



From: corridoreiswebmaster@anl.gov
To: [Corridoreisarchives;](#)
CC:
Subject: Energy Corridor Programmatic EIS Comment 80079
Date: Monday, November 28, 2005 6:42:26 PM
Attachments: [Final Response to DOE 80079.doc](#)

Thank you for your comment, Marv Landauer.

The comment tracking number that has been assigned to your comment is 80079. Please refer to the tracking number in all correspondence relating to this comment.

Comment Date: November 28, 2005 06:42:25PM CDT

Energy Corridor Programmatic EIS Scoping Comment: 80079

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Privacy Preference: Don't withhold name or address from public record

Attachment: C:\Marv\a LT Documents\Energy Bill 2005\Final Response to DOE.doc

Comment Submitted:

Letter is attached. Map will be sent separately.

Questions about submitting comments over the Web? Contact us at:
corridoreiswebmaster@anl.gov or call the Energy Corridor Programmatic EIS
Webmaster at (630)252-6182.

From: corridoreiswebmaster@anl.gov
To: [Corridoreisarchives;](#)
CC:
Subject: Energy Corridor Programmatic EIS Comment 80081
Date: Monday, November 28, 2005 6:46:42 PM
Attachments: [Potential_Corridors_\(3\)_80081.pdf](#)

Thank you for your comment, Marv Landauer.

The comment tracking number that has been assigned to your comment is 80081. Please refer to the tracking number in all correspondence relating to this comment.

Comment Date: November 28, 2005 06:46:28PM CDT

Energy Corridor Programmatic EIS Scoping Comment: 80081

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Attachment: C:\Marv\a LT Documents\Energy Bill 2005\Potential_Corridors (3).pdf

Comment Submitted:

This submittal is a map that goes with earlier submittal comment #90079.

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Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

CORPORATE

November 28, 2005

In reply refer to: R-3

Julia A. Souder, Energy Technology Program Specialist
U.S. Department of Energy
Office of Electricity Delivery and Energy Reliability
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Re: Bonneville Power Administration Comments on Notice of Intent to Prepare
Programmatic Environmental Impact Statement, 70 Federal Register 56647
(Sept. 28, 2005)

Dear Ms. Souder:

Bonneville Power Administration (BPA) appreciates the opportunity to participate in this Programmatic Environmental Impact Statement (PEIS) process to designate corridors on federal land for pipelines and electrical facilities. BPA is submitting these comments in response to the above-referenced Federal Register Notice. We have identified some issues that should be addressed in the PEIS and some potential new corridor additions that we believe are necessary to meet BPA's long-term transmission service obligations.

Reliability Issues Associated with Multiple Facilities in the Same Corridor

One of BPA's main concerns as a transmission owner and operator is reliability and security of the transmission system. The NERC/WECC Planning Standards for electric system reliability apply to all western utilities and can be found at

[http://www.wecc.biz/documents/library/procedures/planning/WECC-](http://www.wecc.biz/documents/library/procedures/planning/WECC-NERC_Planning%20Standards_4-10-03.pdf)

[NERC Planning%20Standards 4-10-03.pdf](http://www.wecc.biz/documents/library/procedures/planning/WECC-NERC_Planning%20Standards_4-10-03.pdf). They include standards and guidelines for reliability of adjacent facilities in the same corridor. This is described in three places. Table I, Category C.5 indicates that the loss of "*any two circuits on a multiple circuit towerline*" must be shown to meet Category C performance level. Standard WECC-S2 expands this requirement to adjacent circuits with "*The NERC Category C.5 initiating event of a non-three phase fault with normal clearing shall also apply to the common mode contingency of two adjacent circuits on separate towers unless the event frequency is determined to be less than one in thirty years.*" Guideline WECC-G5 further states that "*Considerations in determining the probability of occurrence of an outage of two adjacent circuits on separate towers should include line design; length; location, environmental factors; outage history; operational guidelines; and separation*

between circuits." The consequence of these three parts of the Standards is that careful analysis must be performed to determine the reliability impacts of adjacent electrical facilities and multiple circuit transmission lines.

Although it is desirable from an environmental viewpoint to co-locate facilities in the same corridors, the reliability impacts must be assessed. If a second transmission line is added adjacent to an existing line, consideration must be given to the simultaneous outage of both facilities which can limit the usable capability of the new line. In fact, a poorly planned facility might not provide any additional system capability. Upgrading existing corridors is not always a viable option.

The separation criterion in the WECC/NERC Planning Standards is not explicit and open to interpretation. One of the more prevalent interpretations is that adequate separation is related to the average span length of the transmission line (typically 1000 feet or more for 500-kV lines). Short segments in narrow corridors might be allowed less separation.

In addition, the co-location of other energy pipelines that transport flammable fuels (such as natural gas or bulk gasoline pipelines) in the same corridor with electric transmission facilities could have significant impacts on the reliability of the electrical transmission system and infrastructure security. Although pipelines are typically very safe, catastrophic failures occasionally occur. So this failure scenario must be included in the analysis of possible multi-transmission circuit outages. Pipeline failures often result in large, intense fires that can cause conductor and tower damage to nearby electric transmission lines for several spans. Repair of these facilities could take a substantial amount of time, depending upon the location and severity of the damage. Due to these concerns, BPA presently performs a reliability assessment for any proposal to use our rights-of-way (ROWs) for pipeline facilities to determine if the performance of the electric system would be negatively impacted by the potential pipeline under the NERC/WECC Planning Standards. We believe that this issue requires further analysis and would be a fruitful area for government-industry cooperative research.

There is also the possibility that, depending on the specific configuration, gas pipelines feeding combustion turbine generators and electrical transmission lines could be serving the same electrical load. Simultaneous outages of these pipelines and transmission lines could have cumulative impact on electrical load service. The reliability and availability impacts of co-location of *all* energy transportation systems should be analyzed before determining whether it is prudent to add facilities to a corridor.

Comments on Alternatives Considered in the PEIS

The names and descriptions of some of the alternatives to be considered in the programmatic EIS are unclear as written. Our reading of the Increased Utilization Alternative is that if it were chosen, it would result in no new energy corridors on federal land. If that is not the case, then there should be more explanation why this is different from the Optimization Criteria

Alternative. The same applies to the New Corridor Alternative. It seems that this alternative implies that no new development would be allowed on existing corridors on federal lands. The Increased Utilization Alternative appears to be limited to "increasing the capacity of existing energy corridors through the application of new technologies and/or operational techniques." The focus on new technology and operational techniques is problematic, since impacts of new technologies are unknown. Since the agencies are not the energy developers, they would not control the technologies or the operational techniques. The alternative should be framed in terms of environmental impacts of the corridors. DOE/BLM should consider reframing this as the No New Corridors Alternative, focusing on the impacts of dense development of energy corridors across federal land, and the impacts of the inevitable consequences of forcing development onto private land.

Also, the Increased Utilization Alternative should include utilizing existing technology to upgrade the electric system, in addition to new technology and/or operational measures. Transmission planning should include analysis of all viable alternatives, both existing and new technologies, to maximize use of existing corridors before developing any new corridors. Many new technological solutions are cost prohibitive for most applications such as underground transmission and high temperature conductors. Decisions to implement these new technologies must be economically sound and should be left to the parties that pay for them.

Other General Concerns and Comments with this new Corridor Designation Process.

BPA has over 15,000 circuit miles of transmission lines in the Pacific Northwest along with the associated land rights. We actively monitor the need for these ROWs and dispose of any that are surplus to our needs. Most of the ROWs we own are either fully utilized with existing transmission lines or expected to be used for new transmission lines in the future. This new corridor designation process should not limit our ability to use and upgrade our existing ROWs.

The planning environment for electrical facilities is constantly changing along with the need for new corridors. The PEIS needs to address the impact that identifying corridors now will have on the flexibility for siting transmission lines on federal land in the future, especially in corridors other than those identified through this process. Also, it is unclear what planning horizon should be used for this process. Planning out to ten years is difficult at best today. It is important that this corridor designation process be revisited on a regular basis so that this corridor information can be updated to accommodate the ongoing evolution of system needs.

The actual siting process for new transmission lines often requires some rerouting of the proposed transmission line corridors due to situations that are unknown during the planning phase of the project. Flexibility must be built into this process to allow this.

Although this process is designed to cover only federal land, some analysis of the nearby affected private and state land needs to be incorporated in the process so that usable corridors can

be developed. If the extension of federal corridors onto non-federal land has significant restrictions, the likelihood of developing the federal corridor is questionable.

BPA has done much corridor location analysis in the past for possible future electric transmission corridors. Examples include BPA's "Pacific Northwest Long Range East-West Energy Corridor Study" and the subsequent work by the Western Utility Group. This geographic information should be used as much as possible in this new process to identify corridors. If you wish a copy of the BPA documents, please let me know.

Consideration should be given in this process to protecting Critical Infrastructure Information that may be needed to analyze alternatives. Utilities may need to provide information about specific vulnerabilities that should not be broadly available to the public.

General BPA corridor requirements

The following are BPA requirements for our corridors.

1. All transmission corridors must include an adequate access road system to allow for construction and future maintenance. Adequate access means access to every tower. Impacts from access road construction and maintenance should be included in the analysis. Additionally, it should not be assumed that existing corridors have an adequate access road system in place if substantial improvements are to be made to existing transmission lines or if new transmission lines are built adjacent to existing corridors. It should also not be assumed that access roads can be confined to the rights-of-way. Terrain often requires access roads to be constructed outside of the right-of-way boundaries.
2. BPA transmission lines often carry communication facilities such as fiber optic cables and wireless antennas.
3. BPA has developed a vegetation management program for maintaining a safe and reliable transmission system (DOE/EIS-0285). NERC is developing a vegetation management standard for North America. Ability to perform vegetation management to meet these standards must be included in every new corridor analysis.
4. When considering corridors through forested areas, an additional width needs to be analyzed to incorporate clearing of danger trees (trees outside of the ROW that could fall into or otherwise jeopardize the reliability of the line).

Specific New Corridor Needs

To meet our projected needs, BPA looks to upgrade its existing ROWs and lines, but if that is insufficient, we look to develop new ROWs and corridors. The following list itemizes, as best we can today, potential corridor needs to meet BPA's projected demands for the next 10-20 years

that are near federal lands. This list is based on building new facilities to BPA's interpretation of the existing planning standards. These projects are mostly for bulk transmission needs. Local load service projects typically require less lead time and as such, few corridors have been identified for those types of projects. This shorter planning horizon increases the need to revisit this process at least every five years to keep up with current needs. As stated above, BPA assumes that it will retain the ability to site future transmission lines on federal land in existing corridors and on ROWs other than those identified through this process.

The corridors that are identified are very preliminary. Because of the time constraints of this process, we have not been able to obtain a review of these needs by the many interested parties in the northwest. If and when we instigate the siting of any projects, we will consult with the tribes in the region, other siting authorities and interest groups.

We are also working with several transmission and generation developers that have plans to connect to the BPA system. We are assuming that they are conveying their corridor needs directly to DOE.

Our potential corridor needs are summarized as follows. We are also attaching a map to help describe these corridors.

1. Paul-Troutdale

The anticipated route is a new corridor from Centralia, Washington south to Vancouver, then east to Camas and south to Troutdale, Oregon.

2. Bell-Ashe

There are some existing ROWs that could partially accommodate a proposed Bell-Ashe line but a direct route between these stations on a new corridor might be needed.

3. Monroe-Echo Lake

Due to reliability concerns and suburban growth in the area, new corridors to the east of the existing corridor will need to be explored.

4. Northwest to Canada

To address parallel reliability concerns, the corridor between Coulee/Chief Joe and Oliver, British Columbia (Vaseux Lake Substation) needs to be explored.

5. Northwest to Idaho

Options to add capacity to this path may include expanding the existing WECC Path 18 from Montana into Idaho or a new line from McNary to Brownlee (and farther into Idaho). A new corridor from Klamath Falls, Oregon through Lakeview and Fields into Idaho should also be considered.

6. Montana-Northwest

Options to add capacity to this path may include the existing Garrison-Hot Springs-Bell ROW or upgrades to the existing Path 18 from Montana into Idaho. Upgrades to the latter path would also require additions to the Northwest to Idaho path as mentioned above.

7. Wautoma to Big Eddy/John Day

Options to add capacity to this path may include several existing ROWs or a new corridor.

8. Cross Cascades South

Options to add capacity to this path may include several existing ROWs or a new Summer Lake-Alvey corridor could be developed.

9. Tahkenitch-Fairview, Bandon-Rogue

Options to add capacity to this path may include several existing ROWs or a new corridor developed in the vicinity.

10. Pearl-Marion-Albany

This path need can probably be accommodated using existing ROWs although a new corridor might be required.

11. Libby-Bell

Options to add capacity to this path may include existing ROWs or a new corridor in the vicinity of the existing one could be developed.

The analysis of these corridors and requirements is a daunting task. BPA offers its support to DOE to analyze the corridor needs in the West. If you have any questions, please contact me at 503-230-4105.

Sincerely,

Marvin J. Landauer
System Planning Team Lead

Attachment:
Potential_Corridors(3).pdf

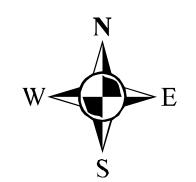
Potential BPA Transmission Line Corridors

Legend

- BPA Transmission Lines
- Potential Corridors

Note: Corridors are approximate and are intended for visual purposes only.

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Miles



November, 2005

