

CHAPTER 1

PURPOSE, NEED, AND BENEFITS

1.1 INTRODUCTION

This document constitutes the draft state and federal environmental impact statement (EIS) for the proposed Mountain States Transmission Intertie (MSTI). This chapter provides the context for the EIS by describing the purpose, need, and benefits of the proposed 500-kilovolt (kV) transmission line within the framework of existing regulations and the electricity transmission system in the western United States (U.S.). This EIS is intended to meet the needs of the National Environmental Policy Act of 1969 (NEPA) as well as the Montana Environmental Policy Act (MEPA) and the Major Facility Siting Act (MFSA), Montana statutes. Because this EIS has been prepared to satisfy requirements of several laws, not just NEPA, some terminology may be different from conventional NEPA-only documents.

This document satisfies the requirements of not only the National Environmental Policy Act but also the Montana Environmental Policy Act and the Major Facility Siting Act. The Major Facility Siting Act is a law governing the siting of facilities such as transmission lines in Montana.

NorthWestern Energy (NorthWestern), a regulated, investor-owned utility serving 650,000 customers in Montana, Nebraska, and South Dakota, proposes to build and operate a 500-kV electric transmission line from a proposed new substation roughly 5 miles southeast of Townsend, Montana, to the Midpoint Substation near Jerome, Idaho (Figure 1-1). The project area extends from the northern terminus at the proposed new Townsend Substation, south and west to the proposed southern terminus at the Midpoint Substation.

This project being evaluated in this EIS (the proposed action and the action alternatives are collectively referred to throughout this EIS as the “proposed project”) has been proposed to help meet requests from transmission customers, other utilities, new generators, and power marketers to move electricity out of Montana and gain access to market hubs and load centers. Montana has some of the greatest wind potential and coal reserves of any state. However, the existing transmission system has minimal capability to move power from new generation sources to locations outside of the state. As a result, Montana’s vast wind and coal resources cannot be used by those parties interested in moving that power to large load centers in the West (e.g. Seattle, Portland, and Los Angeles). By providing new transmission capacity from Montana, the proposed project would provide new opportunities for the export of electricity from Montana wind and other generation resources.

1.2 REGULATORY SETTING

This section describes the regulatory context within which this EIS has been prepared. The context is important in guiding the analysis and evaluating the proposed project. Public comments and agency consultation for the proposed project and national and regional goals related to energy have served to focus the analysis in this EIS.

1.2.1 Background

In June 2008 NorthWestern submitted an application for a Certificate of Compliance for MSTI under MFSA (75-20-101, et seq., Montana Code Annotated [MCA]) to the Montana Department of Environmental Quality (MDEQ). This application was declared by MDEQ to be complete on December 22, 2009. In August 2007 NorthWestern submitted Standard Form 299 (Request for Right-of-Way (ROW) over Federal Land) to the Bureau of Land Management (BLM). In October 2007 NorthWestern

submitted a Standard Form 299 to the U.S. Department of Agriculture (USDA) Forest Service (USFS). This EIS has been prepared to assist federal and state agencies in making informed decisions. The decisions before MDEQ are whether to issue a Certificate of Compliance for the portions of the proposed project in Montana and, if that certificate is issued, which alternative should be approved and with what stipulations. The MDEQ must also determine whether to issue “318” Authorizations for construction activities that would result in increased turbidity in Montana state waters. These authorizations create short-term narrative water quality standards for turbidity related to construction. The decisions before the BLM are whether to grant a formal ROW across BLM-administered lands and, if that ROW is issued, to determine which alternative should be approved and with what stipulations. The USFS will also evaluate this EIS and make a decision on whether or not, and where, to issue a Special Use Permit across land that they administer.

Preparation of this EIS involved two lead agencies and six cooperating agencies. The lead agencies are the MDEQ and the BLM. The cooperating agencies are:

- USFS
- U.S. Department of Energy (DOE)
- Montana Department of Natural Resources and Conservation (MDNRC)
- Montana Fish Wildlife and Parks
- Idaho Office of Energy Resources
- Idaho Power Company (IPCO)

The sections below describe the respective roles and responsibilities of the two lead agencies. The role of cooperating agencies is derived from the NEPA requirement of federal, state, and local governments to cooperate with the goal of achieving “productive harmony” between humans and their environment. The Council on Environmental Quality (CEQ) regulations implementing NEPA allow the lead federal agency to invite other federal, state, tribal, or local agencies that have jurisdiction by law or special expertise with respect to any environmental issue that will be addressed by the NEPA analysis to serve as cooperating agencies in the preparation of EISs (40 Code of Federal Regulations [CFR] § 1508).

1.2.2 Montana Department of Environmental Quality

The MDEQ approval of the proposed project must be obtained before construction or the exercise of eminent domain powers may begin. In response to the application for a Certificate of Compliance under MFSA, the MDEQ must conduct an environmental review to satisfy MEPA (75-1-101, et seq., MCA) and prepare a report to satisfy the requirements of MFSA. This EIS will serve as that report.

The MEPA requires that the state decision-makers consider the effects of their actions on the environment and that state agencies inform the public of the decision-making process and allow participation in the process. MFSA requires a Certificate of Compliance for development of the proposed project. Among the purposes listed in MFSA are:

- To ensure the protection of the state’s environmental resources
- To ensure the consideration of socioeconomic impacts
- To provide citizens with an opportunity to participate in facility siting decisions
- To establish a coordinated and efficient method to process all authorizations required for regulated facilities

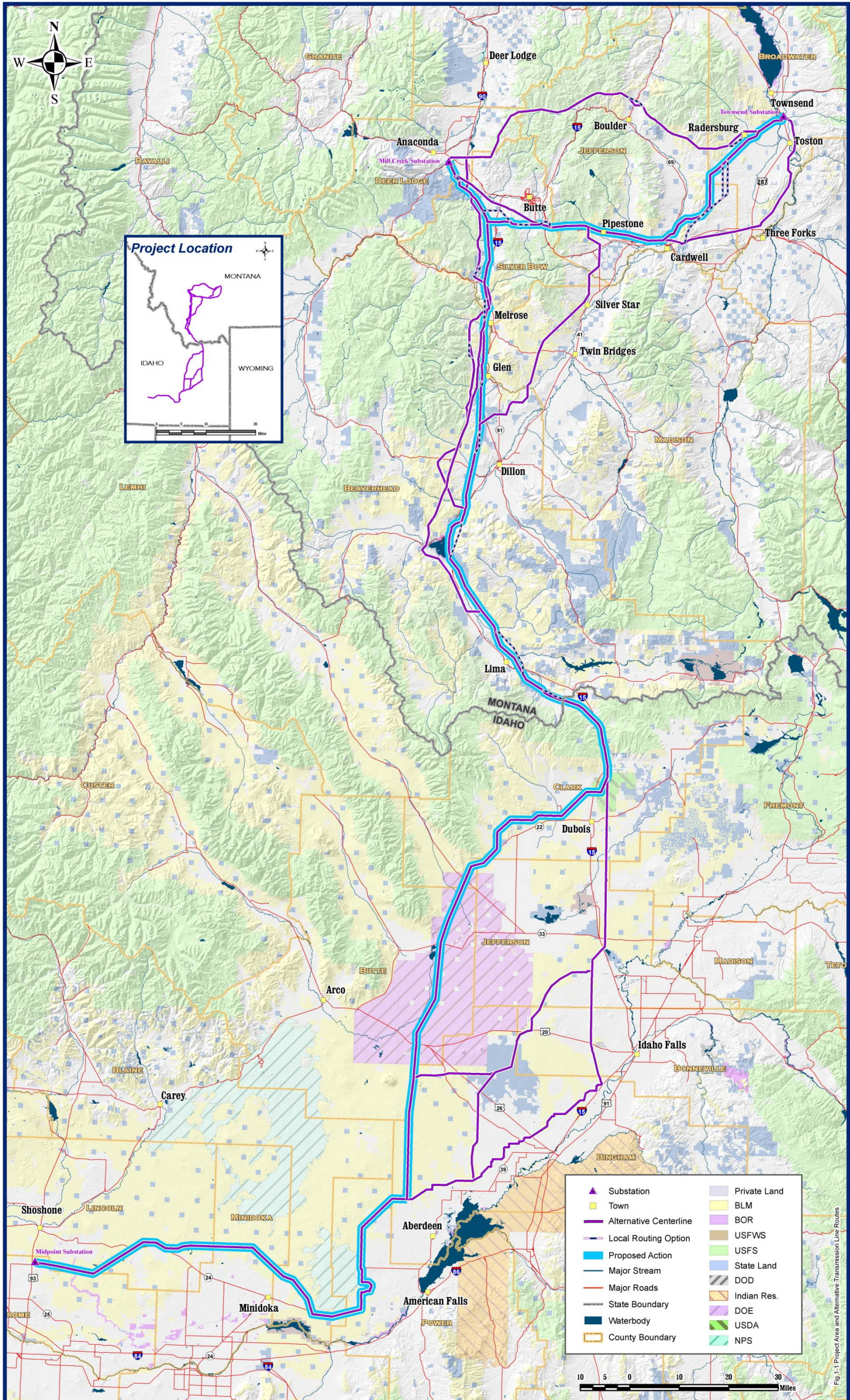



Figure 1-1. Project Area and Alternative Transmission Line Routes

Under MFSA, the MDEQ must make its decision on the issuance of the Certificate of Compliance for a transmission line based on the following findings (75-20-301, MCA and ARM 17.20.1607):

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1. The basis of the need for the facility
 2. The nature of probable environmental impact, including cumulative impact
 3. That the facility minimizes adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives
 4. What part, if any, of the line would be located underground
 5. The costs of the facility including internal costs of construction and operation and mitigation costs, plus other external costs and unmitigated environmental costs
 6. That the facility is consistent with regional plans for expansion of the appropriate grid of the utility systems serving the state and interconnected utility systems
 7. That the facility will serve the interests of utility system economy and reliability
 8. That the location of the facility as proposed conforms to applicable state and local laws and regulations, except that the department may refuse to apply any local law or regulation if it finds that, as applied to the proposed facility, the law or regulation is unreasonably restrictive in view of existing technology, cost factors, economics, or consumer needs, whether located inside or outside the directly affected government subdivisions
 9. That the facility will serve the public interest, convenience, and necessity. Under this finding, the MDEQ will consider the following factors (ARM 17.20.1604):
 - The benefits to the applicant, the state of Montana, the applicant's customers, and any other entities benefiting or resulting from the facility
 - The effects of the economic activity resulting from the proposed facility
 - The effects of the proposed facility on the public health, welfare, and safety
 - Any other factors that it considers relevant
 10. That the department or board has issued any necessary air or water quality decision, opinion, order, certification, or permit
 11. That the use of public lands for location of the facility was evaluated and public lands were selected whenever their use is as economically practicable as the use of private lands

With a few exceptions, after a Certificate of Compliance is issued, a state or regional agency or municipality or other local government may not require any approval, consent, permit, certificate, or other condition for the construction, operation, or maintenance of a facility authorized by the Certificate of Compliance. The MDEQ and the Board of Environmental Review retain the authority to determine compliance of the proposed facility with state and federal standards and implementation plans for air and water quality and to enforce those standards. Issuance of a Certificate of Compliance does not prevent the application of state laws for the protection of employees engaged in the construction, operation, or maintenance of a facility, or prevent the state from exercising its property ownership rights and obligations. The MDEQ must also issue 318 Authorizations under the Montana Water Quality Act (75-5-318, MCA). NorthWestern must still adhere to state weed control laws and obtain land use license or easements to cross land owned by state agencies, and must obtain temporary water use permits from MDNRC if NorthWestern diverts water during construction.

1.2.3 Bureau of Land Management

This EIS discloses potential project-related impacts pursuant to the requirements of NEPA (42 United States Code [USC] §§ 4321, et seq.) and subsequent implementing regulations issued by the CEQ (40 CFR Parts 1500 through 1508). The EIS was prepared in conformance with the BLM NEPA Handbook (BLM Handbook H-1790-1), which provides instructions for compliance with the CEQ regulations for implementing the procedural provisions of NEPA and the U.S. Department of the Interior's Manual on NEPA (516 DM 1-7). This EIS has been developed in a manner that facilitates compliance with the procedures for Resource Management Plan Amendments in 43 CFR Part 1610. No subsequent NEPA documents are anticipated for this project.

The BLM is the lead federal agency responsible for processing NorthWestern's ROW application on public lands managed by BLM. If one of the action alternatives is selected, BLM would issue two documents following a decision on this EIS. The first document would be a ROW grant that would give NorthWestern the right to construct, operate, and maintain a 500-kV transmission line on lands administered by the BLM. It would be granted for a fixed width. If permanent access is needed, this grant would include the roads. The BLM would also issue a Temporary Use Permit for construction and access. The permanent ROW would be issued for a term of 30 years with the right of renewal. The ROW and Temporary Use Permit are issued under the authority of Section 501 of the Federal Land Policy and Management Act of 1976, as amended (43 USC § 1761).

The routes for the alternatives being considered in this EIS would cross land managed by the following BLM field offices:

- Butte
- Dillon
- Upper Snake
- Burley
- Shoshone

The BLM has prepared Resource Management Plans (RMP) and Management Framework Plans (MFP) to manage resources on these lands. Depending on which alternative is ultimately chosen, the BLM would have to amend one or more of these plans. The needed plan amendments are described as part of the applicable alternative and are analyzed in Chapter 3. The BLM State Directors in Montana and Idaho would be the authorized officers for any RMP or MFP amendment in their respective state.

1.2.4 USDA Forest Service

The USFS will evaluate this EIS and issue its own decision for those proposed activities on the land it administers. The decision before the USFS is whether, and where, to authorize a 50-year Special Use Permit for the construction, use, and maintenance of 500-kV transmission line facilities within a 220-foot-wide route on National Forest System lands. Appropriate Special Use Permit(s) will be issued to authorize activities (such as construction) outside the 220-foot-wide corridor on National Forest System lands.

Alternatives evaluated in this EIS cross the Beaverhead-Deerlodge National Forest and the Caribou-Targhee National Forest. Each of these National Forests has Land Management Plans and RMPs that may need to be amended.

1.2.5 Planning Requirements, Authorizations and Permits

Numerous state, federal, and local approvals and permits would be required for the proposed project; these range from federal agency actions related to ROW and tariffs to local actions on construction activities and MFSA compliance.

1.3 PURPOSE AND NEED

1.3.1 Federal Agencies' Purpose and Need

The purpose of the federal action on federally managed lands is to determine whether providing for the use of those lands for portions of the proposed project is in the public interest. The need for the action is established by the federal agencies' responsibility under their respective authorizing statutes to respond to an application for authority to construct, maintain, and operate a facility on federal land. The purpose and need for major federal authorizing actions requested for the proposed project to proceed are described below.

1.3.2 Bureau of Land Management Purpose and Need

The BLM has received ROW applications from NorthWestern and must determine whether to allow the use of the National System of Public Lands for portions of the proposed project. Specific to the proposed project, 43 CFR § 2801.9 requires a BLM ROW grant for use of public lands for "systems or facilities over, under, on, or through public lands" including transmission lines. The BLM must also determine the environmental impact of granting a ROW across public lands. NorthWestern has identified a public need (described in Section 1.3.5). The BLM will consider this application in accordance with 43 CFR § 2800, and decide whether to issue the ROW grant to meet the public need. Subpart 2804 describes the process for filing applications for a ROW grant, which NorthWestern followed when submitting the applications (Section 1.2.1).

The BLM must consider the existing RMPs and MFPs in their decision to issue ROW grants in accordance with. The RMPs and MFPs allocate public land resource use and establish management objectives. Applicable RMPs and MFPs are listed and evaluated for consistency in Chapter 5 to determine conformance of the proposed project and alternative route segments. Depending on the alternative chosen, segments of the proposed project may not conform with one or more BLM Land Management Plans; therefore, potential amendments (43 CFR § 1610.5-5) to these plans are presented in Section 2.3.2.10. The environmental effects of these amendments are analyzed in Chapter 3. As part of the Record of Decision (ROD), the BLM will decide whether to implement the amendment and the significance of the amendment when the corresponding route or alternative is selected.

The decision whether to authorize the proposed project would be documented in the ROD prepared by BLM. The BLM decisions to be made are to:

- Decide whether a ROW grant should be issued for the transmission line
- Decide whether (and how) one or more BLM land use plans should be amended to allow the proposed transmission line
- Determine the most appropriate location for the proposed project on the National System of Public Lands, considering multiple-use objectives
- Determine the terms and conditions (stipulations) that should be applied to the construction, operation, and maintenance of the transmission line on the National System of Public Lands

The BLM has prepared this EIS to meet the disclosure requirements under NEPA, to facilitate public participation, to assist the BLM decision-makers in determining whether to issue a ROW grant, determine how the land use plans would be amended, and to determine under what terms and conditions that ROW grant should be issued.

1.3.3 USDA Forest Service Purpose and Need

Because the proposed project would cross the Beaverhead-Deerlodge and Caribou-Targhee National Forests, NorthWestern has applied to the USFS for a Special Use Permit. The USFS must determine whether to issue the Special Use Permit for the portions of proposed project on USFS-administered land. The USFS, as a cooperating federal agency, has participated and will continue to participate in all aspects of the environmental analysis. The USFS will use this EIS as a basis for its decision in selecting a preferred alternative and the issuance of a Special Use Permit and to determine under what terms and conditions a permit should be issued. Title 36 CFR Part 251, Subpart B, provides authority for reviewing and granting Special Use Permits for transmission lines. Further direction is provided in Forest Service Manuals 2701 and 2710.1. For a transmission line with a capacity of 66 kV or higher, the USFS is required to notify the DOE when an application is received (Forest Service Handbook 2709.11).

Land Management Plans and RMPs (Forest Plans) establish similar management allocations and guidelines as BLM RMPs and MFPs. The Targhee portion of the Caribou-Targhee National Forest is managed according to the Targhee Revised Forest Plan. The Beaverhead-Deerlodge National Forest is managed in accordance with the Beaverhead-Deerlodge Revised Forest Plan. Consistency and compliance with these plans is evaluated in Chapter 5. Depending on the alternative chosen, certain amendments to these plans may be required.

The decision as to whether or not to authorize the proposed project would be documented in the ROD prepared by the BLM, a joint ROD prepared by the BLM and the USFS, or as a separate ROD prepared by the USFS and would include the decisions made by the USFS. The USFS decisions to be made are to:

- Decide whether a Special Use Permit should be issued for the transmission line
- Decide whether and how one or more National Forest land use plans should be amended to allow the proposed or alternative routes for the transmission line
- Determine the most appropriate location for the transmission line on National Forest System lands, considering multiple-use objectives
- Determine the terms and conditions (stipulations) that should be applied to the construction, operation, and maintenance of the transmission line on National Forest System lands

1.3.4 Montana Department of Environmental Quality Purpose Need and Benefit

NorthWestern has submitted an MFSA application to MDEQ. The purpose of this EIS is to satisfy the requirement to produce an “environmental report” as part of MDEQ’s determination of whether to issue a Certificate of Compliance.

Under MFSA, the need decision standard is in the Administrative Rules of Montana (ARM) §17.20.1606. Under this rule, the need for a new electric transmission facility must meet at least one of the following major criteria:

- A need for additional transfer capacity within 2 years of the in-service date or that the expected benefits of constructing a transmission line with a transfer capacity of the proposed line warrant the costs

- A need to resolve a transient stability problem on the system
- A need to resolve excessive voltage drop on the system
- A need to maintain reliability of service
- A need based on economic considerations

The MFSA generally requires that any of the above criteria that apply must be needed within 2 years of the date the proposed transmission facility is to be placed in service.

1.3.5 Proponent's Purpose and Need

This section provides basic information about why NorthWestern is proposing this project and describes the electrical transmission system needs that would be met.

The overall purpose of the proposed project is to:

- Increase transfer capacity between Montana and Idaho in response to transmission service requests (TSR) to move power from Montana to Idaho
- Provide future opportunity to transfer low-cost energy resources in Montana to concentrated load centers outside of the state
- Provide future opportunity to transfer low-cost energy resources in Montana to concentrated load centers in the western U.S.

1.3.5.1 Provide Needed Transmission Infrastructure

One purpose of the proposed project is to meet the need for transmission capacity to facilitate the transfer of energy resources from Montana to other markets having a demand. Section 1.4 discusses the demands that currently exist and characterizes the need that the proposed project is intended to meet.

1.3.5.2 Respond to Transmission Capacity Service Requests

Existing transmission lines between Montana and Idaho are fully subscribed (i.e., at capacity). With this understanding, in December 2004 NorthWestern conducted an Open Season process for shippers interested in sending electricity from Montana to Idaho. During this process, a transmission provider can identify potential interest for new transmission capacity. TSRs are the official expressions of interest from these shippers. TSRs were accepted on NorthWestern's Open Access Same-time Information System (OASIS) for new capacity between Montana and Idaho. NorthWestern received TSRs that far exceed the capability of the existing transmission system. Another Open Season for the proposed project will be conducted in 2010, and additional TSRs are anticipated through this process.

NorthWestern's 2004 Open Season consisted of three phases:

- *Phase 1.* The initial expression of interest phase was October 1 to 31, 2004. NorthWestern announced their plans for transmission expansion and asked for parties (generators, suppliers, and load serving entities) to come forward with statements of interest for new transmission services. These parties were asked to specify the amount of capacity needed, the direction of service, a start date, and the term of service. At the conclusion of Phase 1, NorthWestern reviewed the level of interest and made a determination that there was adequate market demand to support their Open Season process.

- *Phase 2.* This phase began in mid-November 2004, with a posting of the time period to accept TSRs for the Open Season process. From December 1 to December 31, 2004, NorthWestern solicited TSRs for new transmission capacity from Montana to Idaho.
- *Phase 3.* After the closing date of December 31, 2004, NorthWestern began a study that examined the size of line (i.e., 230-kV, 345-kV, and 500-kV) and the transmission upgrades that would be needed in Montana to move power from its generation sources to the northern terminal of the proposed project at Townsend.

NorthWestern initially received 17 TSRs totaling 2,250 megawatts (MW) of expressed interest. Using this information, NorthWestern designed a high-level study that would provide cost information regarding the need for transmission system improvements to move all or a part of the 2,250 MW to Idaho. This information was provided so that Open Season respondents could decide whether to proceed to the next level of study by funding their Open Season request. After NorthWestern presented the results of this study, 850 MW of continued interest remained from the original participants.

After the formal public announcement of the proposed project, NorthWestern received 500 MW of additional TSRs, for a total of 1,350 MW of capacity on the proposed transmission line, which was formerly called the Montana to Idaho 500-kV pathway. The proposed project would address requests from customers for transmission capacity by providing up to 1,500 MW of available new capacity.

After these changes, NorthWestern has received additional revisions to the TSRs to reduce the current requests to 539 MW (Table 1-1). NorthWestern is currently offering a second Open Season for TSRs. This second solicitation may result in additional commitments from generators and power marketers. Agencies will consider the results of the second 2010 Open Season in the Final EIS. It is important to note that requests are an interest by generators, power marketers, or other entities in potential transmission availability. A request does not constitute a firm commitment that the entity will actually demand the transmission service at some future time.

Table 1-1. Potential NorthWestern Energy Customers for the Proposed Project

Potential Customer	MW Requested	Start Date	End Date	Comments
Powerex	39	01/01/2013	01/01/2018	Deposit received by NorthWestern
PPL Montana	75	01/01/2006	01/01/2016	Deposit received by NorthWestern
PPL Montana	25	01/01/2006	01/01/2016	Deposit received by NorthWestern
IPCO	150	01/01/2010	01/01/2030	Deposit received by NorthWestern
Powerex	100	01/05/2008	01/05/2010	Deposit received by NorthWestern
PPL Montana	25	01/01/2007	01/01/2017	Deposit received by NorthWestern
PPL Montana	25	01/01/2007	01/01/2017	Deposit received by NorthWestern
Powerex	100	01/01/2013	01/01/2018	Deposit received by NorthWestern
Total	539			

Source: NorthWestern Energy 2008a

1.3.6 Overview of Need for the Proposed Project

NorthWestern asserts there is a need for the proposed project because:

- There is demand for additional transfer capacity out of Montana. Transmission lines exporting power from Montana do not have sufficient capacity to carry power from substantial additional sources in Montana.
- There is an increasing demand for electricity generated from renewable sources (e.g., there is substantial potential for renewable energy generation in Montana).

The sections below discuss each area; additional detail is in Appendix A.

1.3.6.1 Projected Growth of Electricity Demand in the Western U.S.

Because of increasing needs, energy demand in the western U.S. is projected to grow substantially by 2030. Based on information compiled by Energy Strategies (a firm working for the third-party contractor on this EIS), and using information from utility Integrated Resource Plans (IRP) and state utility commission forecasts and the Western Electricity Coordinating Council (WECC), demand could rise from approximately 670,000 gigawatt hours (GWh) in 2007 to almost one million GWh by 2030 (Table 1-2 and Figure 1-2). As shown on the table and figure, Montana’s projected load growth, in absolute terms, is much smaller than other states in the West. Idaho, the terminal point of the proposed line, is also a very small market but a pivotal location for transmission service. Generators exporting power over the proposed transmission line will need to procure additional transmission service to reach some of the areas beyond Idaho that are projected to have significantly larger load growth.

The largest electricity market in the West is California, which can be segmented into two primary markets: northern and southern. In addition to the southern California market, other substantial electricity markets are in Arizona and southern Nevada (where most of Nevada’s load growth is expected to occur). A substantial market also exists in the Pacific Northwest, particularly in Washington and Oregon. Other important markets in the West include Utah and Colorado. These markets will need substantial new resources to meet forecasted load growth.

Table 1-2. Historic and Forecasted Electricity Sales (GWh)

State	2007	2020	2030
AZ	77,193	121,167	156,589
CA	264,235	315,018	356,343
CO	51,299	63,160	76,316
ID	23,755	27,654	31,672
MT	15,532	16,185	17,433
NM	22,267	28,914	35,694
NV	35,643	45,376	53,138
OR	48,697	59,448	69,756
UT	27,785	39,864	50,534
WA	85,742	105,306	126,163
WY	15,536	23,634	23,399
Total	667,685	845,726	997,036

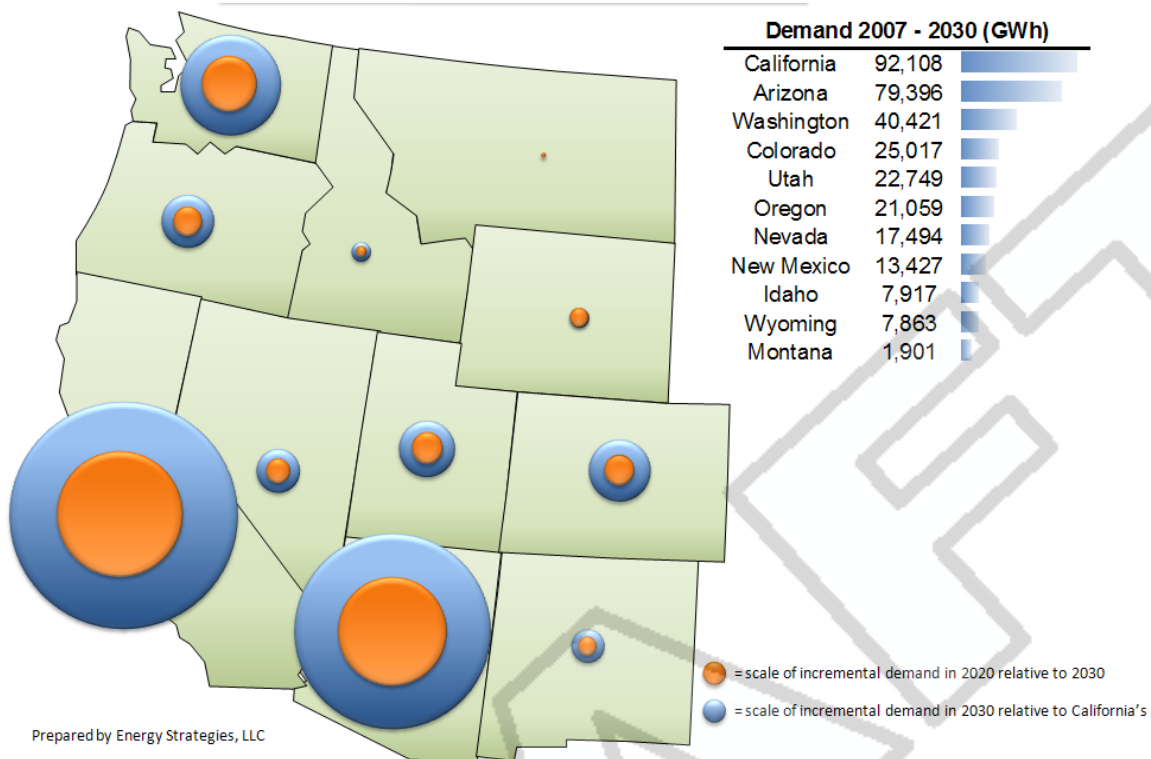


Figure 1-2. Incremental Electricity Demand 2007–2020 and 2007–2030 (Gigawatt-hours per year [GWh/yr])

The WECC 2008 Power Supply Assessment (WECC 2008) shows that the Southwest region and the Southern California/Mexico region will have a summer electricity resource deficit as early as 2010 (WECC 2008). To meet forecasted summer load obligations (including demand and reserve requirements), these Southwest markets will need to procure additional resources, or new transmission into the region will need to be constructed. While the Southwest is deficient in resources, the Northwest will have adequate supplies. However, because of “insufficient resource capacity and transmission in the south, and the effect of a transmission constraint on exports from the Northwest” (WECC 2008), resources are not readily transferred between the two regions. This difficulty underscores the need for additional transmission from the north to the south to help meet regional demand in the coming years. Markets in the Southwest would benefit from the availability of additional resource markets that might be opened up by new transmission capacity from the north to the south.

The Pacific Northwest, which for purposes of this discussion is Oregon and Washington, is expected to have substantial increases in electricity sales in the next 10 to 20 years. However, the WECC Power Supply Assessment demonstrates that the Northwest will have surplus generation in the summer months, even after using existing transmission paths to export surplus power. The Northwest has significant hydroelectric resources, which means that the region could, potentially, experience a shortage in a low-water year. Additionally, this region has recently seen a large increase in installed wind capacity.

Sales in Oregon and Washington are expected to increase by 61,480 GWh from 2007 to 2030 (Table 1-2). This substantial increase in electricity sales is comparable to the total electricity sales in Colorado in 2007.

Of the western states, California is predicted to have the largest incremental growth in electricity sales between 2007 and 2030, with increased sales of 92,108 GWh projected. This projected growth is 50 percent greater than the expected increase in sales during the same time in Oregon and Washington combined. It is also about twice Colorado's 2007 electricity sales. While California's growth in absolute terms is substantial, its rate of growth is tempered by high electricity prices and energy efficiency programs that help reduce demand.

Arizona also needs significant resources to help meet increased load, especially in the summer when air conditioning usage drives up demand. Arizona's projected incremental electricity sales between 2007 and 2030 are second in size only to California (Table 1-2). These areas also need large quantities of renewable energy to meet Renewable Portfolio Standards (RPS) requirements (Appendix A). The California market is of particular interest to many renewable developers because of the size of its RPS requirements (Appendix A).

1.3.6.2 Growth of Demand for Renewable Energy

Renewable resource mandates have become commonplace in recent years, both in the West (Figure 1-3) and throughout the U.S. As concerns have grown about the country's dependence on fossil fuel-based resources and the contribution of fossil fuels to climate change, many states have implemented requirements that electric utilities procure at least a certain percentage of their retail electric sales from renewable generation sources.

These requirements are prevalent in the West, where 9 of 11 states have some type of RPS requirements. In the West, only Idaho and Wyoming have not yet implemented renewable electricity requirements. While eight western states have renewable standards that are considered mandatory, Utah's RPS is typically referred to as a "renewable energy goal." Utah has a goal for 20 percent of its electricity to come from "economic renewable energy" by 2025. Therefore, Utah's utilities are not required to procure the renewable energy unless it is economically favorable. Other states have significant RPS mandates, many of which have some type of cost containment provision to help protect ratepayers from unreasonably high rates. These requirements are driving many developers to explore the possibility of developing the considerable wind resources in Idaho, Montana, and Wyoming and other states.

The most substantial RPS requirement in the West is California's because it will require the largest amount of renewable electricity to be procured. California currently has a statutory 20 percent RPS requirement by 2010, but there is significant interest in increasing that requirement to 33 percent by 2020. In fact, in November 2008 Governor Schwarzenegger issued Executive Order S-14-08, which raises the RPS to 33 percent for all utilities (including municipals and cooperatives). Currently being considered at the California Legislature are bills that would codify this requirement. In September 2009 the Governor issued another Executive Order directing the California Air Resources Board to adopt regulations to increase the California RPS to 33 percent. Therefore, in the subsequent discussions of the magnitude of RPS requirements, it is assumed that California's 33 percent RPS is a requirement for all utilities in the state. While there is uncertainty as to how out-of-state renewable electricity will be treated for purposes of RPS compliance in California, developers are still interested in moving their renewable electricity to this vast market.

To meet their RPS goals, each western state's total expected renewable electricity needs in 2020 (when many RPS requirements reach their maximum percentage) range from more than 100,000 GWh per year in California to just under 2,000 GWh per year in Montana (Figure 1-4). Because of the nature of Utah's renewable energy "goal," it will not be included in subsequent quantification of the renewable requirement in the West. Besides California, other sizeable renewable markets are Arizona, Colorado, Nevada, Oregon, and Washington.

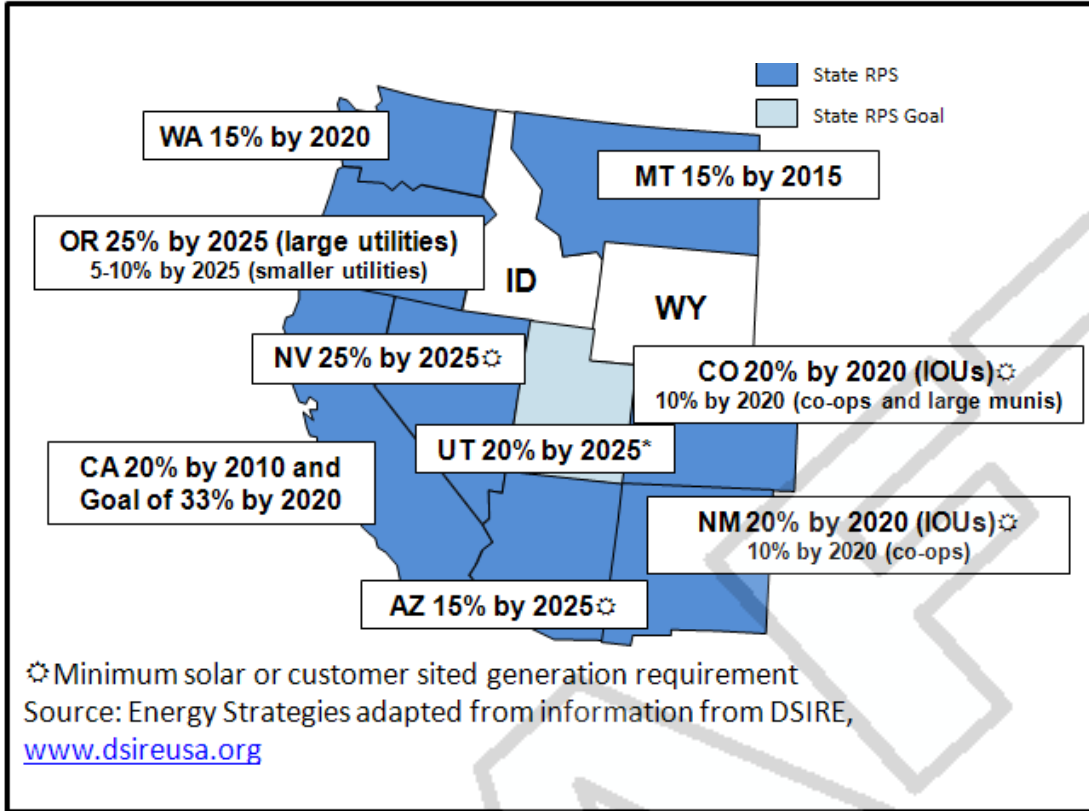
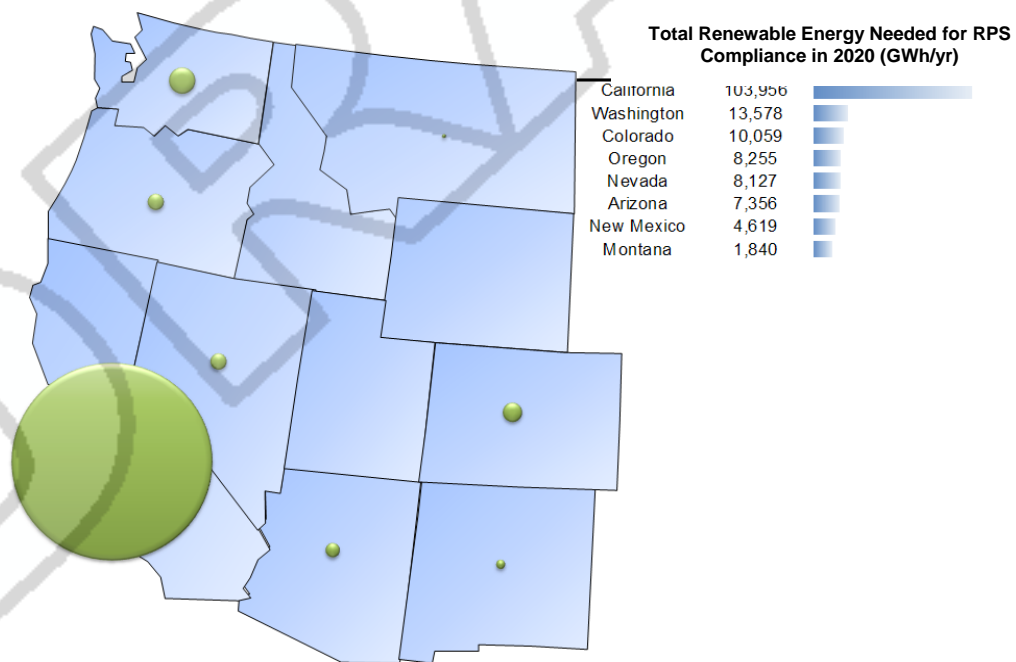


Figure 1-3. Renewable Portfolio Standards in the West



Source: Energy Strategies; Appendix A

Figure 1-4. Renewable Electricity Needed to Meet RPS Requirements in 2020 (GWh/yr)

The relatively small absolute size of Montana’s projected renewable energy requirement illustrates why Montana’s vast wind potential cannot be fully utilized by the RPS requirements of the state alone.

Incremental RPS requirements in the 11 primary states that make up the U.S. portion of WECC are expected to rise from under 20,000 GWh per year in 2010 to more than 100,000 GWh per year in 2020 (Figure 1-5). In the rate impact study conducted for this EIS (Appendix A) Energy Strategies estimated that the additional renewable energy generation needed by 2020 to meet RPS requirements is 107,000 GWh per year.

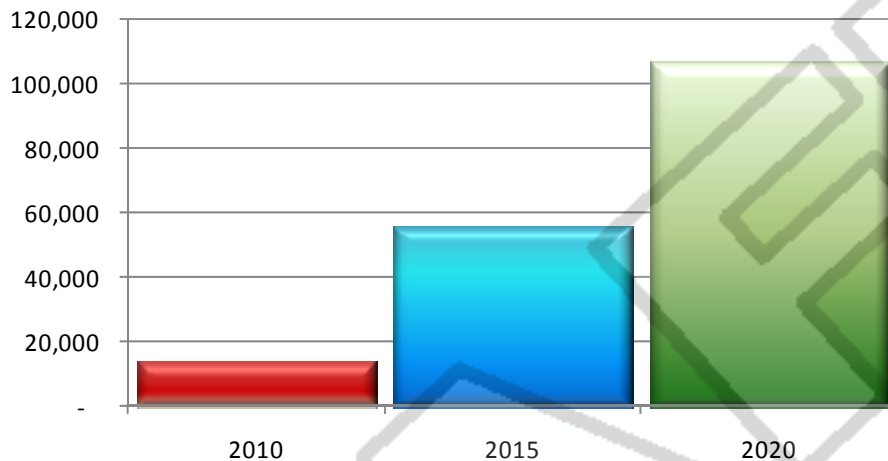


Figure 1-5. WECC (U.S.) Incremental Renewable Portfolio Standards Demand by Year (GWh)

1.3.6.3 Montana’s Load-Generation-Transmission Balance

Because the amount of existing generation in Montana exceeds the Montana customer load, Montana is an electricity export state. The surplus generation in Montana that exceeds the state’s internal load must either be shut down or exported out of state on the three existing transmission paths (Figure 1-6):

- Montana-Northwest (MT-NW, WECC Path 8)
- Montana-Idaho (MT-ID, WECC Path 18)
- Montana-Southeast (MT-SE, WECC Path 80)

The amount of surplus generation that is exported on a firm (long-term contracted) and non-firm (as available, short-term contracted) basis and which export path is used for this export are dependent on the location of the out-of-state load needing power and the market conditions. Consequently, the actual flows across Montana’s export paths will vary daily and seasonally. Historically, Paths 18 and 8 are the most actively used because they provide the most direct route to southwest and northwest load centers. The term “path” describes a general route of flow of electricity. It is used for overall planning of transmission on the regional scale. See Figure 1-6 for the location of these paths. Path 18, the path that the proposed MSTI line would follow, is fully subscribed through long-term firm commitments (J. Leland, NorthWestern Energy 2009 personal communication), making this path fully and contractually congested with no available firm transmission capacity.

Path 18 is currently comprised of two transmission lines: a 230-kV line (Mill Creek-Antelope) and a 161-kV line (Dillon-Salmon-Big Grassy). These two lines have a combined effective rating of 337 MW of transmission capacity. Additional details on these lines are as follows:

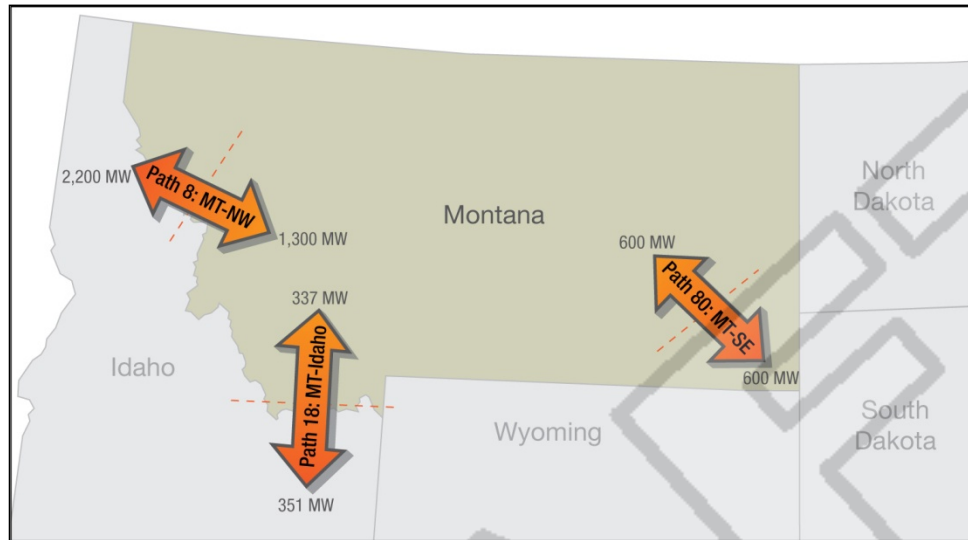


Figure 1-6. Import and Export Path Ratings

- The 230-kV line is jointly owned by NorthWestern, PacifiCorp, and IPCO. NorthWestern owns the facilities in Montana, while PacifiCorp and IPCO own the remainder of the line in Idaho. The three parties share approximately equal portions of the 250-MW transmission capacity in the joint facility from southwestern Montana to southern Idaho.
- The 161-kV line is owned by NorthWestern in Montana and IPCO in Idaho. Each party owns 100 percent of the 87 MW of the transmission capacity in its respective state.

Considering only firm transmission contracts, Path 8 is partially subscribed, but when non-firm commitments are considered the path can become fully contractually congested at times. The proposed project is being proposed to relieve the congestion on both Paths 18 and 8. The proposed project would provide an alternate route to the load centers in the southwest and northwest. Without additional export capacity, congestion from Montana to out-of-state markets would worsen as new generation comes online. To sell transmission capacity on a firm basis would require that, for every MW of new generation added within NorthWestern's control area, a MW must be used in Montana or exported to load elsewhere in the west through NorthWestern's three export paths.

Upgrades to existing lines or new transmission would be needed to handle new generation being proposed in Montana. Because Montana's supply is currently secured by mostly in-state sources, new generation built in Montana would likely be required to export out-of-state for their market. For a more detailed description of the electricity markets and how they operate in Montana, Idaho, and the western U.S., (Appendix A).

1.3.6.4 Need Related to Increased Transfer Capacity

According to NorthWestern, the main purpose of the proposed project is to increase transmission capacity from Montana to load centers outside of Montana. This is in response to TSRs from electricity generators

and suppliers over the past 6 years. These generation projects have not been built yet, and some of them likely plan to build in Montana and export energy out of state.

According to NorthWestern, the proposed project is a direct response to the growing need for electricity in the western U.S. and to bottlenecks in shipping large amounts of power generated at new generating facilities in Montana to Idaho and markets beyond. In addition, many western states have passed RPSs that require utilities in their respective states to use clean renewable energy to meet their energy needs; the proposed project could help states meet those standards.

As of January 12, 2010, NorthWestern, as a whole, had 2,360 MW of proposed renewable generation (including 50 MW proposed hydroelectric) under study and 3,123 MW total in its queue (J. Leland, personal communication, February 2, 2010). It is uncertain how much of this would ever be developed and how much of this power might be marketed over the proposed transmission line.

While the proposed project does not have firm customers at this time, there is a considerable interest from prospective generators for transmission services on NorthWestern's system. It is currently uncertain how many (if any) of these prospective generators might use the proposed line. An indication of interest from potential shippers in transmitting electricity on NorthWestern's transmission lines is referred to as the transmission queue, which is where requests for transmission are documented. This queue can be viewed at: <http://www.oatioasis.com/NWMT/NWMTdocs/GenConnect.html>.

NorthWestern is currently in the process of conducting a second Open Season, by which additional TSRs are submitted and the interest expressed during this process may reduce, if not eliminate, any surplus capacity currently available on the proposed project. The proposed project and the alternatives would relieve some of the current constraints and could enhance the reliability and capability of the power grid that supplies electricity to residences and businesses in the western U.S.

1.4 BENEFITS

The evaluation of benefits of a proposed project is a requirement of MEPA. The potential benefits of the proposed project range from improved transmission capacity and electrical transmission reliability and performance (referred to hereinafter as system reliability) to economic development (Table 1-3).

One potential benefit of the proposed project is that it would enhance system reliability. More studies are needed to verify potential enhancements to system reliability. These studies will be conducted by NorthWestern under the guidance of WECC.

Another benefit is to help meet regional demand and help states meet their RPSs. Western states will need substantially more renewable energy sources to meet their RPSs over the next 10 years. Montana may be able to help other states meet their demand and their RPSs, but to do so would need more transmission out of the state. It also may help increase the amount of renewable resources built in the U.S. However, there is no assurance that the 539 MW of non-committed transmission capacity would be filled by renewable sources or that future requests would be from renewable generation.

Table 1-3. Assessment of Potential Benefits of the Proposed Project

Benefit	Scale of Influence	Description of Benefit	Does the Project Purpose Provide this Benefit?	MDEQ Assessment of Whether the Proposed Project Provides the Benefit
Global climate change and fulfilling renewable portfolio standards	Global and regional	One of the most often cited solutions to the perceived challenge of climate change is to switch to renewable energy sources. In most cases, generation facilities being envisioned for renewable energy are located far from existing transmission lines. It is a commonly held belief that new transmission capacity must be developed to accomplish any meaningful transition to renewable energy in the U.S. Other states in the western grid have substantial new requirements for renewable energy.	Not explicitly. It is explicit in this EIS that development of this transmission line would make available new transmission capacity for energy generators in Montana. This capacity would be made available to all generators, and renewable energy developers may respond. Should developers of renewable energy ultimately use the proposed project, it would help address global climate change by offering a substitute for carbon-based generation. There is, however, no explicit commitment to limit the use of proposed project to only renewable energy developers. Such exclusivity would be counter to the federal rules under which NorthWestern operates.	Possibly. If the transmission capacity provided by the proposed project is used by renewable energy developers, this project would provide a benefit compared to new generation that uses fossil fuels.

Table 1-3. Assessment of Potential Benefits of the Proposed Project

Benefit	Scale of Influence	Description of Benefit	Does the Project Purpose Provide this Benefit?	MDEQ Assessment of Whether the Proposed Project Provides the Benefit
Energy independence	National	It is a widely held belief that the U.S. would be more secure if it were less dependent on sources of energy that originate outside of our boundaries. Development of energy sources within our boundaries (along with conservation measures) would increase the energy independence and, therefore, U.S. security.	Not explicitly. As with the climate change issue, the proposed project does not expressly claim the purpose of addressing U.S. energy independence. Because many of the undeveloped energy sources in the U.S. are not near the markets for the energy or transmission lines, it is clear that a critical element to achieving greater energy independence would be increased transmission capacity through projects such as the proposed project.	Possibly. If the transmission capacity provided by the proposed project is used by domestic energy developers, this project could provide some contribution to energy independence; however, most of our electricity is already domestically produced and fueled, so this may not lead to substantial energy independence. The U.S. is most dependent on foreign energy used for transportation.
Increased market competition and electricity supplier choice	Local and regional	In theory, congestion can prevent delivery of lower-cost power to high-priced markets. Congestion can limit the diversity of power suppliers, thereby driving up prices.	Potentially. If the proposed project alleviates congestion, and if more diverse energy suppliers would transmit power over the proposed transmission line than otherwise would be possible, market competition could increase.	Potentially. If the proposed project alleviates congestion, and if more diverse energy suppliers would transmit power over the proposed transmission than otherwise would be possible, market competition could increase.
Energy diversification	Regional	The project would allow utilities in the West access to power generated with fuels other than natural gas, leading to more stable electricity prices.	Not explicitly. The project would allow another transmission path for electricity generators; however, there is no certainty of the fuel type that those generators would use.	Possibly. Much of the potential new generation in Montana is from wind, coal, and more efficient hydroelectric generation. If these generators use the new line, reliance on natural gas-fired generation elsewhere could be reduced.

Table 1-3. Assessment of Potential Benefits of the Proposed Project

Benefit	Scale of Influence	Description of Benefit	Does the Project Purpose Provide this Benefit?	MDEQ Assessment of Whether the Proposed Project Provides the Benefit
Improved transmission capacity	Regional	<ul style="list-style-type: none"> The electricity export path from Montana to Idaho has been identified as one of the congestion points for transmission in the western U.S. (DOE 2006). Customers have filed TSRs with NorthWestern for additional transmission capacity. Development of new energy sources in Montana will be constrained by lack of additional transmission capacity. 	<p>Yes. The project is being proposed as a 500-kV line that would provide 1,500 MW of additional transmission capacity in the export path from Montana to Idaho and 950 MW from Idaho to Montana.</p>	<p>Yes. The proposed project would provide additional transmission capacity on the Montana to Idaho export path to developers of new energy sources in Montana; however, NorthWestern has indicated it is also proceeding with a separate effort to upgrade existing 500-kV transmission lines between Montana and the Northwest (Path 8) to add at least 500 MW of capacity. This is not the only project that could increase the transmission capacity between Montana and the Northwest (Path 8) that could add at least 500 MW of capacity.</p>
Improved transmission system reliability	Regional	<p>Another intermediate end point on the 500-kV transmission system would allow the system to be sectionalized farther from Colstrip, thereby mitigating voltage swings due to line outages.</p>	<p>Yes. A simultaneous outage on both 500-kV lines from Colstrip can cause voltage swings on the system, potentially tripping generators at Colstrip. An intermediate substation and alternative 500-kV transmission path could help mitigate this problem.</p>	<p>Yes. The proposed project would provide an additional intermediate substation and transmission loop path resulting in overall system reliability. The project would comply with WECC standards for reliability.</p>

Table 1-3. Assessment of Potential Benefits of the Proposed Project

Benefit	Scale of Influence	Description of Benefit	Does the Project Purpose Provide this Benefit?	MDEQ Assessment of Whether the Proposed Project Provides the Benefit
Economic development (development of energy resources)	State	Montana is rich in energy resources. To increase the development of these resources and capitalize on the revenue generation benefits that development would yield (through construction, operation, and maintenance jobs as well as tax revenue), additional transmission capacity to markets outside of Montana must be developed as more generation projects are developed.	Yes. This is an explicit purpose of the proposed project.	Yes. Construction, operation, and maintenance jobs as well as additional property tax revenue would be created by any energy development (Section 3.7). A few long-term jobs could be created directly by the project and indirectly at new generation projects.
Revenue generation	State and local	County governments are in need of additional revenue for public services.	Not explicitly. While not an explicit purpose of the proposed project, there are anticipated benefits.	Yes. Property taxes from the proposed project would be paid to county governments in the counties through which the proposed project would pass and to the states (Section 3.7).

1.4.1 Consistency with Plans for Grid Expansion

This section describes how the proposed project is consistent with the plans coordinated by the Northern Tier Transmission Group (NTTG), WECC, DOE, and the Western Governors' Association (WGA) for grid expansion.

1.4.1.1 Northern Tier Transmission Group Plans

The NTTG is a group of transmission providers, including NorthWestern, and transmission customers that are actively involved in the sale and purchase of transmission capacity of the power grid that delivers electricity to customers in the Northwest and Mountain states. Transmission owners serving this territory work in conjunction with state governments, customers, and other stakeholders to improve the operations of, and chart the future for, the grid that links all of these service territories. The NTTG coordinates the sub-regional planning efforts for those entities of the high-voltage transmission network to meet transmission service reliability requirements for delivery of power to consumers.

Under open access rules enforced by the Federal Energy Regulatory Commission, transmission owners such as NorthWestern are required, subject to contractual rights and available transmission capacity, to offer their available transmission capacity on a firm or non-firm basis to third-party users. The amount of available transmission capacity on each of NorthWestern's export transmission paths can vary by season, depending on prior commitments and the reliability limits established for each path for that season.

Other 500-kV projects, including the proposed project, are planned in the western U.S. (Figure 1-7). These transmission projects are part of the first NTTG biennial transmission plan and include:

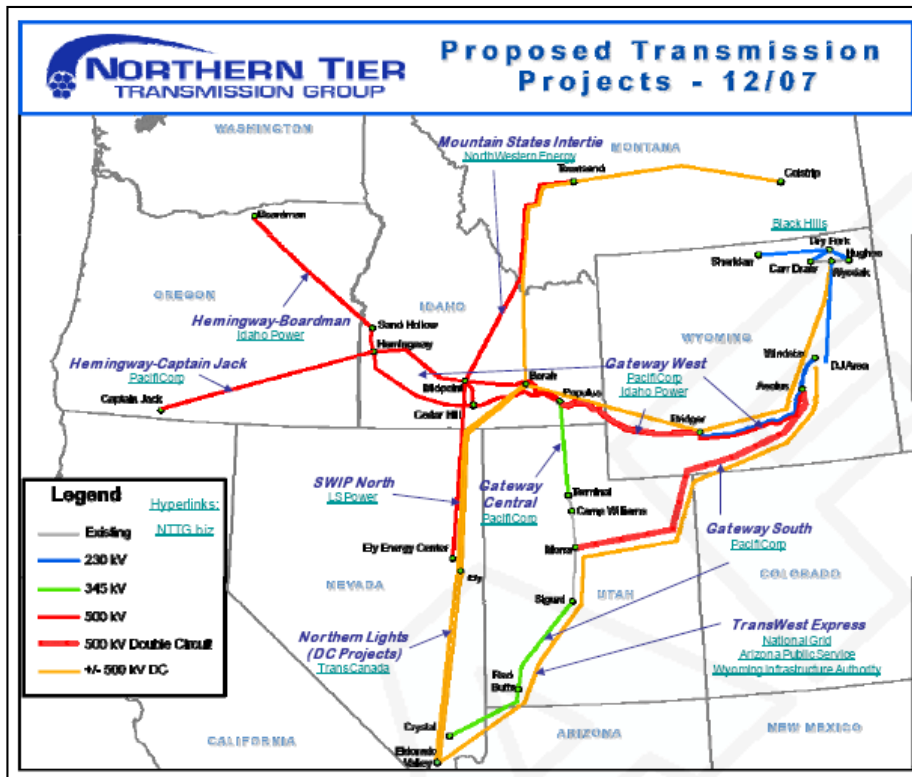
- Boardman to Hemmingway
- Hemingway to Captain Jack
- Southwest Intertie
- Overland Intertie
- MSTI
- Gateway West
- Gateway South
- TransWest Express
- Gateway Central
- Chinook High-Voltage Direct Current
- Zephyr High-Voltage Direct Current

The proposed project would fit into the NTTG's regional expansion plans by connecting into the Midpoint Substation where many proposed new lines also connect. This would provide the proposed project with access to many markets throughout the West.

NorthWestern is also in the early planning stages for what it refers to as the "collector system." This is a series of 230-kV transmission lines that would feed power from new areas of generation (e.g., areas of high wind development potential) to the proposed new Townsend Substation.

The Rocky Mountain Area Transmission Study (RMATS) recommended various methods to increase the transfer of capacity from Montana to demand centers in other regions of the WECC (RMATS 2004). The RMATS group was formed by the WGA specifically to evaluate transmission needs in the Intermountain West. Within the RMATS study area (Montana, Idaho, Wyoming, Utah, and Colorado), four projects that will provide significant benefit were recommended to serve load in the Rocky Mountain area in the near

term. One of the proposed projects is the addition of a phase shifting transformer on the line between Montana and Idaho to increase transfer capacity from Montana. This project has been completed.



Source: NTTG Web site www.nttg.biz

Note: The routes of these proposed lines may have changed since it was first distributed by NTTG.

Figure 1-7. Proposed Transmission Projects

The RMATS study recommended three new 500-kV transmission line projects to move power out of the RMATS study area (RMATS 2004). These three lines would connect to Nevada, California, and Oregon; all three lines would originate from the Midpoint Substation in Idaho (Figure 1-7):

- Idaho to Las Vegas Line (Southwest Intertie)
- Idaho to North California Line (Midpoint to Tesla)
- Midpoint to Oregon Line (Midpoint to Grizzly)

Because the southern terminus of the proposed project would be at the Midpoint Substation, it is consistent with the RMATS plan to expand the grid.

1.4.1.2 Western Governors' Association Plans

Governors in the western states called for 30,000 MW of clean, diversified energy in the western power grid by 2015. The WGA 2007 Annual Report stated that the western states are well on their way to meeting, and likely exceeding, the regional goals of adding 30,000 MW of clean, diverse energy by 2015; increasing energy efficiency by 20 percent by 2020; and developing plans to ensure reliable, safe transmission for 25 years (WGA 2007). The proposed project would provide a pathway for renewable

energy from Montana to be transmitted to markets in other states and is consistent with WGA plans to expand the grid.

Section 216 of the Federal Power Act was added as a result of Section 1221(a) of the National Energy Policy Act of 2005. Section 216 directed the Secretary of Energy to conduct a nationwide study of electric transmission congestion. In August 2006 the DOE released the first congestion study in response to the new law. The study, called the National Electric Transmission Congestion Study (DOE Congestion Study) (DOE 2006), examined congestion and transmission constraints in the U.S. portions of the eastern and western power grids. The study explained that congestion occurs when actual or scheduled flows of electricity on a transmission line or a related piece of equipment are restricted below desired levels, either by the physical or electrical capacity of the line, or by the operational restrictions created and enforced to protect the security and reliability of the grid. The term “transmission constraint” according to DOE may refer either to a piece of equipment that limits electricity flows in physical terms or to an operational limit imposed to protect reliability.

The DOE Congestion Study identified the need for additional flow in the area of Path 18 from Montana to the south. NorthWestern has indicated that new transmission facilities would be needed to expand the Montana-to-Idaho corridor to satisfy TSRs that may come from new generation or other shippers in Montana. The proposed project would address this need by increasing transfer capacity from Montana, south into Idaho along WECC’s Path 18 (Montana-to-Idaho corridor). Electricity could also flow south to north.

The DOE performed modeling for the Western Interconnection Region (DOE 2006), which identified current and projected congestion on the western transmission paths. The proposed project would not alleviate all congestion in the Western Interconnection Region, but it is part of an overall solution that would enable energy to be transferred from Montana to the load centers that require a more robust and reliable transmission system.

1.4.2 U.S. Western Grid Regional Benefits

Overall, the benefits from the proposed project are directly connected to the western energy grid. The benefit of providing stable, secure transmission capacity (i.e., system reliability) would allow further development of generation projects in the planning stages, enable access to energy demand centers of these generation facilities, assist states in meeting RPS goals, and provide redundancy in the overall transmission system. According to NorthWestern, benefits from the proposed project would be to:

- Increase transfer capacity out of Montana by up to 1,500 MW, resulting in greater firm transmission space between Montana and Idaho.
- Relieve the Montana to Idaho (Path 18) congestion identified in the 2006 DOE Congestion Study.
- Allow new generation built in Montana to export power out of state.
- Represent a significant upgrade of the Northwest 500-kV system by closing an important 500-kV loop in the Northwest.
- Follow one of the few non-mountainous routes out of Montana to important commercial hubs near load centers (interconnect with other transmission lines in Midpoint is needed to make final connection with actual load centers). These lines (Southwest Intertie, Gateway West, etc.) are in various stages of planning.
- Provide significant opportunity for customers, utilities, and states to gain access to renewable sources of power from Montana to fulfill their required RPS.

The RMATS study (2004) identified significant regional benefit by relieving the congestion between Montana and Idaho, thereby providing customers access to generation within Montana. Benefits of investment in transmission expansion identified in the RMATS include:

- Improved access for utilities to lower-cost power
- Greater liquidity and price competition in power markets, including mitigation of generator market power
- Increased ability of generators to diversify fuels used to serve their customers, which can help minimize fuel price risks and broaden access to renewable resources and generally increase transmission routing options in the regional area
- Tax revenue and other economic benefits to communities and states where development takes place
- Improved reliability and greater flexibility for maintenance and other operational purposes

These benefits have the potential to be met with the proposed project. Other benefits would include short-term and long-term additional jobs and income, secondary economic benefits from spending, potential profit for the project owners, and payments to landowners. Also, NorthWestern would ideally make a return on investment to its shareholders. The proposed project is expected to facilitate energy diversification, improve system reliability, and create economic stimulus for local governments along the corridor in Montana and Idaho.

1.4.3 Enable Energy Diversification

The Northern Tier Projects (Figure 1-7) are comprised primarily of 500-kV lines designed to connect the energy resource-rich regions of the Inland Northwest with the customer loads of the Pacific Northwest and Southwest, and the growing demands of Intermountain population centers. It is often assumed that fuel diversity means greater reliance on fuels other than natural gas. By diversifying fuels, generators can mitigate gas price risks. Further, new access can be provided to renewable resources, helping to reduce risks and costs, stabilizing customer prices, and meeting environmental policy objectives, including RPS (RMATS 2004).

Fuel diversity benefits of new transmission investments can flow to utilities and their customers. The size of the benefits depends on the value of reduced fuel price volatility to the generator, how risks and costs are calculated, and on incremental costs to utilities of alternatives for meeting RPS, risk management goals, and environmental policy objectives (RMATS 2004).

1.4.4 Provide Bi-Directional Transmission Capacity

NorthWestern is in the process of obtaining a path rating of the proposed project through WECC. The proposed project would have a 1,500-MW north-to-south rating and a 950-MW south-to-north rating. This is expected to provide ample capacity in both directions to meet known current transmission need.

1.4.5 Provide Market Competition and Increase Supplier Choice

Transmission congestion always has a cost. When constraints prevent delivery of energy from less expensive sources, energy that is delivered from more expensive sources must be used instead (DOE 2006). In concept, by relieving congestion, liquidity in energy markets would increase and competition would become more robust. This may lead to lower and more stable prices, especially in short-term markets, creating benefits that flow to utilities and their customers within and outside the RMATS region.

The RMATS has identified and recommended potential upgrades and expansions to the transmission system in nine western states. The economic analysis shows that these projects could ultimately provide lower costs to users to the extent that lower production costs are translated into lower wholesale prices throughout the Western Interconnection Region (RMATS 2004).

The proposed project would enhance access to major Northwest load centers as the amount of generation in NorthWestern's balancing area increases and as Montana to Northwest (Path 8) congestion increases. The proposed project, combined with other NTTG projects, can provide export opportunity to the Northwest relatively unaffected by congestion.

The proposed project would also serve the needs of generation outside of Montana. The proposed project would improve the ability of out-of-state generation to flow through Montana to Idaho. The opportunity to move power from Montana south into Idaho is limited today because Path 18 is fully subscribed. The proposed project would enhance the opportunity for power transfers between Alberta (and other generation facilities to the north) and Idaho (and farther south) through the Montana Alberta Tie Ltd. transmission line if additional capacity is added between Great Falls and Townsend.

1.4.6 Provide a Positive Economic Influence

Construction of the proposed project could provide positive economic influences; these range from tax revenues provided to local tax districts from project construction and ROW purchases to job opportunities associated with construction, operation, and maintenance.

Assured transmission capacity could lead to construction of new wind farms and other power plants, which would provide economic development benefits as a result of jobs and increased tax revenues to Montana and local communities hosting these facilities. Tax revenue benefits for the state and localities include increased property taxes, additional franchise taxes, higher utility tax revenues, increased state and local income taxes, along with secondary and tertiary induced and indirect economic benefits, and resulting taxes flowing from the investments.

1.4.7 Montana Department of Environmental Quality Preliminary Assessment of Need

Currently, Path 18, over which the proposed project would travel, is contractually subscribed up to its 337-MW limit north to south, and no additional room exists for firm power. Usually, it is firm power that new generators are interested in. Non-firm room on a transmission line (room that can be used only when available) is not generally enough of a guarantee for a new generation project to be built. Therefore, MDEQ acknowledges that there is no additional room for firm deliveries on Path 18, and very little room exists on other paths leaving Montana.

Currently, NorthWestern has TSRs for 539 MW from north to south on Path 18. These 539 MW are non-binding and result from eight TSRs received from three sponsors during NorthWestern's initial December 2004 Open Season (Tom Pankratz, NorthWestern, personal communication 2009). The available non-firm capacity on Path 18 would be unable to accommodate most of these requests.

An additional Open Season is to be conducted in 2010 by NorthWestern to solicit additional TSRs. Currently, a 345-kV line would most likely meet the need of 539 MW of non-binding requests. A 230-kV line would not be large enough to meet the 539 MW of requests. After the second Open Season, the situation might change, and a 500-kV line might be justified. Thus, a smaller line should be considered as an alternative that could meet the need justification, if the 1,500 MW is not demanded by shippers.

From the project inception, NorthWestern has evaluated various voltage levels in the event the full 1,500-MW subscription level was not achieved. NorthWestern stated in its application that it would consider either 230-kV or 345-kV projects if the expressed interest does not approach 1,500 MW. NorthWestern is also evaluating options to phase in segments of the line over time that could mitigate cost and pricing issues depending on subscription level and voltage selection. NorthWestern is counting on potential shippers seeing the proposed project as viable (NorthWestern 2008).

Based on the indefinite nature of proposed generation projects such as those in NorthWestern's queue, and based on an uncertain outcome of the second proposed Open Season, MDEQ cannot predict the number of TSRs that will request transmission capacity on the proposed transmission line. Therefore, MDEQ cannot reach a finding of sufficient need for the proposed project at this time based solely upon existing TSRs. The MDEQ also recognizes that the results of the second Open Season will provide a better definition of what transmission line size is justifiable under need based solely on TSRs.

If additional transfer capacity requests do not justify the proposed 500-kv line, the need for the proposed transmission line may nonetheless be established if the expected benefits of constructing the 500-kv line warrant the costs under ARM 17.20.1606(1)(a)(ii). In making this determination, MDEQ must consider (1) the expected benefits of building the proposed transmission line compared to building a line with a transfer capacity that will be needed within 2 years, and (2) the extra costs of building the proposed line compared to building a line with a transfer capacity that will be needed within 2 years. Finally, the need for the proposed project may be based on economic considerations set forth in ARM 17.20.1606(h).

While the proposed project does not currently meet the need criterion of additional transfer capacity for the proposed 500-kV line, it does have other benefits (Section 1.4). The need to provide an additional transmission path for new generation was mentioned by NorthWestern in their MFSA application. The proposed project would help meet this goal. Aside from a potential 500-plus-MW upgrade to the Colstrip line, new lines in the planning stages such as the Chinook and Wind Spirit projects, and some other potential small upgrades on other lines, new generation in Montana would have to use non-firm capacity, use newly built transmission, or be consumed in Montana. Clearly, with Montana's resources and increasing electricity demand in the western U.S., it is expected that there will be new generation developed in Montana in the future, resulting in a need for increased capacity out of state.

The need to relieve congestion was also mentioned. As stated by NorthWestern, the proposed project would not alleviate all congestion in the Western Interconnection Region, but it would do so on Path 18. The project would be part of the overall solution to transfer energy from Montana to the load centers that require a more robust and reliable transmission system.

1.5 AUTHORIZING LAWS AND REGULATIONS

Table 1-4 lists the major federal, state, and local permits, approvals, and consultations identified for the construction and operation of the proposed project. NorthWestern would be responsible for obtaining all permits and approvals required to implement the proposed project regardless of whether they appear in this table.

Table 1-4. Authorizations, Permits, Reviews, and Approvals

Action Requiring Permit, Approval, or Review	Permit/Approval	Accepting Authority/ Approving Agency	Statutory Reference
Federal			
Power line construction and operation on land under BLM administration	ROW Grant/Plan of Development Approval	BLM	Federal Land Policy and Management Act of 1976 (Public Law [PL] 94-579) USC 1761-1771 43 CFR Part 2800
Power line construction and operation	Special Use Permit	USFS	36 CFR Part 251, Subpart B
NEPA compliance to grant ROW by BLM and Special Use Permit by USFS	EIS	BLM and USFS	NEPA, CEQ 40 CFR Part 1500-et. seq.
Construction, operation, and abandonment of transmission lines across or within highway ROW	Permit to cross Federal Aid Highway	Federal Highway Administration	23 CFR Parts 1.23 and 1.27 USC Sections 116, 123, and 315 23 CFR Part 645 Subpart B 23 CFR Part 77
Grant of ROW by BLM	Endangered Species Act Compliance by USFS and by U.S. Fish and Wildlife Service Biological Assessment and Biological Evaluation	U.S. Fish and Wildlife Service	Endangered Species Act Section 7 Consultation
Grant of ROW by BLM	National Historic Preservation Act Compliance Section 106	BLM and State Historic Preservation Office	National Historic Preservation Act of 1966 36 CFR Part 800 16 USC 47
Tower location and height relative to air traffic corridors	Notice of Proposed Construction or Alteration	Federal Aviation Administration	49 USC 1501 13 CFR Part 77
Fill in a wetland	404 Permit	U.S. Army Corps of Engineers	Clean Water Act Section 404

Table 1-4. Authorizations, Permits, Reviews, and Approvals

Action Requiring Permit, Approval, or Review	Permit/Approval	Accepting Authority/ Approving Agency	Statutory Reference
Grant of ROW by BLM through Idaho National Laboratory	DOE consultation and concurrence of BLM Grant of ROW	DOE	April 2003 Memorandum of Understanding between DOE-Idaho Operations Office and BLM
Approval of rates for transmission in interstate commerce for jurisdictional utilities, power marketers, power pools, power exchanges, and independent system operators	Tariff Review and Approval	Federal Energy Regulatory Commission	CFR Title 18
U.S. Security Policy Review for power line construction and operation	Consultation and Concurrence	Department of Homeland Security	U.S. Security Policy
State of Montana			
Authorization of stormwater discharges to surface waters of the state associated with the construction activities	General Discharge Permit for Stormwater Associated with Construction Activity	MDEQ	Montana Water Quality Act (75-5-401, et seq., MCA)
Authorization of construction and operation of certain transmission lines with a design capacity greater than 69 kV	Certificate of Compliance	MDEQ	MFSA (75-20-101, et seq., MCA)
Authorization of short-term narrative standard for turbidity related to construction	318 Authorization	MDEQ	Montana Water Quality Act (75-5-101, MCA)
Permit to excavate 10,000 cubic yards or more total aggregate from one or more pits regardless of surface ownership	Open Cut Permit (if new gravel sources are needed)	MDEQ	Open Cut Mining Act (84-4-401, et seq., MCA)
Grant of ROW and easements and authorization of construction activities on state trust lands and navigable waterways	Easement/Land Use License	Board of Land Commissioners and MDNRC	Title 77, MCA

Table 1-4. Authorizations, Permits, Reviews, and Approvals

Action Requiring Permit, Approval, or Review	Permit/Approval	Accepting Authority/ Approving Agency	Statutory Reference
Grant of utility crossing permits for transmission line and access roads that may encroach on state-maintained routes	Utility Crossing Permit	Montana Department of Transportation	RW 131 and/or RW 20
Consultation with project applicants and state agencies regarding impacts on cultural resources	State Historic Preservation Compliance	State Historic Preservation Office	Montana Antiquities Act (22-3-421 through 442, MCA)
Facilities construction	Building permits per relevant building codes	Montana Department of Labor and Industry, Building Codes Bureau	Title 50, Chapter 60, and Title 50, Chapter 74, MCA
Licensing structure and improvements on state lands and across navigable water bodies	Land Use License (DS-432)	MDNRC	Title 77, MCA
Authorization of construction prior to easement grant by Board of Land Commissioners	Preconstruction Authorization	MDNRC	85-2-402 and 85-2-407, MCA
Temporary water use permit if water is diverted for dust control or other purposes	Temporary water use permit	MDNRC	MCA 85-2-410
MEPA compliance for MDEQ to grant Certificate of Compliance pursuant to MFSA	EIS	MDEQ	Title 75, Chapter 1, Part 2, MCA
State of Idaho			
Encroachment into state highway ROW	ROW Occupancy Permit	Idaho Transportation Department (ITD)	Idaho Code (IC) Title 8, Chapter 8
Crossing on or through state lands	ROW Easement	Idaho Department of Lands	IC Title 58, Chapter 6, Section 58-603
Obstructions to air flight	Notice of Proposed Construction	ITD, Division of Aeronautics	IC 21-513 through 520 ITD Rule No. 39.04.02
Authorization of construction or operation near a waterway or floodplain	404 Permit	Idaho Department of Environmental Quality	IC Title 8, Chapter 8

Table 1-4. Authorizations, Permits, Reviews, and Approvals

Action Requiring Permit, Approval, or Review	Permit/Approval	Accepting Authority/ Approving Agency	Statutory Reference
Counties of Montana			
Provide containment suppression and eradication of noxious weeds	Noxious Weed Management Plan	County Weed Control Districts (all that apply)	Title 7, MCA
Issuance of easement grants and road-crossing permits for county property and roadway	Easement Grants and Road Crossing permits	Board of County Commissioners (all that apply)	Varies
Counties of Idaho			
Provide containment of noxious weeds	Noxious Weed Management Plan	County Weed Control Districts (all that apply)	IC Title 22, Chapter 24
Power line construction and operation within or on private property	Special Use Permit; public hearing required.	Bingham County Board of County Commissioners	Agricultural (A) District Regulations Section 6.2, Listed Uses Chart: Tower
Power line construction and operation within or on private property	Conditional Use Permit; public hearing required.	Blaine County Board of County Commissioners	Power overlay District Ordinance 2008-18
Power line construction and operation within or on private property	Permitted use; Conditional Use Permit required for height variance over 35 feet; public hearing required.	Clark County Board of County Commissioners	No code regarding public utilities or overhead transmission lines.
Power line construction and operation within or on private property	Conditional Use Permit; public hearing required.	Jefferson County Board of County Commissioners	Standards Governing Conditional Uses Section 3.7.4 (C) Public Utility
Power line construction and operation within or on private property	Conditional Use Permit required for non-federal and state lands; public hearing required.	Lincoln County Board of County Commissioners	Agricultural (A-40) Zoning Section 4.1.3 (a)
Power line construction and operation within or on private property	Special Use Permit required	Power County Board of County Commissioners	No code cited and no specific ordinance for transmission lines.

Table 1-4. Authorizations, Permits, Reviews, and Approvals

Action Requiring Permit, Approval, or Review	Permit/Approval	Accepting Authority/ Approving Agency	Statutory Reference
Other			
Power line construction and operation over private railroad ROW	Permit to be on railroad property for nonintrusive civil engineering survey work. Application for crossing and encroachment.	Union Pacific Railroad	Form DR-0404-H
Power line construction and operation over private railroad ROW	Application for wire line crossing	Montana Rail Link	NA
Power line construction and operation over private railroad ROW	Application for temporary occupancy Application for wire line crossing	Burlington Northern Santa Fe Railroad	Form Wireline
Power line construction and operation over private railroad ROW		Butte, Anaconda & Pacific Railway	NA
Power line construction and operation over private railroad ROW	Application to use ROW for public use	Watco Co. Eastern Idaho Railroad	NA
Power line construction and operation over petroleum pipeline utility ROW	ROW Development Provisions application	NorthWestern Energy Gas Transmission	Form 3492
Power line construction and operation over petroleum pipeline utility ROW	Agreement for crossing will be determined and approved at time of engineering submittal.	ConocoPhillips- Yellowstone Pipeline	NA
Power line construction and operation over petroleum pipeline utility ROW	Encroachment/Line Crossing Permit	Williams-Northwest Gas Pipeline	Form WGP
Power line construction and operation over canal or ditch ROW	Submit project information and crossing drawings. If no interference, project should be approved	Butte & Market Lake Canal Company Board	NA
Power line construction and operation over canal or ditch ROW		Big Wood Canal Company and American Falls Reservoir 2	NA

Table 1-4. Authorizations, Permits, Reviews, and Approvals

Action Requiring Permit, Approval, or Review	Permit/Approval	Accepting Authority/ Approving Agency	Statutory Reference
Power line construction and operation over canal or ditch ROW	Submit letter of intent with crossing drawings. Approval through agreement between utility and canal company.	Aberdeen Springfield Canal Company	NA
Power line construction and operation over canal or ditch ROW	No submittal required. Present project to board for approval.	Little Wood River Irrigation District Board	NA
Power line construction and operation over canal or ditch ROW	Submit project information and crossing drawings. If no interference, project should be approved.	New Sweden Irrigation Company	NA
Power line construction and operation over canal or ditch ROW	For privately owned canals or ditches permitting or granting permission a crossing may be done at the time of easement or ROW negotiations.	Individual landowners and agricultural operations	NA

1.6 SCOPING PROCESS AND ISSUES RAISED

1.6.1 Scoping Meetings and Public Outreach

An extensive public outreach and scoping process has been undertaken for this project, both by the lead federal agencies and by NorthWestern. Details of the scoping process and other public outreach are in Chapter 6.

1.6.2 Issues Analyzed

Some issues raised in the scoping meetings addressed the impacts of the proposed project and topics that should be included in the EIS analysis. The major issues, in general terms, are shown below. A complete list is in the Scoping Report completed by the lead agencies in January 2009 (PBS&J 2009a).

Electric and Magnetic Fields

- Would electric and magnetic fields associated with transmission lines cause health effects?
- Would the audible noise during operation be in compliance with applicable laws?
- Would services such as global positioning system receivers, satellite dish receivers, cell phones, AM/FM (amplitude modulation/frequency modulation) radio, two-way radio communication, television, and Internet be disrupted?

Visual Resources

- Would the proposed project have a visual impact on residents and visitors to the project area, and if so, how much and how will it be mitigated?
- Do the visual effects conform to Visual Resource Management or Visual/Scenic Quality Objectives established in land use plans?

Cultural Resources

- What are the effects of the proposed project on cultural resource sites, both in terms of physical impact and impacts to enjoyment and appreciation of the sites?

Socioeconomics

- What would be the effects on economic conditions?
- How would the proposed project affect tax income to local governments?
- How would the presence of the transmission line affect the quality of life of and enjoyment of the land by local residents?
- How would the proposed project affect tourism and recreation?
- What would be the effect on property values?
- What would be the effect on electricity rates in Montana?

Environmental Justice

- What would be the effects on minority populations or communities?
- What would be the effects on low-income populations or communities?

Vegetation Communities

- What would be the effect on vegetation from construction and maintenance of the proposed project?
- How much disturbance would occur in sagebrush and native grassland communities, and what would be the effects?
- What would be the effects to endangered and threatened plant species (individuals and populations)?
- Would noxious weeds be introduced or spread into the ROW and adjacent areas?

Wetlands

- What would be the effects on permanent and seasonal wetlands as well as riparian areas?

Wildlife and Fish

- What would the effects of the proposed project construction and operation be on both special status and non-special-status wildlife, including birds, reptiles, and amphibians, and large and small mammals?
- Would there be a loss or fragmentation of wildlife habitat, especially for sagebrush-obligate and forest-dependent species?
- What would be the effects on big game migration?
- What would be the effects on rare and/or sensitive wildlife habitats?
- Would the proposed project increase the risk of wildfire?
- What would be the effects on big game and crucial big game winter range including habitat removal and disturbance during seasonal occupancy?
- What would be the effects on big game parturition areas from habitat removal and disturbance during seasonal occupancy?
- What would be the potential for avian collision during operation, and what measures would be taken to minimize this risk?
- What best management practices would be used during construction and operation to protect fish resources?
- How would the proposed project affect sage-grouse habitat?
- Would the proposed project comply with sage-grouse conservation plans?

Paleontology

- What would be the effects on paleontologic resources?

Soils and Geology

- What effect would unstable soils have on the transmission line?
- What effect would construction blasting in shallow bedrock have on unstable landforms (landslide-prone areas) or on adjacent manmade structures not related to the transmission line?

Soils

- What would be the effect on soil erosion, and what would be the potential for increased soil erosion from proposed project construction, operation, and decommissioning?
- What would be the effect on soils from compaction by vehicle and equipment traffic?
- What effect would topsoil disturbance have on soil productivity after construction and reclamation?

Water Resources

- What would be the impact to water quality from roads and other causes of water pollution?

Land Use and Recreation

- Which routes would be located more on public lands than private lands?
- How would the proposed project affect current agricultural systems, including center-pivot irrigation and advanced positioning systems and other electronics used in modern farm equipment?
- What residential areas, planned development, and specially designated uses would be affected?
- How would the proposed project affect specially designated areas including National Wildlife Refuges, National Parks, National Monuments, Special Management Areas, recreation sites, and roadless areas?
- How would the transmission line affect timber and fire management activities?
- Would hunting or fishing be affected?
- Would there be any loss of recreational opportunities?
- What permits and plan amendments would be required for the proposed project?
- How much agricultural land would be impacted and what would the effects be?
- What would be the effects on livestock grazing of construction and operation of the transmission line?
- Would there be a loss of prime farmland?
- What would be the impact to agricultural production, including equipment operation and aerial spraying?

Air Quality

- Would the proposed project be inconsistent with the applicable air quality plans?
- What would be the effects on human health of any increase in airborne pollutants caused by the proposed project?
- Would the proposed project generate or contribute to emissions of air pollutants that would exceed established thresholds of any state or federal ambient air quality standards or otherwise cause adverse impacts on air quality?