CO07-CO10

ORIGINAL

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PUBLIC SCOPING MEETING OF THE WEST-WIDE

ENERGY CORRIDOR ENVIRONMENTAL IMPACT STATEMENT

OCTOBER 25, 2005, 7:00 P.M.

MEETING 1-B

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HELD AT:

COLORADO CONVENTION CENTER

700 - 14TH STREET

DENVER, COLORADO

conservation partners across the west, will continue to monitor this process and will provide written comments in advance of the November 28th deadline.

Again, thank you, very much, for your time. The Wilderness Society looks forward to working with you to develop a PEIS to ensure that energy can be transported safely, without comprising the west's greatest resource, it's wild and [garbled] lands. CO08

POWERS: Thank you. Our next commentor is Bud Anderson with Northern Lights Transmission.

ANDERSON: Again, my name is Bud Anderson, representing the Northern Lights Projects.

TransCanada Corporation is one of North America's leading infrastructure companies, with more than $18 Billion in assets. That's U.S. Dollars. Out of that $18 Billion, we have approximately $15.3 Billion in natural gas assets, natural gas pipelines, etc. The power end of that is about $2.5 Billion. As you can see, we're a pretty substantial company throughout North America.

Although TransCanada is best known for our

natural gas pipeline business, we're also a very rapidly emerging player in the field of power generation and transmission. TransCanada's financial strength and experience in linear facilities positions well to pursue opportunities within the pipeline and electrical and natural gas transmission areas.

Northern Lights Project is TransCanada's initiative to facilitate the development of new, inland generation by providing new electrical transmission capacity to the west coast and to the southwest states.

Northern Lights is currently developing two 500,000 volt, high voltage, direct current projects. The inland project, being the first one, provides a path to interconnect low cost, renewable and other energies in Montana, Wyoming, Nevada and Idaho, with grown loads to the southwest. Energy will be moved to southern Nevada, southern California and, potentially, Arizona.

The Soleilo [phonetic] Project provides a path to bring in low cost, high efficiency, low emission co- generation from Canada, Montana, eastern Washington, eastern Oregon, to the Pacific Northwest and, potentially, on to California.

Northern Lights hereby submits a number of interregional transmission and pipeline corridors for development through the Programmmatic Environmental EIS, PEIS, process under Section 3.68 of the Energy Policy Act of 2005. A 30-year planning horizon is proposed. Again, a 30-year planning horizon is proposed -- along with transmission planning, organization, consultation, approaches to permitting that will facilitate a much-needed development of new energy corridors in the western United States.

I'd like to take a minute on the corridor that we have identified, we've taken in very much consideration the areas of critical environmental concern in the selection of our routes, along with the national and wilderness study areas. We have used and utilized existing corridors throughout the two different projects and their auxiliary routes.

Northern Lights is supportive of the initiative created by Section 3.68 of the Energy Policy Act of 2005 and will assist the Department of Energy, Department of Interior, Department of Agriculture and other federal agencies -- [garbled] new set of lips and I'm trying them out the first time tonight -- fulfilling their legal and

legislative mandate.

I'd like to take the opportunity to thank you on the panel for providing us the opportunity to participate in this very important endeavor, and I offer any assistance that we can have and can give to you in the endeavor.

CO09

Thank you, very much.

POWERS: Thank you. The next presenter would be Linda Grace McBryde with Spring Grace Ranch.

McBRYDE: Thank you for letting me speak tonight. My name is Linda Grace McBryde, and I operate a non-profit in Mesa, Colorado, a town of 300 near Grand Junction. The program that I've had there has been for children to learn about environmental science, and then they do an art project to remember that lesson.

We've had like 6,000 children, many of them have been slow learner or from backgrounds where they do not get to a pristine environmental setting, such as the ranch in Mesa.

The reason I'm here is, two weeks ago I found out that my old farmer neighbor has leased out ten acres to create a 4,000 hp compression station directly across the street, which will be the

NorthernLights
Transmission

# Submission of NorthernLights Transmission to the United States of America Department of Energy, Department of Agriculture and Department of Interior

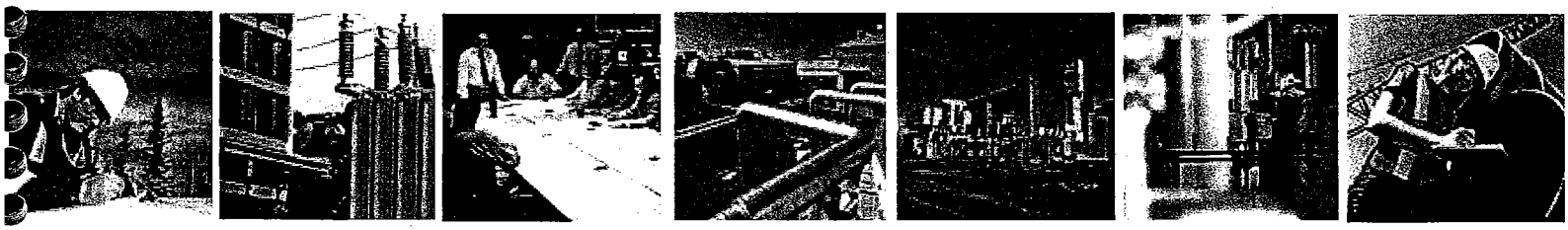
## Regarding

## Section 368 of the Energy Policy Act 2005 Programmatic Environmental Impact Statement for Energy Corridors in the Eleven Western States

Federal Registry Reference
Vol. 70, No. 187 / Wednesday September 28, 2005

October 25, 2005

TransCanada
*In business to deliver*



## Executive Summary

TransCanada Corporation (TransCanada) is one of North America's leading energy infrastructure companies with more than US$18 billion in assets. Although TransCanada is best known for our natural gas pipeline business, it is also a rapidly emerging player in the field of power generation and transmission. TransCanada's financial strength and experience in linear facilities positions it well to pursue opportunities within the pipeline and transmission line businesses.

NorthernLights is TransCanada's initiative to facilitate the development of new inland generation resources by providing new electrical transmission capacity to the West Coast and Southwest states. NorthernLights is currently developing two 500 kV DC transmission projects.

The "Inland Project" provides a path to interconnect low cost resources in Montana, Wyoming, Nevada and Idaho with growing loads in the Southwest. Energy will be moved to Southern Nevada, Southern California and potentially Arizona.

The "Celilo Project" provides a path to bring low cost, high efficiency, low emission cogeneration energy from Canada, Montana, Eastern Washington and Eastern Oregon to the Pacific Northwest and potentially on to Northern California.

NorthernLights hereby submits a number of interregional transmission and pipelines corridors for development through the PEIS (Programmatic Environmental Impact Statement) process under Section 368 of the Energy Policy Act of 2005. A 30 year planning horizon is proposed, along with transmission planning organization consultation and approaches to permitting that will facilitate the much needed development of new energy corridors within the Western States.

NorthernLights is supportive of the initiative created by Section 368 of the Energy Policy Act of 2005 and will assist the Department of Energy, Department of the Interior, Department of Agriculture and Bureau of Land Management in fulfilling their legislated mandate.

NorthernLights thanks the Agencies for providing the opportunity to participate in this important initiative and is prepared to provide assistance as required.

# Table of Contents

# 1. Introduction

NorthernLights' submission is provided as a response to the Notice of Intent by The Department of Energy (DOE) and the Department of Interior in the Federal Register, Vol. 70, No. 187, dated September 28, 2005 "To Prepare a Programmatic Environmental Impact Statement." NorthernLights Transmission (NorthernLights) respectfully submits its views and recommendations to these agencies and the Department of Agriculture (the Agencies).

NorthernLights is TransCanada's initiative to facilitate the development of new inland generation resources by providing new electrical transmission capacity to the West Coast and Southwestern states.

NorthernLights is supportive of the initiative created by Section 368 of the Energy Policy Act of 2005 and will assist the Agencies as required.

# 2. TransCanada

TransCanada is one of North America's leading energy infrastructure companies with more than US$18 billion in assets[1]. Although TransCanada is best known for its natural gas pipeline business, it is also a significant player in the field of power generation and transmission. TransCanada's financial strength positions it well to pursue opportunities within these businesses.

***Natural Gas Transmission***

TransCanada transports the majority of Western Canada's natural gas production, offering our customers quick, flexible and reliable access to key markets in Eastern Canada, the Pacific Northwest, Midwest and Northeast United States.

At approximately 25,600 miles, TransCanada's wholly owned pipeline system is the single largest natural gas pipeline system in North America and one of the most sophisticated in the world. TransCanada connects almost 1,000 receipt points and ships for more than 300 customers. TransCanada is focused on optimizing its pipeline network by connecting new supply, providing better access to markets and introducing competitive and innovative approaches to meeting customers' needs.

[1] at December 31, 2004

***Power***

Since entering the power business in 1996, the power plants and power supply that TransCanada owns, operates and/or controls, including those under construction or in development, have grown to represent approximately 6,700 megawatts (MW). Additionally, TransCanada's power marketing experience helps it manage and supply electricity requirements for a wide range of industrial clients.

TransCanada is a pioneer of independent power production focused on using strong market knowledge and project management expertise to build a diverse portfolio of high quality power generation assets in the U.S. TransCanada's portfolio includes natural gas-fired combined cycle and simple cycle plants, as well as hydro facilities. Across Canada, we have developed and operate a fuel-efficient and environmentally conscious fleet of cogeneration plants. TransCanada's leading-edge expertise in cogeneration has made it a partner of choice for large industrial customers to develop onsite power generation.

We hold a significant interest in Bruce Power, a nuclear power plant in Ontario, which is the largest independent power generator in North America. TransCanada's share of the plant's current capacity is approximately 1,650 MW out of a total of 4,700 MW. TransCanada recently announced a restart of portions of the plant that will increase output from 4,700 to 6,200 MW by 2010 with TransCanada's share increasing to 2,350MW.

TransCanada is part owner and developer of a 740 MW wind power project in Quebec, and is exploring further opportunities in wind power in Canada and the U.S.

***Multi-State Facilities***

TransCanada has been successful in developing numerous inter-state projects that involve interaction with multiple jurisdictions. TransCanada has constructed multistate facilities that involve California, Nevada, Oregon, Washington, Idaho and other eastern states.

TransCanada is also currently working with the state of Alaska in the development of the Alaska gas pipeline and with the states of North and South Dakota, Iowa, Missouri and Illinois, in the development of a major crude oil pipeline.

***Operational Excellence***

TransCanada is committed to operational excellence and cost reduction through the wise and efficient use of capital, an emphasis on achieving the lowest operating costs, and competitive benchmarking. TransCanada's operational efficiency and cost effectiveness measures, place TransCanada in the top quartile of the North American natural gas pipeline industry.

*Major Projects Expertise*

TransCanada's credentials and track record in construction and operation in extreme climates and virtually all types of terrain are unequalled in North America.

TransCanada is the leading global operator of large gas turbine compressor stations, with expertise and experience in remote facility control. TransCanada's employees are highly skilled in designing, building and operating complex infrastructure and take pride in delivering major projects on time and on budget.

*Social Responsibility*

Social responsibility is a core value at TransCanada and one that it endeavors to fulfill in all of its operations. Through both TransCanada's pipeline and power operations, TransCanada is a neighbor to many landowners and communities across Canada and the U.S. TransCanada sees safety and reliability to be primary social responsibilities, and takes these responsibilities very seriously. TransCanada runs its businesses to ensure that essential services are always available. By consulting regularly with directly impacted stakeholders and the broader public, TransCanada better understands the impact on its neighbors, its pipeline and power projects, and on its ongoing operations.

TransCanada's headquarters are in Calgary, Alberta, Canada and has offices across Canada and the U.S. Common shares trade under the symbol TRP on the New York and Toronto stock exchanges.

For additional information please visit www.transcanada.com.

# 3. NorthernLights

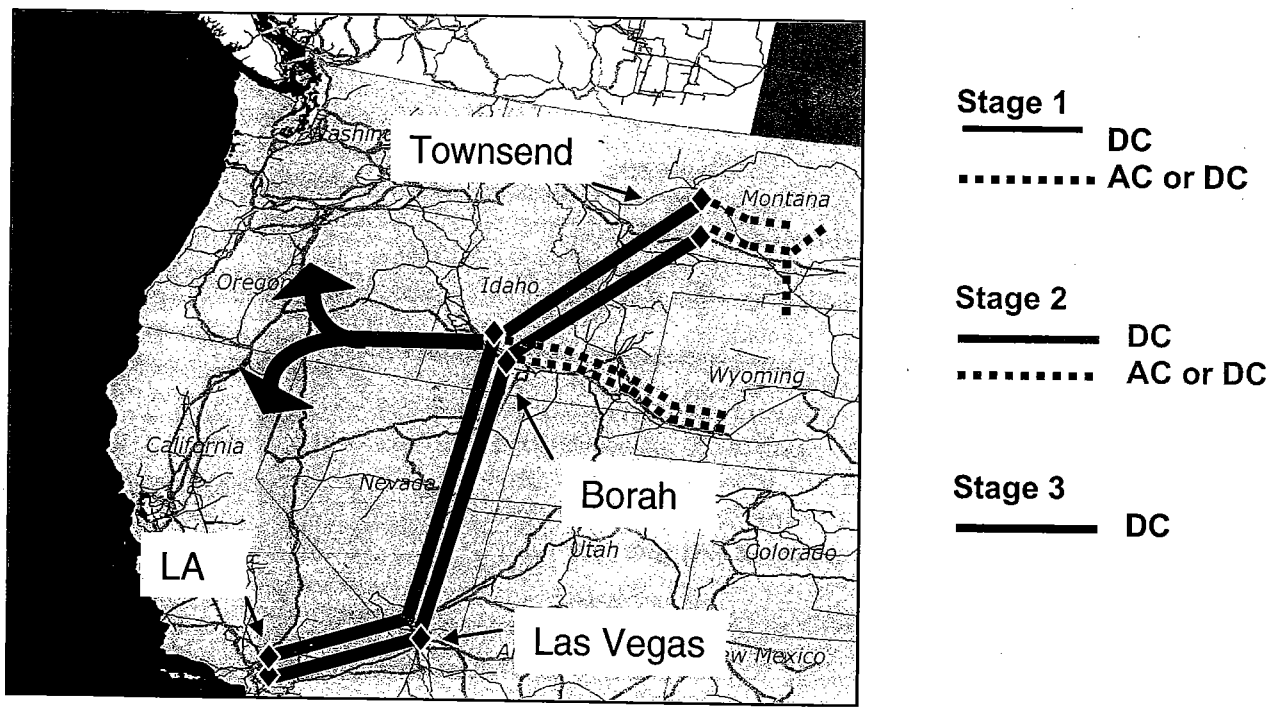
NorthernLights recognizes that there is a growing need for new electric supply in the Western Costal and Southwestern states of the U.S. These states have developed available resources to a large extent and will become increasingly dependent on energy imported from other regions. NorthernLights believes that a large part of the emerging electric energy requirements will be supplied from economic generation plants located in the states such as Montana, Idaho, Wyoming and Nevada.

Central to the concepts developed by NorthernLights is the use of modern high voltage direct current (DC) transmission technology. The benefits of DC are low losses, reduced land use, lower costs and relative ease of integration with existing power systems. The DC components of NorthernLights projects are planned to operate at +/- 500 kV. High voltage alternating current (AC) transmission may also be built as a part of the NorthernLights development, primarily to interconnect generating plants with DC stations.

To facilitate the development of new inland generation resources NorthernLights is developing two transmission projects - The Inland Project and The Celilo Project.

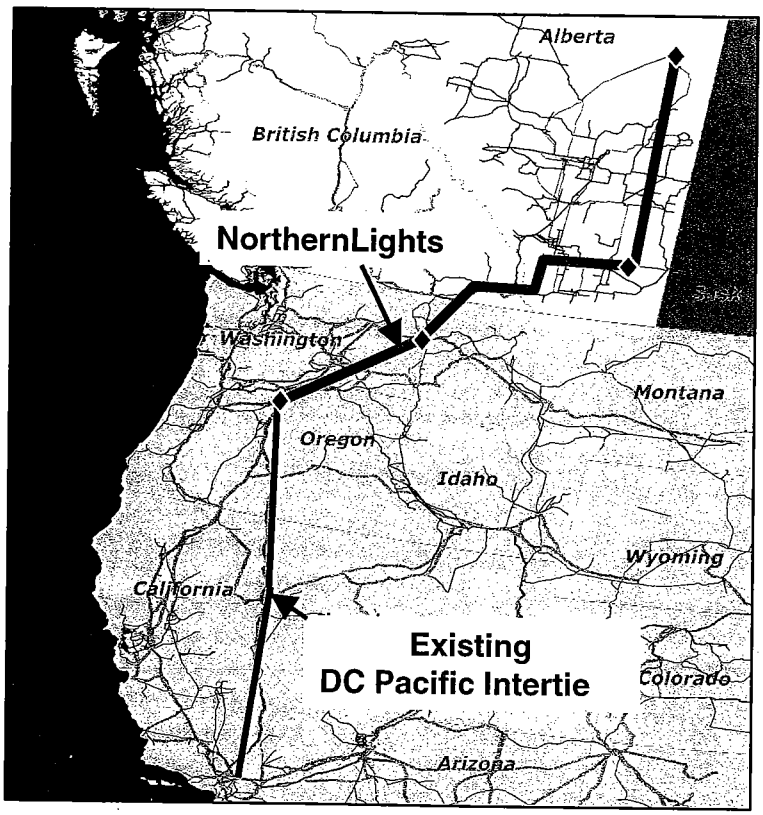
The "Inland Project" provides a path to interconnect low cost resources in Montana, Idaho, Wyoming and Nevada with growing loads in the Southwest. A northern DC terminal is planned for Townsend, Montana on the Colstrip 500 kV AC transmission system. If sufficient generation develops to the east of Townsend, consideration will also be given to moving the terminal further east. Potential converter stations at Borah, Idaho and Ely, Nevada, with AC collector systems could provide the capability to access generation in each of the locations. Resources in Wyoming may be connected to the NorthernLights DC line via a DC spur into Wyoming. Converter stations in the Los Angeles and Las Vegas areas provide points where energy can be delivered to California, Southern Nevada and Arizona.

**Figure 3.1 The Inland Project**



The "Celilo Project" provides a path to bring low cost, high efficiency, low emission cogeneration energy from Canada to the Pacific Northwest. With a converter station in the Spokane area, new generation in Montana, Eastern Washington and British Columbia can access the Pacific Northwest coastal market or California over existing or expanded facilities. A number of participants in the Pacific Northwest have expressed interest in this project with a more northerly termination in the Mid C trading area.

**Figure 3.2 The Celilo Project**



NorthernLights considers it important to provide significant new transmission capacity to support the integration of wind and other renewable energy resources over both projects.

Over the last four years, NorthernLights has explored a number of system configurations and corridor options with federal and state officials, regulators, load serving entities and regional planning organizations. These consultations have shaped the NorthernLights projects and led to the corridor recommendations discussed later.

NorthernLights has explored siting of both projects as well as potential alternative approaches as discussed later.

# 4. Regional Perspective

NorthernLights supports the Agencies' long term view of the need for transmission from the inland energy resources to the coastal and southwest states. NorthernLights recommends that the Agencies take a long term view and consider needs for at least the next 30 years.

The peak western interconnection electric load was 141,100 MW in the summer of 2004. The WECC (Western Electricity Coordinating Council) forecasts that this peak load will grow to 181,023 MW in 2014. This represents an annual rate or 2.5 percent compounded and the need to add at least 40,000 MW of new generation. Table 4.1 summarizes the load growth in major U.S. regions of the western interconnection.

**Table 4.1 Western U.S. Load Growth 2004 to 2014 (MW)**

| Area | Actual 2004 MW | Forecast 2014 MW | Load Growth MW | % p.a. |
|---|---|---|---|---|
| WECC | 123,136 | 158,698 | 35,562 | 2.6 |
| NWPP (winter peak) | 38,084 | 44,905 | 6,821 | 1.6 |
| Rocky Mountain area | 10,400 | 13,507 | 3,107 | 2.6 |
| Arizona - New Mexico - Southern Nevada | 25,636 | 35,060 | 9,424 | 3.2 |
| California | 54,160 | 68,694 | 14,534 | 2.4 |

Note: All peak loads are summer except as noted.

The sources of energy supply to meet this load growth are not clear. Resource development in the coastal states will undoubtedly occur. However, development of resources in the interior regions will also occur, with a view to shipping energy to the coastal and southwest states. The Frontier Project and the Northwest Power Pool's (NWPP) Montana to the West Coast Study are other examples of initiative to move interior resources to coastal markets.

Figure 4.1 provides a view of the interior coal resources considered by the Frontier group. There are also vast wind and other renewable resources available in the interior states. Figure 4.2 demonstrates the wind potential in the western U.S. that NorthernLights can help to integrate.

To interconnect the resources to the load, much of the land that must be traversed is administered by Federal agencies such as the Bureau of Land Management and the US Forest Service. To facilitate development of these resources, the federal initiative as set out in Section 368 of the Energy Policy Act of 2005 is a necessary and welcome step.

**Figure 4.1 Western Coal Resources**[2]

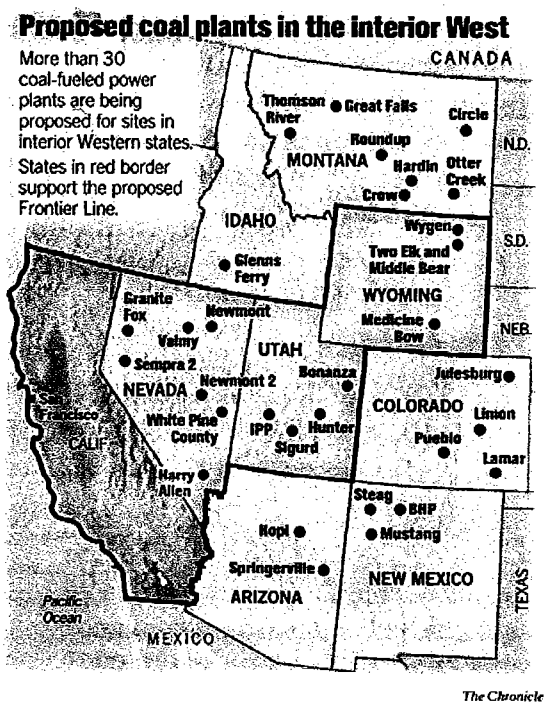
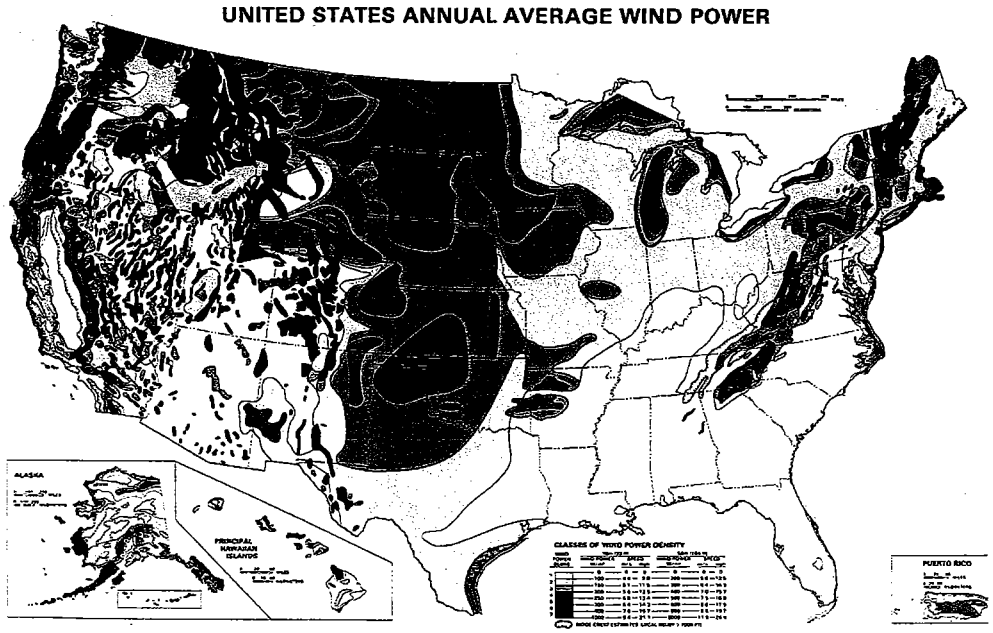



**Figure 4.2 Wind Potential Map** [3]




[2] San Francisco Chronicle
[3] National Renewable Energy Laboratory, U.S. Department of Energy

# 5. NorthernLights Corridor Request

NorthernLights requests that the Agencies include the following corridors in the PEIS mandated by the Energy Policy Act of 2005 to accommodate the NorthernLights projects and potential extensions or variations thereof. A general map of the proposed corridor is included at the end of this section.

**Priority 1**

**The Inland Project**

From Townsend, Montana to Borah, Idaho to Ely, Nevada to Marketplace[4], Nevada to Adelanto, California.

- two 500 kV DC lines
  - to meet NERC (National Electric Reliability Council)/WECC reliability standards these two lines will need to be separated by a distance that will reduce the possibility of them suffering a common mode outage. Preliminary discussions indicate that 2000 ft separation may suffice. Consultation with the WECC is recommended.
- This corridor would also be suitable for oil or product pipelines to transport Montana, Wyoming and Western Canadian petroleum products to markets in the Western and Southwestern states NorthernLights recommends that the petroleum pipeline land use reservation in California extend to a point where the pipeline would turn towards Bakersfield, California.

From the Adelanto area, facilities are required to integrate with the California grid. The integration facilities will need a total new capacity of 2,000 to 3,000 MW per new 500 kV DC line terminating in the area. NorthernLights recommends consultation with the California ISO to develop the corridor requirements.

From Townsend, Montana to Colstrip, Montana and from Borah, Idaho to Jim Bridger, Wyoming

- two 500 kV AC or DC line

**The Inland Project Wyoming Variation**

From Colstrip, Montana to Wyodak, Wyoming to Jim Bridger, Wyoming to Borah, Idaho

- two 500 kV DC lines

[4] Marketplace, Colstrip, Borah, Jim Bridger Wyodac, Celilo, Tesla, are major substations represented on the WECC's transmission maps. Interconnection may be at these stations, or new stations may be established in the vicinity. Other names are geographic points.

**The Celilo Project**

From the Alberta – Idaho border to Celilo, Oregon:

- one 500 kV DC line

From Celilo, Oregon to the Portland area to facilitate cross cascade capacity

- one 500 kV AC line. Consultation with the NWPP NTAC regional planning committee is recommended.

**The Celilo Project extended to California**

This corridor will provide the opportunity to extend the Celilo or other projects to a substantial and growing load point in California.

From Celilo, Oregon to Tesla, California

- one 500 kV DC line

**The Celilo Project variation via Mid C**

A number of load serving entities in the Pacific Northwest consider that the Celilo Project should terminate at a station in the Mid C area of central Washington to facilitate development of the current trading hub.

From the Alberta – Idaho border to a Mid C (Mid Columbia) station in Washington to Tesla, California:

- one 500 kV DC line

**Priority 2**

Looking into the future the following corridors will provide the ability to integrate generation originating in Idaho, Montana, Wyoming and Utah and transport the energy to the Pacific Northwest and/or California.

From Borah, Idaho to Celilo, Oregon.

- one 500 kV DC line

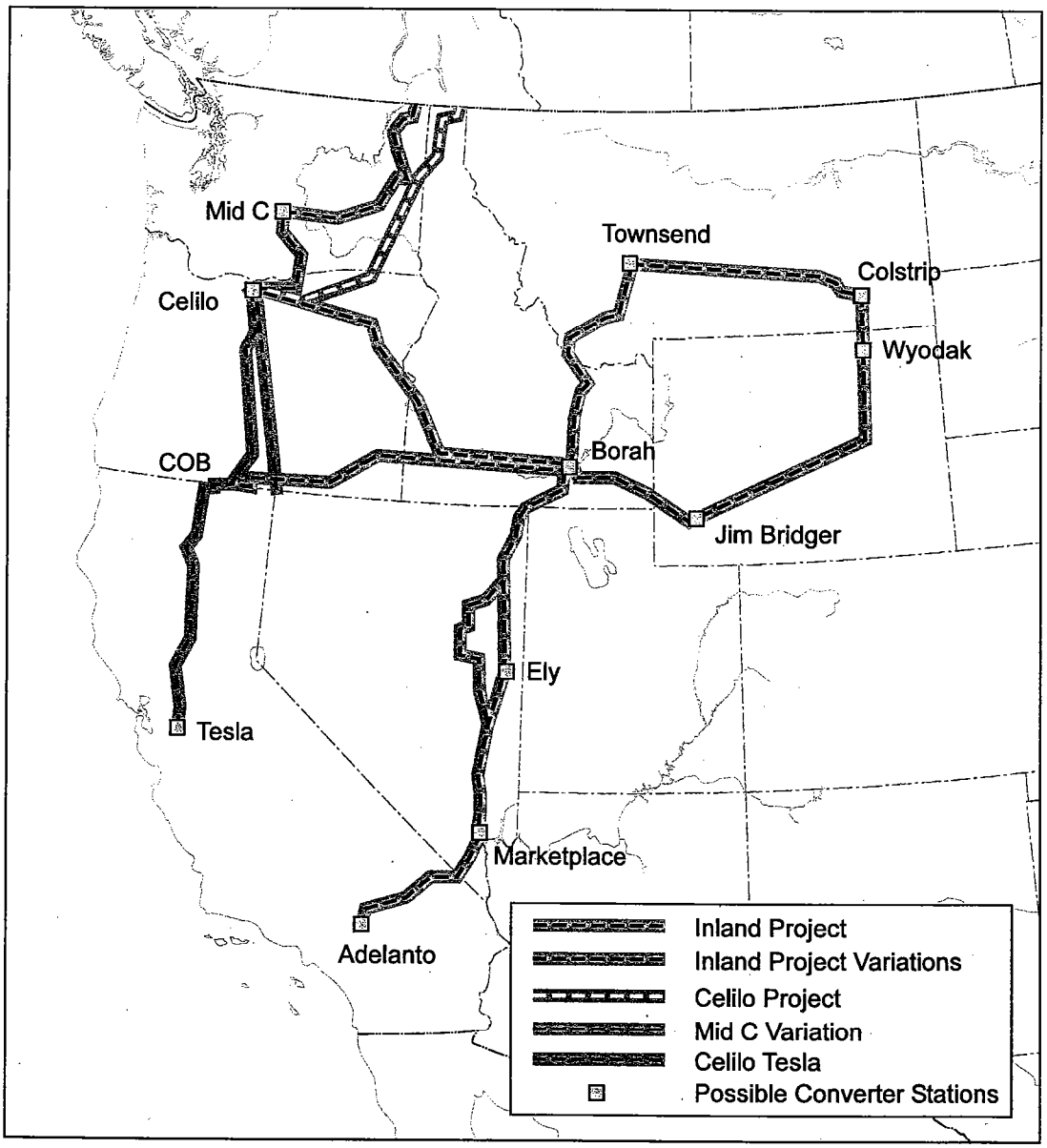
From Borah, Idaho to the California Oregon Border (COB)

- one 500 kV DC line

From Borah, Idaho to Tesla, California

- one 500 kV DC line

**Figure 5.1 Proposed Transmission Corridors**



# 6. Corridor Route Selection

NorthernLights has been actively exploring potential corridors for western interregional transmission for the last three years. Care has been taken to identify constraints to the development of transmission facilities, and avoid critical environmental and sensitive areas. The corridors proposed by NorthernLights generally avoid critical environmental, scenic areas, populated areas, native lands, military bases, parks and national monuments. Where possible the corridors have been sited to use existing corridors or rights-of-way.

The corridors proposed provide a path from resources to load that is quite geographically separate from the existing Western Interconnection (WI) paths. Where the paths do converge in load regions, care will need to be taken to meet WECC reliability standards for separation of transmission lines.

A good portion of the corridors proposed by NorthernLights are already identified as priority corridors as by the Western Utility Group (WUG). The Inland Project and alternatives are consistent with some of the RMATS (Rocky Mountain Area Transmission Study) recommendations.

NorthernLights has consulted with the Department of Energy, The Bureau of Land Management, the U.S. Forest Service and the Idaho National Laboratory, state agencies and transmission facility owners throughout the corridor identification process. This consultation will increase as NorthernLights gets more deeply into the permitting processes.

# 7. Corridor Requirements and Use

When setting aside land for energy corridors the Agencies will need to consider conflicting imperatives. Often it is argued that all types of linear facilities should be co-located adjacent to one another in a common right-of-way. Sometimes this is a pragmatic necessity in densely populated or developed areas. On the other hand, in rural low development areas, it is more likely that the desire for separation to avoid the possibility of common mode failures may lead to a desire for greater separation between facilities.

The common mode failure for electric transmission facilities is normally addressed in the WECC planning process. At this time the WECC does not have a separation standard for high capacity facilities. Preliminary discussions with WECC members indicate that, for transmission lines with major inter regional transportation roles, 2000 ft separation may be sufficient. NorthernLights recommends that the Agencies consult with the WECC with a view to establishing such a standard for this region.

This standard should be flexible enough to take into account varying geography as well as risks and power system consequences.

For corridors with transmission lines and pipelines, an appropriate separation is required to avoid common mode or consequential failures, and the impact on energy delivery. The WECC does not have a criterion to address this concern. NorthernLights recommends that the Agencies address this concern and set aside sufficient rights-of-way to ensure security and reliability of energy supply.

The rights-of-way width requirements for the facilities contemplated by NorthernLights are:

| | |
|---|---|
| 500 kV DC | 200 ft |
| 500 kV AC | 200 ft |
| Oil or product pipeline | 60 ft permanent<br>(120 ft temporary construction work space) |

NorthernLights expects that other facilities will share the corridors. These widths are the minimum required for the NorthernLights recommended rights-of-way. NorthernLights understands that the Agencies will aggregate the requirements of the various proponents, take into account potential requirements that are not included in submissions, take into account WECC and other separation requirements and make a judgement as to the full corridor widths and separation requirements.

NorthernLights recommends that when selecting the corridors, consideration be given to construction and ongoing maintenance access requirements. Consideration should also be given to the different characteristics of transmission lines and pipelines. Pipeline design, particularly for liquid products, is more sensitive to elevation changes than transmission lines. For example, it may be more cost effective to route a liquid pipeline around a hill rather than over it. On the other hand it may be appropriate for a transmission line to be routed over the hill. Consideration should be given to crafting the corridors with both uses in mind where appropriate. This may mean wider corridors or corridors that diverge at logical points. NorthernLights is willing to assist in this analysis.

**Compatible Uses**

NorthernLights considers the following to be compatible with transmission facilities:

- farming and irrigation;
- ranching;
- boating and fishing;
- roads and highways;
- railways;
- recreation activities;
- wildlife;
- pipelines carrying gas, oil, petroleum products, hydrogen, water; and
- other transmission or distribution lines.

To ensure the facilities are compatible the separation requirements must be met and all measures to ensure reliability, security and compatibility must also be addressed.

NorthernLights recommends that the Agencies consider broader rather then narrower corridors to provide sufficient flexibility to meet compatibility requirements.

**Incompatible uses**

NorthernLights considers the following uses to be incompatible with transmission facilities:

- industrial plants with emissions that can contaminate transmission facilities;
- industrial, commercial or residential developments on the rights-of-way.

# 8. PEIS Scope

**The Process**

NorthernLights understands that the PEIS initiative will be focussing on the designation of certain corridors for a particular land use. In carrying out this assessment, it is expected that the Agencies will consider the potential biophysical and social issues, the potential mitigation measures that would avoid or minimize the potential negative impacts, and maximize the potential positive impacts. It is also expected that the result of this exercise will be designation of acceptable corridors for pipeline or electrical transmission and distribution facilities.

NorthernLights recommends that the Agencies develop a process to complete the PEIS in parallel with concurrent or subsequent facility applications. Applications for specific projects may well come into play early on, midway through or shortly after the PEIS process. By considering how this process will facilitate specific project proposals, the Agencies have the opportunity to reduce the overall permitting cost to society and support an efficient review process.

It is then expected that a streamlined application process would allow environmental work to be focused on the project-specific mitigation measures, or the "how" of any development proposal, and eliminate the need for extensive baseline data collection and analysis due to the availability of the corridor documentation within the first 5 years.

It is important to implement a process as outlined above to avoid duplication of effort leading to increased costs and delays that will have a negative impact on end use customers.

**Flexibility in Practices**

In the process of developing the PEIS, the Agencies will be applying assumptions about development, construction and operation practices. NorthernLights recommends that the Agencies provide for broad flexibility in practices by focusing on the goals to be achieved as opposed to the details of specific practices. Avoiding

ineffective encumbrances will reduce societal costs. If the acceptability of a corridor is based on very specific practices, it may cause unnecessary expenditures for future proponents if the practices are unrealistic, inconsistent with current best practices, or are well beyond what is necessary to achieve environmental goals for a certain location issue, or are made obsolete through the implementation of new technologies/practices. For example, the PEIS should focus on goal-oriented practices such as conserving wetlands, and not detailed practices like specific materials handling procedures, or revegetation procedures. In support of this direction, NorthernLights recommends that the Agencies ensure they access available current best practice expertise from appropriate practitioners.

## Scope of Environmental Issues

NorthernLights recommends that this PEIS adopt a spatial and temporal scope broad enough to address the likely issues for a large electrical transmission line project. NorthernLights recommends that spatial considerations be broad enough to allow for issues such as aesthetics and viewshed concerns for neighbours to be included. This could likely extend beyond the physical footprint of the corridor. If the intent is to establish "where" the acceptable corridors are, then NorthernLights recommends that the potential for public concern with the aesthetics of all facilities being considered for location in that corridor be addressed at this stage and not at a project-specific application stage. NorthernLights recommends that the temporal scope be long term to allow proponents to confidently progress development plans for future facilities without risk of having to relocate due to changing support for the corridor.

## Scope of the PEIS

NorthernLights takes no further position on the scope of the PEIS at this time and trusts that the Agencies will be effective in balancing the diverse views that will no doubt be presented though this process.

# 9. Recommendations and Requests

To assist the Agencies the recommendations of NorthernLights are summarized below. The reader is encouraged to refer to the more detailed text for the full context of each recommendation. NorthernLights recommends that the Agencies:

1. Include the priority 1 and 2 transmission and pipeline corridors that are identified herein for inclusion in the Agencies' PEIS. These corridors include the current NorthernLights projects under development as well as logical alternative or additive corridors.
2. Take a long term view and consider needs for at least the next 30 years.
3. Consult with the NWPP NTAC regional planning committee for direction regarding cross Cascade mountain transmission corridor requirements.
4. Consult with the WECC to determine a minimum separation standard for major interregional transmission lines as well as parallel pipelines recognizing the specific geographic location. Energy supply reliability and security should be considered.
5. Consult with the California ISO to determine corridor requirements from the Adelanto area to integrate at least 4,000 to 6,000 MW of new import transmission capacity with the California grid.
6. Establish minimum rights-of-way widths for high voltage AC and DC transmission lines and petroleum pipelines as proposed herein.
7. Consider construction and ongoing operational access requirements to linear facilities in arriving at final corridors.
8. Establish broader rather then narrower corridors to provide sufficient flexibility to meet compatibility requirements.
9. Establish a process to complete the PEIS in parallel with concurrent or subsequent facility applications.
10. Allow for consideration of broad flexibility in environmental, construction and maintenance practices by focusing on the goals to be achieved rather then prescriptive solutions. Access available current best practice expertise from appropriate practitioners.
11. Adopt a spatial and temporal scope broad enough to address the likely issues for a large electrical transmission line project. In particular, spatial considerations should be broad enough to allow for issues such as aesthetics and viewshed concerns for neighbors.
12. Take into account public concern with the aesthetics of all facilities being considered for location in each corridor at this stage, and not at a project-specific application stage.

13. Establish temporal scope that is sufficiently long term to allow proponents to confidently progress development plans for future facilities without risk of having to relocate due to changing support for the corridor

Additional recommendations not previously discussed are:

1. Establish an approach to transferring federal land to private ownership or use that protects the land use designation and prevents over charging for the land use.
2. Establish a process to manage expiry of land use plans that protects used and future use corridors.
3. Provide for a clear and expedient process to site and permit facilities on the corridor.
4. Ensure that, after the PEIS is complete, the same work should not have to be redone for a period of 5 to 10 years.

NorthernLights thanks the Agencies for providing the opportunity to participate in this important initiative.

# 10. Contacts

For further information please contact:

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# Appendix A

# Glossary

# Appendix A Glossary

| | |
|---|---|
| AC | alternating current |
| DC | direct current |
| ISO | Independent System Operator |
| Mid C | Mid Columbia – a trading hub in central Washington |
| MW | Mega Watts or 1,000,000 Watts or 1,000 kilowatts |
| WUG | Western Utility Group |
| NERC | National Electric Reliability Council |
| NWPP NTAC | Northwest Power Pool Transmission Assessment Committee |
| PEIS | Programmatic Environmental Impact Statement |
| WECC | Western Electricity Coordinating Council |
| 500 kV DC | +/- 500 kV direct current |
| 500 kV AC | 500 kV alternating current |