

# **RECORD OF DECISION**

## **Antelope Valley Station to Neset Transmission Project**

**U.S. Department of Agriculture**

**RURAL UTILITIES SERVICE**

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## INTRODUCTION

### A. Background

Basin Electric is proposing to construct, operate, and maintain a new electrical transmission line connecting the existing Antelope Valley Station (AVS), Charlie Creek, Williston, and Neset substations with five newly proposed delivery substations. The overall project area identified for this proposed project encompasses parts of Mercer, Dunn, McKenzie, Williams, and Mountrail counties in North Dakota. The proposed project includes the construction of 345-kilovolt (kV) transmission line facilities from Basin Electric's AVS generation facility located in northwestern North Dakota to increase the capacity and reliability of the electricity transmission infrastructure of the region. The line would connect AVS with Basin Electric's Charlie Creek and Neset substations and Western Area Power Administration's (Western) Williston Substation. It would also provide new substation facilities to connect the proposed line into the current transmission system and provide locations for load-serving connections. Several alternatives, including a no-action alternative and three different build alternatives were evaluated in the Environmental Impact Statement (EIS).

The Rural Utilities Service (RUS) issued a Draft Environmental Impact Statement (DRAFT EIS) evaluating the potential environmental effects of Basin Electric's AVS to Neset Transmission Proposed project in November 2012. The originally proposed project, as evaluated in the DRAFT EIS, considered the development of a single 345-kV transmission line and two new substations in one of two alternative routes. The project was proposed to increase transmission line capacity to meet the expected increase in load. However, subsequent to the issuance of the Draft EIS, a new load forecast showed the load increasing above and beyond the original forecast by nearly 50 percent (Kardmas, Lee & Jackson, Inc. [KLJ], 2012). Therefore the original project as described in the Draft EIS would not achieve capacity needs or reliability standards identified in the new load forecast.

RUS prepared a Supplemental Draft EIS for the AVS to Neset Transmission Proposed project to evaluate project changes that occurred after the Draft EIS was published and the comment period closed. To accommodate additional load requirements, new alternatives were evaluated in the Supplemental Draft EIS that included building a transmission line on both routes A and B (now identified as Alternative C) and two additional alternatives, similar to the alignment of Alternative B. The primary difference is a double-circuit 345-kV line (Alternative D) or two parallel lines (Alternative E) running 63 miles from the Red Substation near Killdeer to the new White Substation and on to the Blue Substation and the additional Killdeer South Substation would be required. The Killdeer South Substation would interconnect the Red Substation to the existing AVS to Charlie Creek 345-kV transmission line by 12 miles of parallel 345-kV single-circuit transmission line. Additional project components including substations were evaluated under each of these alternatives in the Supplemental Draft EIS. The Supplemental Draft EIS was published in December 2013 and the Final EIS was

published in May 2014. A detailed description of the project alternatives is included in the FINAL EIS.

## **B. NEPA Compliance**

Basin Electric has requested financial assistance from RUS to construct the AVS to Neset Transmission Proposed project. RUS determined that the agency's decision to finance the project would constitute a major federal action that may have a significant impact on the environment within the context of the National Environmental Policy Act of 1969 (NEPA). RUS is serving as the lead federal agency for the EIS, and Western and the United States Forest Service-Dakota Prairie Grasslands, McKenzie Ranger District (USFS) are serving as cooperating agencies. RUS, in cooperation with Western and USFS, prepared an EIS in compliance with the requirements of NEPA and the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR CFR 1500-1508). Western is serving as the lead federal agency for compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR 800) to take into account effects to historic properties and consultation under Section 7 of the Endangered Species Act (ESA) for threatened and endangered species.

A Notice of Intent to prepare an EIS and to hold public scoping meeting was published in the Federal Register on November 2, 2011, informing the public of the intent by RUS to prepare an EIS. The notice initiated the 30-day public scoping period and included the dates for public scoping meetings that were held November 15 and 16, 2011 in Williston and Killdeer, North Dakota, respectively. A Notice of Availability of the Draft EIS for the AVS to Neset Transmission Project was published in the Federal Register on December 7, 2012. Two public meeting were held on January 15 and 16, 2013, in Killdeer and Williston, North Dakota, respectively. A Notice of Availability of the Supplemental Draft EIS was published in the Federal Register on December 20, 2013, followed by a public meeting held in Watford City, North Dakota on January 16, 2014. The notice of availability of the Final EIS was published in the Federal Register on May 30, 2014.

## **DESCRIPTION OF PROJECT**

The proposed project as determined as the federally preferred alternative includes approximately 278 miles of transmission line, including 265 miles of new 345-kV transmission line and 13 miles of new 230-kV line, five new substations and additional equipment, but no expansion, to four existing substations.

The federally preferred alternative includes the following project components:

- 45 miles of 345-kV transmission line connecting the existing AVS Substation to a new Red Substation near Killdeer, including an approximately 3/4 mile segment immediately west of AVS Substation where the proposed line would be double-circuited with an existing line.

- 21 miles of 345-kV transmission line connecting the new Red Substation to the existing Charlie Creek Substation.
- 27 miles of 345-kV transmission line connecting the new Red Substation to the new White Substation and 36 miles of 345-kV transmission line connecting the White Substation to the new Blue Substation.
- 51 miles of 345-kV transmission line from the Charlie Creek Substation to the Blue Substation.
- 24 miles of 345-kV transmission line from the Blue Substation to the proposed Judson Substation.
- Two 230-kV single-circuit transmission lines running parallel for 5 miles connecting the Blue Substation to Western's 230-kV transmission line.
- 2 miles of 230/115-kV double-circuit transmission line connecting the proposed Judson Substation to the Williston Substation.
- 61 miles of 345-kV transmission line connecting the proposed Judson Substation to the proposed Tande Substation, approximately 31 miles of which would be double-circuited with a MWEC 115-kV line associated with other regional improvement projects.
- 1 mile of 230-kV transmission line connecting the proposed Tande Substation to the Neset Substation.
- Ten temporary equipment laydown/material and staging areas of approximately five acres each will be located along the transmission line route. These locations include Tande, Daniel, Jackman, Judson, Patent Gate, Tarnavsky, Charlie Creek, Jepson, Gaugler and AVS.

### **Judson, Tande, and Blue 345/230-kV Substations**

The proposed Judson and Blue substations would be constructed to interconnect the proposed 345-kV lines to Western's Williston Substation and to Western's Williston to Charlie Creek 230-kV transmission line along U.S. Highway 85 south of the Missouri River, respectively. Basin Electric's Tande Substation would be constructed to interconnect the 345-kV transmission system to the existing 230-kV system at Basin Electric's Neset Substation located near Tioga. The Judson and Tande substations would each occupy approximately 12 acres of land. The Blue Substation consists of both 345/230-kV and 345/115-kV equipment, therefore a 25-acre parcel would be required.

### **Red, White, and Blue 345/115-kV Substations**

To interconnect the proposed 345-kV lines into the local 115-kV system and serve the load demands of the Williston Load Pocket and surrounding area, three new 345/115-kV substations would be constructed along the 345-kV system. The Red Substation would be located near Killdeer. The White Substation would be located north of the Red Substation and east of Watford City. The Blue Substation would be located south of the Missouri River. The Red Substation and White Substation would occupy approximately 12 acres of land each. The Blue Substation site would be approximately 25 acres because it would also include a 345/230-kV component as noted above.

### **Route Alignment**

The alignments for the 345-kV lines and associated facilities are shown in various figures in the Final EIS. Throughout the environmental review process, Basin Electric continued engineering development and worked with agencies and landowners to address potential project-related concerns. As final design, ROW acquisition, and construction progresses, Basin Electric will continue to work with agencies and landowners to address site-specific concerns. Minor project adjustments are likely to occur and would address concerns and minimize overall impacts, resulting in few, if any, changes to the potential impacts of the project.

### **Decisions to be Made/Authorities**

This Record of Decision (ROD) documents findings specific to RUS's potential approval of financial assistance for the proposed project and specific terms and conditions that will apply. The ROD is based on the environmental, engineering, and economic acceptability of the project. The RUS decision centers around a review of the proposed project's technical and economic justification, reliability, and environmental issues, and the location, in its entirety (both federally managed lands and private property).

The U.S. Forest Service (USFS) and Western Area Power Administration (Western) will be issuing their decisions in separate RODs; their decisions are specific to their actions that are associated with the proposed project. The Forest Supervisor for the Little Missouri National Grasslands (LMNG) is responsible for deciding whether to issue a Special Use Permit (SUP) under the Federal Land Policy and Management Act, with terms and conditions for the construction, maintenance, and operation of a transmission line through lands administered by USFS on LMNG. Western is responsible for considering the interconnection request in accordance with its General Requirements for Interconnection and the Federal Power Act. Western is also serving as the lead federal agency for compliance with Section 106 of NHPA for historic properties and for consultation regarding Section 7 of the ESA.

### **ENVIRONMENTALLY PREFERRED ALTERNATIVE**

In accordance with the provisions of NEPA, 40 CFR §1502.14(e), the Final EIS identifies the environmentally preferred alternative. Based on the analysis and consideration of public comments on the Draft EIS and the Supplemental Draft EIS, the environmentally preferred alternative was identified as Alternative D (construction of a

double circuit line). The environmentally preferred alternative is similar to the federally preferred alternative with the primary differences being the construction of a 345/345-kV double-circuit lines north of Killdeer for 63 miles to the Blue Substation, the additional Killdeer South 345-kV Switchyard, a 345-kV transmission line connection between the Red Substation and the Killdeer South Switchyard, and no line construction between the existing Charlie Creek Substation and the new Blue Substation. The environmentally preferred alternative would include construction of approximately 251 miles of transmission line beginning at the AVS Substation and ending at the Neset Substation, including 13 miles of new 230-kV line and 238 miles of new 345-kV transmission line, of which 65.3 miles would be 345/345-kV double-circuit. The environmentally preferred alternative would also include construction of five new substations, one switchyard, and additional equipment but no expansion to the four existing substations. The environmentally preferred alternative would include the following project components:

- 45 miles of 345-kV transmission line connecting the existing AVS Substation to a new Red Substation near Killdeer, including 2.3 miles immediately west of AVS substation where the proposed line would be double-circuited with an existing line to facilitate future coal mine operations.
- 21 miles of 345-kV transmission line connecting the Red Substation to the existing Charlie Creek Substation.
- A new Killdeer South Switchyard south of Killdeer along Basin Electric's existing AVS to Charlie Creek 345-kV transmission line.
- Two 345-kV single-circuit transmission lines running parallel for approximately 12 miles between the Red Substation and the new Killdeer South Switchyard.
- 27 miles of 345/345-kV double-circuit transmission line connecting the Red Substation to the new White Substation and 36 miles of 345/345-kV double-circuit transmission line connecting the White Substation to the new Blue Substation.
- 24 miles of 345-kV transmission line from the Blue Substation to the proposed Judson Substation.
- Two 230-kV, single-circuit transmission lines running parallel for 5 miles connecting the Blue Substation to Western's 230-kV transmission line.
- 2 miles of 230/115-kV double-circuit transmission line connecting the proposed Judson Substation to the Williston Substation.
- 61 miles of 345-kV transmission line connecting the proposed Judson Substation to the proposed Tande Substation, approximately 31 miles of which would be double-circuited with a MWECC 115-kV line associated with other regional improvement projects.

- 1 mile of 230-kV transmission line connecting the proposed Tande Substation to the Neset Substation.

Additional substation facilities for the environmentally preferred alternative would be the same as those discussed previously for federally preferred alternative.

## **RANGE OF ALTERNATIVES CONSIDERED**

### **A. Action Alternatives**

Originally, two alternatives, A and B, and a no-action alternative were considered and evaluated in the Draft EIS. Due to increased electricity demand projections required to meet the need for the project, particularly in McKenzie County, a Supplemental Draft EIS was prepared to address the increased demand. Alternatives A and B were eliminated from further consideration in the Supplemental Draft EIS because they no longer satisfied the purpose and need for the project as a result of the increased load demand. The Supplemental Draft EIS evaluated three alternatives and a no-action alternative. These alternatives included:

- Alternative C (the federally preferred alternative), which combined Alternative A and portions of Alternative B (as identified in the Draft EIS).
- Alternative D (the environmentally preferred alternative), which included the construction of 345-kV double-circuit lines north of Killdeer for 63 miles along Alternative B (as identified in the Draft EIS).
- Alternative E, which is similar to Alternative D except for the construction of two 345-kV lines running parallel north of Killdeer for 63 miles.

Of all the corridors and alignments considered, the corridors and alignments for Alternatives C, D, and E were determined to best avoid physical and environmental constraints. Route alignments within these corridors are considered fully in the EIS. Constructing the AVS-to-Charlie Creek-to-Judson-to-Tande-to-Neset transmission line with the North Killdeer Loop using 345-kV transmission lines with associated substations and inter-connections was determined to best satisfy the project's purpose and need. Table 1 provides a comparison of project components by alternative.

### **B. The No Action Alternative**

The no-action decision means that the RUS would not provide financial assistance for the proposed project. Under the no-action alternative, the AVS to Neset Transmission Project would not be constructed. It should be noted that Basin could seek financial assistance for the project from another source. The existing environment within the project area would remain the same and no land would be used for transmission lines, facilities, or substations. The no-action alternative does not meet the identified purpose and need for the project. Under this alternative, it is expected that load growth will increase beyond the load-serving capacity of the existing transmission system for the

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Williston/Tioga region by 2016, resulting in transmission system reliability issues and violating the criteria established by North American Electric Reliability Corporation (NERC) for transmission reliability in the region. Moreover, if the transmission lines are not built, it is probable that oil and gas operations would develop alternative sources of electrical power, including the use of diesel generators, which could potentially lead to greater environmental impacts.

**Table 1: Components of Project Alternatives**

		Alternative C	Alternative D	Alternative E
Transmission Line Segments	Kilovolts	Miles	Miles	Miles
AVS Substation to Red Substation	345	45	45	45
Red Substation to Charlie Creek Switchyard	345	21	21	21
Red Substation to Killdeer South Switchyard	345	N/A	24	24
Charlie Creek Substation to Blue Substation	345	51	N/A	N/A
Red Substation to White Substation	345	27	27	54
White Substation to Blue Substation	345	36	36	72
Blue Substation to Western's 230-kV Line	230	10	10	10
Blue Substation to Judson Substation	345	24	24	24
Judson Substation to Williston Substation	230	2	2	2
Judson Substation to Tande Substation	345	61	61	61
Tande Substation to Neset Substation	230	1	1	1
<b>Total miles</b>		<b>278</b>	<b>251</b>	<b>314</b>
<b>Substations/Switchyards</b>				
		<b>Acres</b>	<b>Acres</b>	<b>Acres</b>
AVS Substation (345kV)	Existing	19	19	19
Red Substation (345kV)	Proposed	12	12	12

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		<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>
Charlie Creek Substation (345/230/115kV)	Existing	10	10	10
White Substation (345/115kV)	Proposed	12	12	12
Blue Substation (345/230/115kV)	Proposed	25	25	25
Judson Substation (345/230kV)	Proposed	12	12	12
Williston Substation (230/115kV)	Existing	9	9	9
Tande Substation (345/230kV)	Proposed	12	12	12
Neset Substation (230/115kV)	Existing	8	8	8
Killdeer South Switchyard (345kV)	Proposed	N/A	12	12
<b>Cost Analysis</b>				
Total Cost Transmission		\$352 million	\$374 million	\$399 million
Total Cost Substation		\$155 million	\$188 million	\$188 million
Total Project Cost		\$507 million	\$562 million	\$587 million
Incremental Cost from Alternative C		-----	\$55 million	\$80 million
Discussion:		Preferred based on higher reliability rating at a lower cost, provides future growth	Removed from consideration due to failure to achieve stated purpose and need due to lower reliability and redundancy at higher cost	Removed from consideration due to failure to achieve stated purpose and need due to lower reliability and redundancy at much higher cost

## DECISION AND REASONS FOR DECISION

### A. Decision

RUS has made the following decisions with respect to this proposed project:

- RUS has determined that the NEPA process has been satisfied with respect to a potential request for financial assistance from Basin Electric for this project.
- RUS has reviewed the proposed project's justification and associated engineering studies and agrees that the proposed project meets the stated purpose and need. The engineering design of the proposed project, with all overhead construction, was approved by RUS.
- The line would be constructed in accordance with the Final EIS. RUS has determined that the proposed project would be approximately 278 miles of transmission line, including 265 miles of new 345-kV transmission line and 13 miles of new 230-kV line, five new substations and additional equipment, but no expansion, to four existing substations. The proposed project includes the construction of 345-kilovolt (kV) transmission line facilities from Basin Electric's AVS generation facility in northwestern North Dakota to increase the capacity and reliability of the electricity transmission infrastructure of the region. The line would connect AVS with Basin Electric's Charlie Creek and Neset substations and Western Area Power Administration's (Western) Williston Substation. It would also provide new substation facilities to connect the proposed line into the current transmission system and provide locations for load-serving connections.
- Historically, RUS has not approved financing of underground transmission systems in rural areas. RUS prefers overhead transmission line construction for this project due to length of the transmission line and higher costs associated with underground transmission line construction. RUS has reviewed Basin Electric's Underground Policy that states that Basin will consider construction of underground high voltage facilities when the local jurisdictions or landowners agree to bear the increased cost of the underground facilities. RUS has found this policy to be both reasonable and prudent. The policy is also in agreement with other major utilities
- This decision is based on the following documents:
  - *Macro-Corridor and Alternatives Evaluation Study for the AVS to Neset 345-kV Transmission Line Project, October, 2011.*
  - *Antelope Valley Substation to Neset Transmission Project Draft Environmental Impact Statement, November 2012.*

- *Antelope Valley Substation to Neset Transmission Project Supplemental Draft Environmental Impact Statement, December 2013.*
- *Antelope Valley Substation to Neset Transmission Project Final Environmental Impact Statement, May 2014.*

## **B. Reasons for the Decision**

RUS's decision is to select the federally preferred alternative. The primary reasons for this decision are explained below.

The federally preferred alternative (Alternative C from the Final EIS) is consistent with the purpose and need of the proposed project and complies with applicable laws and regulations. Route characteristics and potential impacts of each of the alternatives are discussed in more detail in Chapter 3 of the Final EIS.

RUS concluded that this federally preferred alternative best meets the project's stated purpose and need while minimizing or mitigating potential impacts. The project proposal is critical to serve the growing load of electric consumers in western North Dakota and eastern Montana in the vicinity of the Bakken oil and gas fields. The preferred alternative best meets both the capacity needs (a forecasted load of 909 MW expected to occur by 2018-2019 winter season) and reliability standards (adequacy and security). Given the possibilities of transmission line outages and the required application of NERC/Midwest Reliability Organization (MRO) standards, a looped system like the one provided by the federally preferred alternative C is much more reliable than either a double-circuit transmission line as presented in Alternative D of the Final EIS (the environmentally preferred alternative) or two parallel lines as presented in Alternative E.

It is likely that over time, an event like a tornado in summer or ice storm in the winter, will occur in the area of the proposed project. While it is less likely that such an event would affect a single area when it occurs, it is likely to take out a portion of the double-circuit line (Alternative D) or both the parallel lines (Alternative E). Such a loss of both 345-kV lines to the load centers near Watford City and Williston, North Dakota, would result in interruptions to large numbers of electrical customers. In contrast, with the looped system proposed under the federally preferred alternative, the likelihood of a severe event resulting in an outage of both 345-kV lines proceeding northward would be greatly reduced because the critical high-voltage lines are not on common structures or near each other. This aspect of the federally preferred alternative, as well as the fact that it is the lowest cost alternative, were significant considerations in identifying it as the preferred alternative. Further the federally preferred alternative presents geographical separation that provides for future growth in western McKenzie County.

Western and USFS concur with RUS's selection of the federally preferred alternative. Concurrence of both agencies is dependent on the project proponent implementing all mitigation measures outlined in Appendix A of the Final EIS and obtaining a SUP from USFS for portions of the line that cross the LMNG.

## **OTHER ALTERNATIVES CONSIDERED AND ELIMINATED**

This section discusses the alternatives that have been considered throughout the planning process but were eliminated for various reasons from further consideration. These alternatives, as well as other alternatives considered as a result of the revised purpose and need for the project, are summarized below and are discussed in detail in the *Macro-Corridor and Alternatives Evaluation Study for the AVS to Neset 345-kV Transmission Line Project*.

### **System Upgrades**

As an alternative to constructing a new line, numerous operating scenarios and system facility upgrades were developed and evaluated for the Integrated System (IS). For the Basin Electric service area, the designated Reliability Coordinator is the IS. The IS consists of the Western Area Power Administration, Basin Electric, and Heartland Consumers Power District and is the backbone of the high-voltage transmission grid in the upper Great Plains. These scenarios were modeled with different line ratings, line carrying capacities, and system contingencies. The initial effort to improve the area transmission system focused on upgrading local equipment to reduce system limitations. These improvements included a second 230/115-kV transformer at the Williston Substation and second 345/230-kV transformers at both Belfield and Charlie Creek substations.

Area line ratings are increased by upgrading terminal equipment or actually raising transmission line structures to increase clearances to improve the line rating. These line rating increases have already or are scheduled to occur on the Richland-Williston 115-kV line, the Baker-Hettinger 230-kV line, and the Mandan-Dickinson-Belfield 230-kV line. To improve voltage profile, several capacitor bank installations are underway at the existing Watford City, Kennaston, Grenora, Minot SW, and Logan substations.

In addition, 115-kV line improvements are underway. These include a new 115-kV line connecting the Blaisdell to Berthold Substations and a new 115-kV line connecting the Snake Creek Pump Station to the Blaisdell and Tioga Substations. These projects are being implemented through a shared effort of Basin Electric, its membership, and Western. However, evaluation of these system upgrades indicate that this alternative would not meet the increased load forecast.

### **Additional 115-kV Lines**

Constructing and operating several additional 115-kV lines based on predicted load growth were considered. Basin Electric member cooperatives identified these proposed new lines to serve specific loads. These transmission lines would not have been operated as part of the overall electricity transmission network and are needed with or without the proposed project. Identified lines include:

- Mountrail-Williams Electric Cooperative (MWEC) 115-kV lines to serve the Tioga and Blaisdell areas;
- MWEC 115-kV line between Watford City and Swenson;
- MWEC 115-kV lines between Charlie Creek and Halliday; and
- 115-kV line connection between Snake Creek Pumping Station and Parshall with an interconnection at Blaisdell.

Construction and operation by the different member cooperatives of these 115-kV facilities would mitigate many of the existing system limitations through 2014. These facilities would reduce loading on the McHenry-Souris 115-kV line, Logan-Tioga 115-kV line, and Charlie Creek-Williston 230-kV line, which could be transmission constraints during peak load conditions. However, many of the current system limitations, such as the potential for low voltages, voltage collapses, and transmission line overloads could still occur even with the construction and operation of the proposed new lines as early as 2015. The critical outage is the loss of the Charlie Creek-Watford City 230-kV line, which results in low voltages across northwest North Dakota and also overloads the Richland-Williston 115-kV line.

Based on the limitations of the system even with the proposed new lines and the subsequent NERC criteria violations, these projects would not fully meet the need of the proposed project in creating system reliability and therefore were not carried forward for analysis.

### **Alternative Corridors**

Potential alternatives to address the inability of the current system to meet projected load forecasts beyond the 2014-2016 time period were identified and analyzed. These alternatives included an evaluation of numerous macro-corridors, as discussed in the *Macro-Corridor and Alternatives Evaluation Study for the AVS to Neset 345-kV Transmission Line Project*, October, 2011, for constructing additional 345-kV or greater voltage. Corridors for the development of alternative routes for project construction were identified in the macro-corridor analysis. Other macro-corridors were dismissed. A summary of these corridors and reasons for dismissal are provided below.

One macro-corridor that was evaluated and eliminated would run north from the AVS Substation to the existing Neset Substation near Tioga. This alternative would require the line to cross both the Fort Berthold Reservation and Lake Sakakawea. Crossing the Fort Berthold Reservation would involve a lengthier approval process that would likely delay the project well beyond 2016, leading to declines in the electric reliability of the region. Based on the project load growth of increases of approximately 15 percent in 2014 and 2015, the timeliness of project completion is critical, and this route creates a scenario that does not meet the need of the proposed project.

In addition, crossing Lake Sakakawea presents some significant engineering challenges. The line would have to be placed at significant depths in the lake and would require specialized equipment that is normally used for ocean work and not available within the region. This would add significant costs and logistical issues to the project. For these reasons, this north corridor was eliminated from further consideration.

An additional macro-corridor that was considered and subsequently eliminated included a corridor that would have extended westward from the existing Charlie Creek Substation. This corridor would cross a significant distance of very rough terrain with limited access for structure placement. It would also cross significant areas of the LMNG and increase overall project length. This corridor would increase costs and create logistical obstacles for the project. Therefore, it was eliminated from further consideration.

Another corridor evaluated and eliminated connected the Leland Olds Station to the Neset Substation by routing a 345-kV line around the east side of Lake Sakakawea. Leland Olds Station is located near Stanton, North Dakota approximately 18 miles east of AVS. This corridor would extend northward towards Minot, connecting at the existing Logan Substation, extending westward to connect with the proposed Tande Substation, and finally terminating at the existing Neset Substation. This alternative would cross the Missouri River, be adjacent to significant U.S. Department of the Interior, Fish and Wildlife Service (USFWS) wildlife refuge complexes, and cross hundreds of miles of the Missouri Coteau region that includes significant wetland resources and migratory waterfowl nesting and stopover habitat. Although the electrical delivery capacity of this alternative to the Tioga area is similar to the alternatives being carried forward, this alternative would not address the added load-serving capacity in McKenzie County and Alternatives C, D, or E would still be required to meet the overall project purpose and need. As a result of the additional infrastructure required, length of line, and the potential for additional environmental impacts, this alternative was eliminated from further consideration.

All routes considered would cross the Missouri River and/or Lake Sakakawea. In addition, several of the corridors eliminated would cross significant areas of topographic relief with limited access, as well as more remote, undisturbed natural areas. The construction of the AVS-to-Charlie Creek-to-Judson-to-Tande-to-Neset 345-kV transmission lines with associated substations and interconnections was determined to best satisfy the project's purpose and need.

One alternative to constructing and operating the single 345-kV North Killdeer Loop circuit between the Red and Blue substations would be to construct two parallel 345-kV lines between the Charlie Creek Substation and the Blue Substation. These parallel lines would follow the proposed alignment of Alternative C between the Charlie Creek and Blue substations. This alternative would provide adequate power delivery to McKenzie County. The primary obstacle for construction of two parallel lines from Charlie Creek Substation to the Blue Substation would be their placement on USFS managed lands east of U.S. Highway 85 and east of the Theodore Roosevelt National

Park (TRNP). To maintain power delivery in the event that one line fails as part of a catastrophic event or natural disaster, such as tornadoes or icing, the two circuits would need to be constructed on separate poles on separate alignments. The separation between the lines would need to be a minimum of 150 feet—centerline to centerline (NERC, 2014). Two sets of structures would increase the visual impact of the project, and in addition, it is likely that one set would be located outside the USFS preferred utility corridor (as considered in the Northern Great Plains Management Plan Revision FINAL EIS [USFS, 2001]) along the east side of U.S. Highway 85. Furthermore, the terrain east of U.S. Highway 85, which cuts into the Little Missouri River Valley, would force a second parallel line up to higher ground adjacent to the road corridor causing the second line to be more visible from the TRNP and the USFS designated Roadless areas (Lone Butte and Long X Divide). North of this area, the parallel lines would also cross LMNG parcels that were avoided or minimized in the routing of Alternative C as a single 345-kV line. Most notably, a parallel line further east of the Alternative C alignment would extend into the Lone Butte designated Roadless area and would not be consistent with USFS management activities for that area. Additionally, having two 345-kV lines within relative proximity increases the risk of regional power delivery failure to this critical area from a catastrophic event.

### **Alternative Routes near the Killdeer Mountain Battlefield Study Area**

Basin's proposed corridor passed near the Killdeer Mountain Battlefield (KMB) Historic Site. Several routes were located within the corridor. At the North Dakota Public Service Commission (NDPSC) hearing in September 2013 for Basin's route application (DRAFT EIS Alternative A), several members of the public expressed concern about possible impacts to the KMB site and the American Battlefield Protection Program's defined study area. The original location in the corridor was further south from the KMB. The NDPSC approved Basin's route. Subsequent to issuing the Supplemental Draft EIS, Basin met with landowners in the area and the landowners preferred line location was closer to KMB historic site (approximately 1½ miles south). RUS has received comments on both the Supplemental Draft EIS and Final EIS regarding the location of the preferred Alternative (Alternative C) through the Killdeer Mountain Battlefield Study Area. These comments requested that an additional alternative should be developed that would eliminate the need to route the transmission line through the study area. During the initial review of alternative routes identified and evaluated in this area, however, based on the meetings with the affected landowners the present location was identified as acceptable and preferred.

### **New 500-kV Line AVS to Williston Area to Neset**

Several alternatives were considered that evaluated constructing a 500-kV line. These included a single 500-kV line within a retained macro-corridor or a combination of single 345-kV lines between AVS and Charlie Creek and Judson and Tande along with a single 500-kV line between Charlie Creek and Williston. While the construction of a 500-kV line could address the system capacity needs of the project purpose and need, no other 500-kV facilities are present in North Dakota. Thus, development of a 500-kV

line would require significant expansion and possible relocation of numerous substations throughout the area to accommodate the 500-kV transformers and other equipment, including AVS, Charlie Creek, and Judson, which increase project cost and project planning and construction timelines. In addition, constructing a 500-kV line would require a larger ROW and increased tower height. Construction of 500-kV facilities was eliminated from further consideration because of the increased environmental impact, cost, and schedule.

### **Additional Generation**

The results of the power supply study (IS, 2011) indicate that sufficient regional electrical generation is available to serve the region. However, limited transmission capacity prevents it from being accessible to serve the regional demand. As a result, additional generation is not required, nor would it meet the purpose and need for the project. The IS did indicate, however, that between 2012 and 2016 several local distribution transmission line projects will be required to correct deficiencies at specific locations. In addition, the study notes that voltage support, provided through new generation, would be required at strategic locations to prevent any interruptions of service on the existing transmission lines that would result from the increased thermal loading because of voltage or current flow fluctuations on the lines due to the increasing electrical demand. In response to those studies, Basin Electric is developing the Pioneer Generation Station, near Williston and the Lonesome Creek Station, near Alexander to provide the necessary voltage support during periods of peak demand in the region.

Phase I of both projects includes a 45-MW simple cycle combustion turbine that was brought online in 2013. Phase II of both projects consists of placing two additional 45-MW simple cycle combustion turbines at each location. At the present time, the Pioneer Phase II project is operational, while Lonesome Creek Station Phase II is under construction and expected to begin initial commercial operations in December 2014. These projects, consisting of approximately 270 MW of capacity, are needed to protect the reliability of power delivery and load-serving capacity in the region of the proposed AVS to Neset Transmission Project. Further, because these facilities are intermediate and peaking resources that can chase load, they are ideal for addressing the immediate power needs in this area and providing reliable peaking power for the whole IS once the AVS to Neset Transmission Project is completed. This is an ideal complementary form of generation to any additional wind generation that is added to the IS in the future. Because most of the new load in northwest North Dakota is of a 24-hour-a-day, 7-days-a-week, 365-days-a-year variety, wind is not an available option to supply this new load. Thus, complementary generation such as natural-gas-combustion-turbines would also need to be developed along with the available wind resources.

Further, this new generation would avoid and displace portable generation and combustion-engine-driven oil and gas extraction engines at the wells. It would also hasten the capture of more of the natural gas at the well-heads, and avoid both the flaring and release of natural gas during the oil extraction process.

New generation built to serve the growing load on the IS since 2000 has been almost exclusively wind and natural gas, including:

- More than 700 MW of new wind generation capacity owned or purchased through power-purchase contracts by Basin Electric.
- Approximately 300 MW of natural-gas-combined-cycle generation owned and operated by Basin Electric that began commercial operation in August 2012 near White, South Dakota.
- Approximately 380 MW of natural-gas-combustion-turbine generation owned and operated by Basin Electric near Groton, South Dakota, and Culbertson, Montana.

The purpose of the AVS to Neset Transmission Project is to increase high-voltage transmission line system reliability and the transmission load-serving capacity in the region. Once the AVS to Neset Transmission Project is completed, new additional natural-gas-peaking power would become more readily available to all IS customers, not just the customers in northwest North Dakota. As such, development of additional generation, without considerable additional transmission capacity, would not meet the regional load requirements. Except for voltage support type projects, sufficient regional electrical generation is available to serve the region. However, limited transmission capacity prevents it from being accessible to serve the regional demand. As a result, additional generation is not sufficient to meet the purpose and need for the project, and was therefore dropped from further consideration.

### **Alternative C Variations**

To address the concerns of USFS and commenters regarding the potential impacts of the proposed project to LMNG, an additional alternative was evaluated that would double circuit a portion of Alternative C along the U.S. Highway 85 corridor (see Figure 2-1).

This modification of Alternative C investigated the potential to double circuit the proposed 345-kV line with an existing Western 230-kV line located within the U.S. Highway 85 corridor area. Double-circuiting focused on the area of the Little Missouri River Badlands.

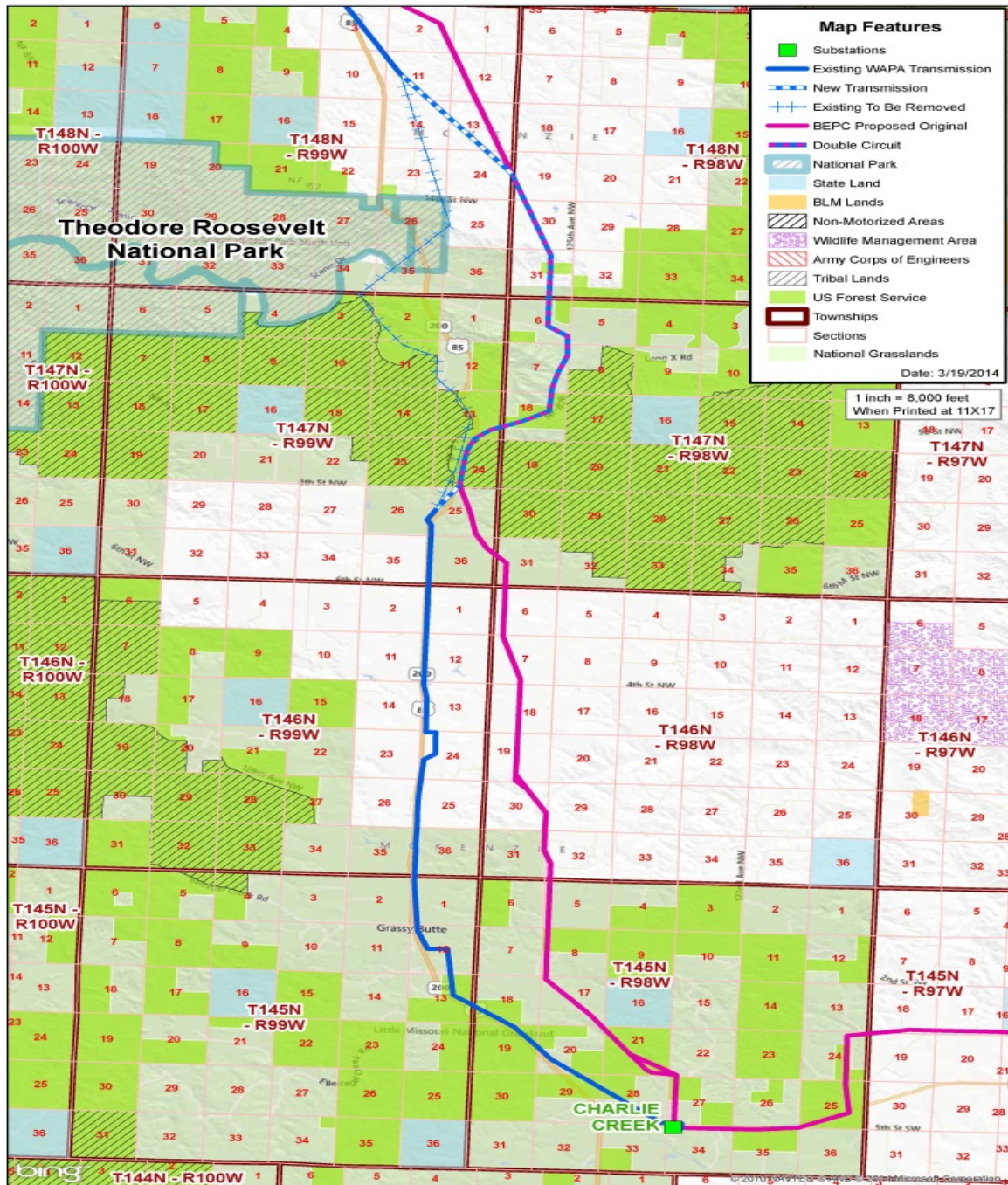
While different voltages, the 345-kV Basin Electric line and the Western 230-kV line would provide system redundancy and back up for each other. Double-circuiting these lines present the potential for both lines to be out of service at the same time as a result of maintenance requirements, a weather event, or other circumstances. Basin Electric and Western are required to comply with the reliability standards of the NERC/MRO. A loss of both lines to the load centers near Watford City and Williston, North Dakota, would result in interruptions to large numbers of electrical customers. To prevent such

reliability failures, the MRO standard for reliability limits the length of double circuit segments of transmission lines to less than 1 mile for any transmission segment.

One option for double-circuiting in this area was to relocate the alignment of Alternative C to follow the alignment of the existing 230-kV line and rebuild the existing 230-kV line as a double circuit 345/230-kV line. This alternative was eliminated from consideration for several reasons.

- The existing 230-kV line could not be taken out of service to allow construction of the double-circuit line, requiring the new line to be constructed while the existing line was still energized. Such construction poses considerable safety risks and therefore significantly increases construction time and cost.
- The double-circuit structures would be approximately 25 feet taller than the single-circuit 345-kV structures and approximately 50 to 60 feet taller than the existing 230-kV structures and increase potential visual impacts, particularly for the TRNP, which the existing line crosses.
- While double-circuiting the line segment through the Little Missouri River Badlands would address considerations of impacts to USFS and the U.S. Department of the Interior, National Park Service (NPS) lands, it would not be viable because the modification would not be compliant with MRO standards as noted above.

Figure 2-2: Alternative C Variations



Consideration was also given to building a new 345/230-kV double-circuit line parallel and adjacent to the existing Western 230-kV line. This option would avoid the construction difficulties and safety concerns with construction in an energized transmission ROW and also enable the Western line to stay in-service until construction was completed. At that time, with Alternative C completed, it would be possible to take the 230-kV line out-of-service for a short period to transfer it to the new double-circuit structures. The portion of the existing 230-kV line transferred could then be removed and the ROW restored. This alternative was also eliminated from further consideration because of potential impacts associated with acquiring and constructing a new ROW across the TRNP and associated impacts from removal of the existing line. The new double-circuit line would also be considerably taller (approximately 50 to 60 feet) than the existing 230-kV structures, contributing to greater visual impacts.

Finally, construction of several miles of a 345/230-kV double-circuit line along the alignment of Alternative C within the U.S. Highway 85 corridor was considered. For this modification, Alternative C would be constructed along the proposed alignment, but would include double-circuit structures for several miles in the U.S. Highway 85 corridor. Following construction, the 230-kV line corresponding to the section of double-circuit 345/230-kV line would be transferred to the 345-kV structures. These structures would need to be approximately 25 feet taller than the single circuit 345-kV structures. Once transferred, the 230-kV structures would be removed and the ROW restored. This modification was also eliminated from further consideration because it would not meet the overall purpose and need for the project of increasing system reliability because it would fail to meet MRO standard TPL-503-MRO-01. This standard requires that a double-circuit transmission line be less than 1 mile long to maintain system reliability. These system reliability standards would apply to both Western's 230-kV line and the 345-kV line proposed by Basin Electric. In addition, this option would have an additional administrative burden under the Federal Land Policy Management Act, which governs the issuance and management of ROWs on federal public lands.

### **Additional Alternative C Variations**

In the Little Missouri River Badlands area, the alignment of Alternative C would cross approximately 2.6 miles of LMNG within the U.S. Highway 85 corridor. Several commenters expressed concern for the potential visual impacts of locating Alternative C along the east side of the highway, while a Western 230-kV line currently exists along the west side of the highway. In response to these concerns, variations of double-circuit and parallel alignments and configuration of Alternative C were considered in this limited area where the line crosses LMNG lands to better compare and assess the potential impacts, including visual impacts. Those variations are described below.

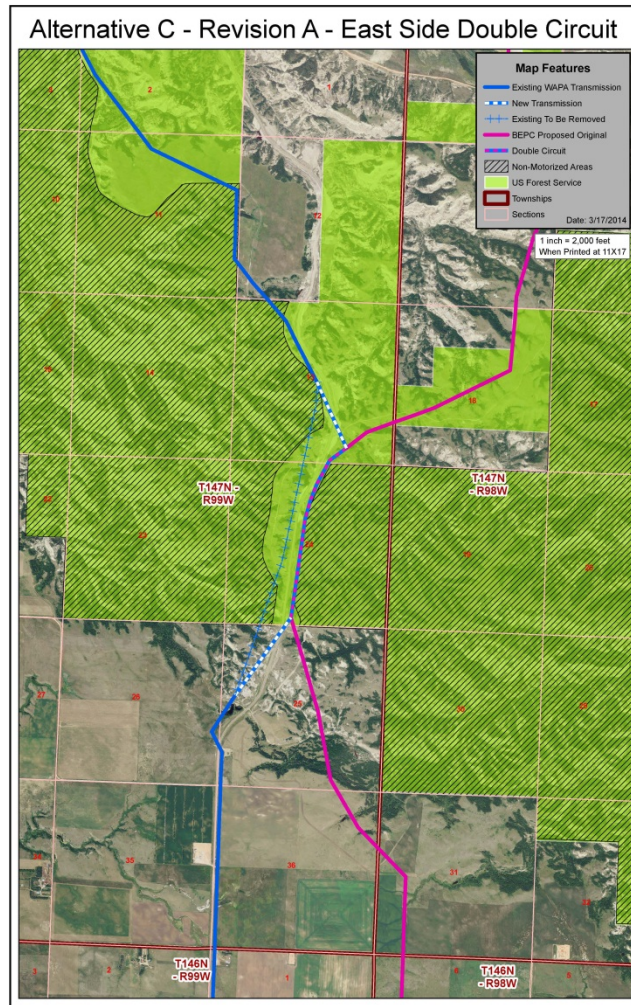
Alternative C is located on the east side and parallel to U.S. Highway 85 for approximately 1 mile in T147N; R99W; Section 24. The area in Section 24 is a topographical ridge that separates two large drainages; the larger basin to the west represents a much larger viewshed from a highway traveler's perspective. To the east of U.S. Highway 85, the drainage is much smaller and falls to the east prior to turning

north toward the Little Missouri River. Immediately on the west side of the highway there is a generally flat area approximately 700 feet wide that is occupied by U.S. Highway 85, the USFS Summit Campground and Trailhead Park, and Western's existing north to south aligned 230-kV transmission line. Immediately west of this area the topography falls off quickly in a large heavily eroded area of the Little Missouri River Badlands. Conversely, the east side of the highway looks into the side-hill of the engineering cut created in the construction of the highway grade.

Three variations of a proposed double-circuit alignment are possible in this area. A map of the double-circuiting is shown on Figure 2-2. For simplicity, only the east side double-circuiting is visually depicted on the figure. Alignments on the west side of U.S. Highway 85 would follow the existing Western 230-kV line.

The three variations that were evaluated to possibly minimize the visual impacts to LMNG lands are described as follows. Each of these variations involved less than 1 mile of double circuit to remain compliant with MRO reliability requirements. A double-circuit segment could be constructed on the west side of U.S. Highway 85 that would eliminate the need for any structures on the east side of the highway for this particular segment. The second variation to Alternative C would be to place a single circuit 345-kV line parallel to the existing 230-kV segment on the west side of U.S. Highway 85. Under this scenario, no structures would be placed on the east side of the segment in question. The single-circuit structures would not require the additional 25 foot structure height. However because there is insufficient room between the existing 230-kV line and the existing U.S. Highway 85 Highway, the parallel 345-kV alignment would be required to be constructed to the west of the existing 230-kV line. To accomplish this, the proposed 345-kV line would pass over the existing 230-kV line and the corresponding structure height would be increased approximately 20 feet. This alternative would require an additional 150 feet of ROW within the USFS Summit Campground and Trailhead Park.

Figure 2-2: Alternative C-1



The west side double-circuit and west side single-circuit alternatives present additional construction, engineering, operational safety complexities, increased costs, and visual impacts that are not present on the east-side alternative. Therefore these alternatives were considered but dismissed from further consideration.

A third variation considered included constructing Alternative C along the proposed alignment east of U.S. Highway 85, using double-circuit structures for approximately 1 mile. Following completion of construction, the corresponding section of Western's 230-kV line along the west side of the highway would be relocated onto the 345/230-kV double-circuit structures. This variation of Alternative C was retained for further consideration in the Final EIS and is discussed in Section 2.4.2 of the Final EIS.

## **Undergrounding All or Portions of Transmission Line**

Underground construction of electricity transmission lines, particularly extra high-voltage lines is generally considered as part of the evaluation of project alternatives for the routing and development of new EHV transmission lines. Construction of underground transmission lines has been effectively used for many years in a number of specific applications and circumstances around the country. These applications include:

- areas of considerable congestion where new, undeveloped ROW is unavailable or so limited that the reduced ROW width for undergrounding presents not just a viable alternative, but in many cases, the only practical alternative;
- areas where height restrictions (such as on or around airports) prevent use of overhead lines;
- areas of considerable visual sensitivity (such as nationally designated scenic resources or National Register historic properties) where overhead lines would significantly impact the visual setting of the area; and
- areas of significantly elevated land values where large portions of the additional costs of underground construction can be off-set by significant reductions in overall project cost obtained through the use of much narrower ROW.

The AVS to Neset Transmission Project area in North Dakota presents none of these challenges or constraints. While there are areas with height restrictions, these have been easily avoided through route development. Additionally, areas of scenic value would be crossed by the proposed project and may affect certain viewsheds but others can be avoided. The abundance of open, undeveloped land creates no compelling reason to consider underground construction and its associated costs, challenges, and impacts; therefore, undergrounding has not been considered as a viable alternative for the proposed project.

## **AGENCY AND PUBLIC INPUT**

A Notice of Intent to Hold Public Scoping Meetings and Prepare an EIS was published in the *Federal Register* on November 2, 2011, informing the public of the intent by RUS to prepare an EIS and to hold public scoping meetings. The notice initiated the 30-day public scoping period and included the dates for public scoping meetings that were held November 15 and 16 in Williston and Killdeer, North Dakota, respectively. The purpose of the public scoping meetings was to provide the public with information regarding the proposed project, answer questions, identify concerns regarding the potential environmental impacts that may result from construction and operation of the project, and gather information to determine the scope of issues to be addressed in the RUS environmental review process and documentation of the project (RUS, 2012). The notification process, public scoping meeting materials, and the process for collecting

public comments are described in more detail in the Public Scoping Report (RUS, 2012).

A notice of availability of the Draft EIS for the AVS to Neset Transmission Project was published in the *Federal Register* on December 7, 2012. Two public hearings were held on January 15 and 16, 2013, in Killdeer and Williston, North Dakota, respectively. Approximately 30 comments were submitted to RUS on the Draft EIS during the public comment period that ended on January 22, 2013. These comments are summarized in Appendix B of the FINAL EIS. No comments regarding impacts to historic resources were submitted.

A notice of availability of the Supplemental Draft EIS was published in the *Federal Register* on December 20, 2013, followed by a public hearing held in Watford City, North Dakota on January 16, 2014. Public comments were accepted on the document until February 3, 2014. Approximately 45 comments were received on the document; these comments and responses are summarized in Appendix C of the Final EIS.

A notice of availability of the Final EIS was published in the *Federal Register* on May 30, 2014. Six comments were received on the document.

## **FINDINGS REQUIRED BY OTHER LAWS**

Numerous laws require that decisions be consistent with their provisions. The Final EIS and ROD complies or is consistent with all applicable laws including but not limited to those listed below. In addition, a number of federal, state and local permits and approvals would be required prior to construction. A complete list is found in the Final EIS on Table 6-1.

### **A. National Environmental Policy Act of 1969 (NEPA)**

The analysis in support of RUS's decisions was performed under statutory requirements and regulations set forth under NEPA. All appropriate steps of the NEPA process were followed including public scoping, identification of issues, development of alternatives, disclosure of environmental consequences, and public comment periods. The entirety of documentation for the proposed project supports compliance with NEPA.

### **B. The Endangered Species Act**

The proposed project is subject to compliance with the Endangered Species Act (ESA). The ESA of 1973 designates and provides for the protection of threatened and endangered plants and animals and their critical habitat. For the proposed project, Western acted as the lead agency for Section 7 consultation under the ESA. Throughout this process, Western consulted with the U.S. Department of the Interior, Fish and Wildlife Service (USFWS) to establish a list of protected species; prepare a Biological Assessment (BA) of the potential for the proposed project to adversely affect listed species; provide coordination between state and federal biological resource agencies to assess impacts and propose mitigation; and develop appropriate mitigation

strategies for all adverse impacts on federally listed species. Western determines in its BA the proposed AVS project would have "no effect" on the threatened gray wolf (*Canis lupus*), the endangered pallid sturgeon (*Scaphirhynchus albus*), or the endangered black-footed ferret (*Musleia nigripes*). In addition, Western has determined that the project "may affect, but is not likely to adversely affect" the Sprague's pipit, the threatened piping plover (*Charadrius melodus*), designated critical habitat for the piping plover, the endangered interior least tern (*Sternula antillarum*), the endangered whooping crane (*Grus americana*), the Northern long-eared bat, the Dakota skipper, and the red-knot. In addition, Western provided an in depth analysis of a Line Marking Plan which proposes to mark approximately 93 percent of the total alignment (over 253 miles of the line, with exception of 21 miles through the Badlands) with bird flight diverters on the static wire. The line marking measures proposed are expected to increase the visibility of the tap line to enhance visual cues for migrating whooping cranes, piping plovers, interior least terns, and Sprague's pipit and, therefore, minimize the potential for collision with the line.

Based upon the project description, conservation measures identified the analysis of potential effects to each species and associated avoidance and minimization measures, and the Line Marking Plan and associated rationale, the USFWS concluded that the effects to the above-mentioned federally-listed species are either insignificant or discountable and therefore concurred with the analysis provided in the March 2014, Biological Assessment submitted to USFSW by Western.

### **C. Clean Water Act**

Clean Water Act (CWA) Section 404 authorizations may be required for the proposed project, because its construction may result in discharge of dredged and/or fill material into waters of the United States. The U.S. Army Corps of Engineers (USACE) is the agency responsible for determining whether to issue a permit for wetland impacts associated with the project. Receipt of a Section 404 permit and adherence to the terms and conditions of the permit, including any associated compensatory mitigation and best management practices (BMPs) to reduce sedimentation and erosion control, would demonstrate the project's compliance with the CWA. Specific permit conditions, including the quantity or extent of compensatory mitigation and specific BMPs, would be determined by USACE after a project alternative route has been selected. Field inspections of the project would evaluate and verify compliance with permits and the CWA.

### **D. Clean Air Act**

There are no significant effects on any aspect of air quality covered by the Clean Air Act or associated regulations from this decision.

## **E. National Historic Preservation Act**

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties and provide the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such effects. The regulations (36 CFR Part 800), implementing Section 106 establish the procedures through which the statutory requirements are met. In order to reach a decision regarding an undertaking, a federal agency is required to implement the regulatory procedures in consultation with nonfederal parties, including the North Dakota State Historic Preservation Office (NDSHPO), Indian tribes, the applicant, Basin Electric, and others with an interest in the project. RUS, Western and the USFS have determined that the individual federal action, which each may take, makes the AVS to Neset Transmission Project an undertaking subject to Section 106 review.

To meet their collective responsibilities, RUS was designated as the lead for NEPA review because its financial assistance will affect all aspects of the AVS to Neset Transmission Project. For Section 106, RUS and USFS agreed, pursuant to 36 CFR § 800.2(a)(2), to designate Western as the lead federal agency because of the availability of its regional staff to actively direct and participate in consultation. In accordance with 36 CFR § 800.8(a)(1), RUS and Western have coordinated implementation Section 106 regulatory procedures with the steps taken to fulfill the requirements of NEPA. As part of this coordination, pursuant to 36 CFR § 800.2(d)(3), Western relied on implementation of the RUS NEPA procedures to meet the agencies' collective Section 106 requirements for public involvement.

Section 106 review was initiated with the participation of the NDSHPO in one of the NEPA Scoping meetings held in November 2011. Indian tribes also were invited to participate in these NEPA scoping meetings, but none attended. Therefore, by letter dated January 31, 2012, Western invited fourteen Indian tribes with a possible interest in the project's effects on historic properties, including the Standing Rock Sioux Tribe (SRST), to participate in Section 106 review. Only two tribes responded to this invitation, and neither voiced interest in participating directly in Section 106 review.

None of the commenters on the Draft EIS, which was issued in December 2012, expressed concerns about impacts to cultural resources, including historic properties. However, in February 2013, the SRST asked to become a consulting party in Section 106 review. Western granted this request.

The 1864 Battle of Killdeer Mountain is regarded as a highly significant engagement between the U.S. military and the Sioux Nation during the Dakota Wars. A one-acre State Historic Site commemorating this battle is located in Dunn County, North Dakota approximately one and one-half miles north of the proposed transmission line. However, in a 2010 report the American Battlefield Protection Program (ABPP), which is part of the National Park Service, identified approximately 17, 000 acres+ as a study area in which activities related to this battle may have occurred. Approximately eight

miles of the proposed transmission line passes through the ABPP Killdeer Mountain Battlefield (KMB) study area. These entire eight miles are privately owned and Basin Electric has obtained all the necessary easements from the private landowners.

During the September 2013 North Dakota Public Service Commission (PSC) hearing for Basin Electric's route application (Draft EIS Alternative A), several members of the public expressed concern about possible impacts to the ABPP defined battlefield study area. In addition to these objections the United Tribes of North Dakota issued a resolution (#9-13-10) opposing Basin Electric's project and any further development at the site of the Battle of Killdeer Mountain. In response to September 3, 2013 SHPO recommendations to the PSC, the federal agencies agreed to move a proposed substation out of the KMB study area, and to conduct study of the eight miles of transmission line right-of-way crossing through the KMB study area to determine if material evidence of the battle is present. The agencies also conducted additional study and analysis to better assess possible the visual effects of the project. In order to ensure the identification of historic properties of religious and cultural significance to Indian tribes, Western hosted a meeting in September 2013 between the federal agencies and the SRST. The Sisseton Wahpeton Oyate (SWO), which had requested and been granted consulting party status, also participated in this consultation meeting. Along with these two Indian tribes, the North Dakota SHPO and Basin Electric, Western granted consulting party status to the following additional parties - the Killdeer Mountain Alliance (KMA), the ABPP, Mr. and Mrs. Craig Dvirnak (private landowners), and the Center for Heritage Renewal at North Dakota State University.

Because the project will cover a large land area to which access, in some cases, has been restricted, the federal agencies determined it appropriate to use a phased approach to the identification and evaluation of historic properties and the assessment and resolution of adverse effects to them. Therefore, since effects on historic properties cannot be fully determined prior to federal action, the agencies determined that, pursuant to 36 CFR § 800.14(b)(1)(ii), execution of a Programmatic Agreement (PA) to be appropriate to fulfill the requirements of Section 106 review. RUS agreed to assist Western in managing PA preparation and consultation. Accordingly, RUS prepared the first draft of the PA, which it then submitted to the consulting parties in March 2014 along with a schedule for concluding Section 106 review. In accordance with 36 CFR § 800.6(a)(1)(i)(C), RUS invited the ACHP to participate in consultation. The ACHP provided RUS with an informal affirmative response on April 10, 2014.

Starting on April 16, 2014, RUS, with the assistance of Western and USFS, hosted several meetings with consulting parties to establish the terms of the PA and consider the possible effects of the project on certain historic properties. The primary issue considered was the level of effort needed to reasonably understand the nature and geographic scope of the KMB, and the possible impact of the proposed project on it. As a result of this consultation effort, the federal agencies and the SHPO agreed to treat the Killdeer Mountain, Medicine Hole, and, as described in the Final EIS, the KMB historic property as eligible for listing on the *National Register of Historic Places*. On July 2, 2014, Section 106 review concluded with the execution by RUS, Western,

USFS, the ACHP, and the North Dakota SHPO of the PA titled, *Programmatic Agreement Among the Western Area Power Administration, the Rural Utilities Service, the U.S. Forest Service, the Advisory Council on Historic Preservation and the North Dakota State Historic Preservation Office Regarding the AVS-Neset 345 kV Transmission Line Project to be Constructed in Mercer, Dunn, Billings, McKenzie, Williams and Mountrail Counties, North Dakota*. With its execution, the federal agencies are now legally committed to the implementation of the terms of the PA.

In accordance with the terms of the PA, the federal agencies proposed that the AVS-Neset Transmission Line Proposed project would have no adverse effect on Killdeer Mountain, Medicine Hole and, as described in the Final EIS, the KMB historic property. On August 4, 2014, the NDSHPO concurred with this proposed finding of no adverse effect with the correct understanding that it applies only to the three historic properties and not to the undertaking in its entirety. The KMA filed an objection to this finding of no adverse effect dated August 22, 2014. In accordance with the terms of the PA, the federal agencies will resolve this objection, seeking the advice of the ACHP, through the established procedures in 36 CFR § 800.5(c).

#### **F. Energy Policy Act**

The Energy Policy Act of 2005 granted the Federal Energy Regulatory Commission (FERC) the authority to impose mandatory reliability standards on transmission systems. To accomplish this, FERC designated NERC as the Electric Reliability Organization with the authority to establish, approve, and enforce the reliability standards. NERC then delegated the authority for proposing and enforcing the reliability standards to particular regions. For the Basin Electric service area, the MRO was designated. The MRO accomplishes its monitoring and enforcement obligations by designating Reliability Coordinators. For the Basin Electric service area, the designated Reliability Coordinator is the IS. The IS consists of the Western Area Power Administration, Basin Electric, and Heartland Consumers Power District and is the backbone of the high-voltage transmission grid in the upper Great Plains. It is the responsibility of the IS to adhere to the reliability standards by providing a high-voltage transmission system grid in the region of eastern Montana, North Dakota, and South Dakota.

#### **G. Executive Order 12898 (Environmental Justice)**

Executive Order 12898 (February 11, 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) directs each federal agency “to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations.” In July 1999, the EPA issued its Final Guidance for Consideration of Environmental Justice in Clean Air Act Reviews. The concepts explained in this guidance are applicable beyond Clean Air Act reviews.

The EPA's guidance has been applied to the public analysis and decision processes in coming to this decision. RUS determined that the AVS to Neset Transmission Project does not disproportionately impact any minority or low income populations; and the project complies with Executive Order 12898.

#### **H. Important Farmland**

The AVS to Neset Transmission Project ROW is expected to cross approximately 88 acres of farmland that is designated by the National Resource Conservation Service as prime farmland, 1,604 acres of farmland of statewide importance and 62 acres of prime farmland if drained or irrigated. Together these lands constitute 35 percent of the lands in the ROW. The permanent disturbance occurring from placement of structures within the ROW constitutes less than 1 percent of total land within the ROW. This includes approximately 0.88 acres of prime farmland.

Impacts to important farmland will be avoided to the greatest extent possible through careful pole placements. Due to the minor amount of important farmland potentially affected, RUS has determined that the AVS to Neset Transmission Project will not significantly impact important farmlands.

#### **I. Executive Order 11990 (Wetlands) of May, 1977**

This Executive Order directs RUS to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In compliance with this Order, RUS evaluated the proposed project's potential to adversely affect wetlands and determined the proposed project will not adversely affect any wetlands (see Final EIS Table 3-13). This decision is in compliance with this Order.

#### **J. Executive Order 11988 (Floodplains) of May, 1977**

This Executive Order directs RUS to provide leadership and to take action to (1) minimize adverse impacts associated with occupancy and modification of floodplains and reduce risks of flood loss, (2) minimize impacts of floods on human safety, health, and welfare, and (3) restore and preserve the natural and beneficial values served by floodplains. Approximately 14.3 acres of open water occur within the right-of-way of this proposed project. Nineteen perennial waterways and 16.5 acres of Federal Emergency Management Agency (FEMA) designated floodplains would be crossed by the proposed project. All open water, waterways and floodplains will be spanned. Basin will obtain a Section 10 permit from the U.S. Army Corps of Engineers for crossing of the Missouri River. The transmission line will cross the Missouri River adjacent to an existing transmission line within a utility corridor. RUS has determined that there will be no impacts to floodplains.

**K. North Dakota Energy Conservation and Transmission Facility Siting Act (Public Service Commission)**

In addition to compliance with all applicable federal regulations and permits, approvals must be granted by the state of North Dakota. The North Dakota Energy Conversion and Transmission Facility Siting Act states that it is necessary to ensure that the location, construction, and operation of energy conversion and transmission facilities will produce minimal adverse effects on the environment and on the welfare of the citizens of the state by providing that no energy conversion or transmission facility shall be located, constructed, and operated within North Dakota without a certificate of site compatibility and a route permit acquired pursuant to Chapter 49-22 of the North Dakota Century Code (North Dakota Century Code, 2011a). It is state policy to site energy conversion facilities and to route transmission facilities in an orderly manner compatible with environmental preservation and the efficient use of resources. To comply with the North Dakota Energy Conversion and Transmission Facility Siting Act, sites and routes shall be chosen to minimize adverse human and environmental impacts while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion. The Certificate of Corridor Compatibility establishes a corridor through which the proposed facilities may be routed. The Route Permit is acquired through a pre-application route development phase, a review of completeness, a public meeting process, and finally a route approval that is contingent on adherence to other federal, state, or local permitting considerations (North Dakota Public Service Commission [NDPSC], 2012).

The North Dakota Public Utility Commission approved AVS to Neset Route (Alternative A) on April 23, 2014.

**L. Required Permits, Licenses, Grants and Authorizations**

Prior to construction, Basin Electric will need to acquire a number of permits from other federal, state and local agencies. Permits are listed in the FINAL EIS, *Table 6-1*.

**CONSISTENCY WITH RUS POLICIES**

In accordance with the Rural Electrification Act of 1936, as amended, (7 United States Code [U.S.C.] 901 et seq.), RUS is authorized to make loans and loan guarantees to finance the construction of electric distribution, transmission, and generation facilities including system improvements and replacements required to furnish and improve electric service in rural areas, as well as demand side management, energy conservation programs, and on- and off-grid renewable energy systems. Basin Electric is requesting financial assistance from RUS for the proposed 345-kV transmission line(s) and substations in Mercer, Dunn, McKenzie, Williams, and Mountrail counties. RUS's proposed federal action is to decide whether to provide financial assistance for the project; accordingly completing the NEPA process is one requirement, along with other technical and financial considerations in processing Basin Electric's application.

RUS' agency actions include the following:

- Provide engineering reviews of the purpose and need, engineering feasibility, and cost of the proposed project.
- Ensure that the proposed project meets the borrower's requirements and prudent utility practices.
- Evaluate the financial ability of the borrower to repay its potential financial obligations to RUS.
- Review and study the alternatives to mitigate and improve transmission reliability issues.
- Ensure that adequate transmission service and capacity are available to meet the proposed project needs.
- Ensure that NEPA and other environmental laws and requirements and RUS environmental policies and procedures are satisfied prior to taking a federal action.

#### **M. RUS LOAN REVIEW**

This ROD is not an approval of the expenditure of federal funds. The ROD concludes the agency's environmental review process in accordance with NEPA and RUS's Environmental Policies and Procedures (7 CFR Part 1794). The ultimate decision as to loan approval depends upon the conclusion of this environmental review process plus financial and engineering analyses. Issuance of the ROD will allow these reviews to proceed.

#### **N. RIGHT TO ADMINISTRATIVE REVIEW**

This Record of Decision concludes the agency's environmental review process pursuant to the National Environmental Policy Act and the RUS's Environmental Policies and Procedures (7 CFR Part 1794). There are no provisions to appeal this decision. Legal challenges to the ROD may be filed in federal district court under the Administrative Procedures Act.

**O. APPROVAL**

This Record of Decision is effective on signature.

Dated: 9/13/14



JACQUELINE M. PONTI-LAZARUK  
Acting Administrator  
Rural Utilities Service

Contact Person

For additional information on this Record of Decision or the Environmental Impact Statement, please contact Mr. Dennis Rankin, Environmental Protection Specialist, at USDA, Rural Utilities Service, 1400 Independence Avenue, SW., Room 2244, Stop 1571, Washington, D.C. 20250-1571; telephone: (202) 720-1953 or e-mail: [dennis.rankin@wdc.usda.gov](mailto:dennis.rankin@wdc.usda.gov).