describe existing PM10 and PM2.5 concentrations in the region and the relative importance of ammonium nitrate secondary aerosol. Please see Chapter 3 of this Final EIS for updated text. Monitors operated by the Washington Department of Ecology indicate that PM10 concentrations are indeed primarily caused by windblown dust, with little contribution by secondary aerosols. Monitoring data at Wallula, Kennewick, and Wishram show no PM2.5 exceedences related to the NAAQS, although it is acknowledged that existing air pollutant concentrations below NAAQS levels cause existing AQRV problems (i.e., ecosystem degradation and visibility impairment).
- 16-5. Based on published reports provided by the U.S. Forest Service, Section 3.2.1.4, Existing Air Quality, has been expanded to describe studies showing current ecosystem degradation by air pollutants. That same section has also been revised to describe the phenomenon of secondary ammonium nitrate aerosol formation and its implications for acid deposition and visibility impairment in the CRGNSA and Class I areas along the eastern Cascades. Please see Chapter 3 of this Final EIS for updated text.
- 16-6. The Final EIS text (Section 3.2.2.2 under "Regional Air Quality Impact Assessment") has been revised to clarify the implications of modeled concentrations below the Significant Impact Levels. The revised text acknowledges that AQRV impacts must be considered even if modeled concentrations are below the SILs. Please see Chapter 3 of this Final EIS for updated text.
- 16-7. Section 3.2 has been revised to describe the current status of the PSD permit process. Please see Chapter 3 of this Final EIS for updated text.
- 16-8. Section 3.2.1.4 has been revised to provide additional information on existing air quality degradation in the CRGNSA and Class I areas on the east side of the Cascades. Please see Chapter 3 of this Final EIS for updated text.
- 16-9. Section 3.2.1.4 has been revised to describe wintertime stagnation episodes in eastern Washington and the implication for air quality impacts in the CRGNSA and Class I areas along the eastern Cascades. Please see Chapter 3 of this Final EIS for updated text.

16-10. Section 3.2.1.4 has been revised to describe the phenomenon of secondary ammonium nitrate aerosol formation and its implications for acid deposition and visibility impairment in the CRGNSA and Class I areas along the eastern Cascades. Please see Chapter 3 of this Final EIS for updated text.

16-11. Thank you for your comment.

16-12. Section 3.2 of the Draft EIS has been revised to describe ongoing interagency actions to protect air quality in the CRGNSA. Please see Chapter 3 of this Final EIS for updated text.

16-13. Please see response to comment 16-6.

16-14. Please see response to comment 16-5.

16-15. Please see response to comment 16-5.

16-16. We do not agree with this comment. The assumed background extinction parameters used for the CALPUFF modeling were appropriately low. Discussions with staff from the U.S. Forest Service and the applicant's air quality consultant indicate that the background extinction parameters used for Mt. Hood and the CRGNSA were essentially identical (and perhaps even lower) than the recommended "natural background" values mandated by the FLAG guidance. The background B_{ext} values listed in Table 3.2-12 are unusually high values corresponding to the modeling days when CALPUFF calculated the highest percent increase above background caused by the Wallula plant's emissions. Those modeling days experienced unusually high relative humidity (in fact, it is likely it was raining on those modeling days), so on those days both the power plant plume and the background aerosols were all impacted by an exceptionally high $f(RH)$ factor.

Inspection of the CALPUFF model output shows that on normal days when the relative humidity in eastern Washington was typically low, the assumed background extinction values were also appropriately low. The following table compares the applicant's CALPUFF background extinction parameters with the FLAG

values and measured Wishram (IMPROVE) data for natural background. The comparison shows the background extinction parameters used by the applicant for their CALPUFF modeling were less than the FLAG and Wishram values for natural background.

Background Extinction Parameters for CALPUFF Modeling for Fall Period

Natural Background Extinction Parameter	CRGNSA	Mt. Hood Class I Area
Background bdry from PSD application.	18.2	13.93
Background bSN from PSD application.	2.35	0.93
Median modeled background bext for Fall period in PSD CALPUFF model	27.0	17.5
FLAG recommended bdry for Fall	--	14.5
FLAG recommended bSN for Fall	--	0.6
FLAG reference bext for Fall	--	17.6
20% cleanest bext at Wishram IMPROVE site	30.0	--

16-17. Thank you for your comment.

16-18. Please see Section 3.2 of this Final EIS for a detailed discussion on regional haze and visibility. Section 3.2.1.4 provides additional information on existing air quality degradation in the CRGNSA and Class I areas on the east side of the Cascades.

In *Air Quality Issues in the Columbia River Gorge National Scenic Area*, a draft technical memorandum assembled by the U.S. Forest Service Region 6 Air Resource Management Staff (no date), cultural resources (rock art) within the Gorge were identified as significant resources that would likely be impacted by an increase in air pollution in the region. Based on preliminary monitoring data, the Air Resource Management Staff found that the primary sources of air pollution in the Columbia River Gorge National Scenic Area come from the Portland/Vancouver area and from within the Scenic Area itself.

A lichen monitoring program over the past five years in the Gorge has identified indirect information on acid deposition and the effect on rock art. A long-term monitoring effort over several years documenting the effect of air pollutants on rock art was recommended.

Additional deposition of nitrogen and sulfur particulates resulting from the Wallula facility would have an unknown effect on sensitive cultural resources such as the rock art located at Horsethief Lake State Park. The U.S. Department of Agriculture and National Park Service have developed acceptable deposition levels for both nitrogen and sulfur particulates. Please see response to comment 29-5 for further discussion.

- 16-19. Please see response to comment 16-1.
- 16-20. See response to comment 16-2.
- 16-21. As described in response to comment 16-16, the applicant used extinction parameters that are consistent with the FLAG guidance. The discrepancy described in the comment has been corrected in Section 3.17 (see Chapter 3 of this Final EIS for updated text). See response to comment 16-1 regarding the use of FLAG impact criteria.