

August 26, 2024

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Steven Kahl
Executive Secretary
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

RE: Minnkota Power Cooperative, Inc.'s Consolidated Application for a Certificate of Corridor Compatibility and Route Permit for a Transmission Line Re-location Project in Oliver County, North Dakota Case No. PU-24-___

Dear Mr. Kahl:

Pursuant to North Dakota Century Code (NDCC) §§ 49-22-07 and 49-22-08.2, Minnkota Power Cooperative, Inc. (MPC) submits to the North Dakota Public Service Commission (Commission) an original and six (6) copies of this filing letter and a consolidated application (Consolidated Application) for a Certificate of Corridor Compatibility (Certificate) and Transmission Facility Route Permit (Route Permit) to re-locate two short segments of an existing 230-kilovolt (kV) line (Project). The two existing 230-kV lines are wholly located within the fence of the Milton R. Young (MRY) Station, an existing coal-fired power plant owned or operated by MPC. The Project will re-locate one segment from each of the two existing lines approximately 1,309 feet south and still within the MRY fence-line to accommodate construction of Project Tundra, the initiative to retrofit the MRY with a carbon capture facility. The proposed Project will remain on land owned entirely by MPC and currently used for industrial purposes.

MPC is also submitting with this Consolidated Application an original and six (6) copies of a request for waiver of procedures and time schedules pursuant to NDCC § 49-22-07.2 (Waiver Request). As discussed in the Waiver Request, the Project is of such length, design, location, and purpose that it will produce minimal adverse effects and, therefore, MPC requests that the PSC waive the public hearing and notice of opportunity for hearing procedures. If the Commission decides to issue a notice of opportunity for hearing, MPC requests that the time for hearing requests and comments be limited to 10 calendar days (a reasonable time under the circumstances, consistent with NDAC § 69-02-04-05); that notice be issued as soon as possible; and that an order be issued granting a Certificate of Corridor Compatibility and Route Permit for the Project conditioned upon the comment period expiring without a request for hearing. Such a conditional permit allows MPC to proceed at the earliest possible time to meet the MRY Station outage timeframe, which is scheduled to commence September 4 through October 15.

Mr. Steven Kahl
August 26, 2024
Page 2

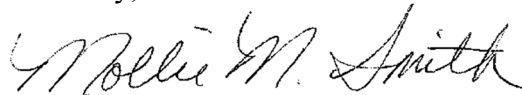
Also enclosed are: (1) a filing fee check in the amount of \$16,640.00; and (2) a USB drive containing GIS data (public data) in shapefile format in projected coordinate system NAD 1983 UTM Zone 14N (WKID 26914). Electronic copies of the enclosed documents and this letter were filed with the Commission today via e-mail.

By copy of this letter, the Oliver County Auditor is being served with a copy of the enclosed documents in accordance with NDAC § 69-06-05-01(4). An Affidavit of Service on the county auditor will be provided under separate cover.

Unredacted, NON-PUBLIC versions of two cultural resource inventory reports (Appendix E to the Application) will be provided under separate cover with an Application for Protection of Information.

If you have any questions, please let me know.

Sincerely,

A handwritten signature in black ink that reads "Mollie M. Smith". The signature is written in a cursive style with a large initial "M".

MOLLIE M. SMITH

MMS/ms/83555859
Enclosures

cc: Victor Schock (via e-mail)
Brian Johnson (via e-mail)

**Milton R. Young Transmission Line Reroute
Combined Application for Certificate of Corridor
Compatibility and Route Permit**

Submitted to:

North Dakota Public Service Commission

Submitted by:

Minnkota Power Cooperative, Inc.

TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	<i>Compliance with the Energy Conversion and Transmission Facility Siting Act.....</i>	1
1.2	<i>U.S. Department of Energy Environmental Assessment.....</i>	2
1.3	<i>Project Analysis and Location Terms</i>	2
1.4	<i>Project Location</i>	3
1.5	<i>Land Rights</i>	3
1.6	<i>Project Schedule</i>	3
1.7	<i>Project Ownership.....</i>	4
1.8	<i>Project Cost</i>	4
2	NEED FOR FACILITY	4
2.1	<i>Need Analysis</i>	4
2.2	<i>Alternatives Considered</i>	4
2.3	<i>Ten-Year Plan.....</i>	4
3	SITE SELECTION CRITERIA	5
3.1	<i>Exclusion Areas.....</i>	5
3.2	<i>Avoidance Areas</i>	6
3.3	<i>Selection Criteria.....</i>	8
3.4	<i>Policy Criteria.....</i>	10
3.5	<i>Design and Construction Limitations.....</i>	12

3.6	<i>Economic Considerations</i>	12
4	DESIGN AND CONSTRUCTION	13
4.1	<i>Project Design</i>	13
4.2	<i>Project Access</i>	14
4.3	<i>Temporary Workspace</i>	14
4.4	<i>Estimated Temporary and Permanent Impacts</i>	14
4.5	<i>Construction Activities</i>	15
4.5.1	Pre-construction Surveying	15
4.5.2	Site Preparation.....	15
4.5.3	Borehole Excavation	16
4.5.4	Structure Assembly and Erection	16
4.5.5	Conductor Stringing and Tensioning	16
4.5.6	Reclamation.....	17
4.6	<i>Construction Environmental Protection, Health, and Safety Measures</i>	17
4.6.1	Construction Waste Management	17
4.6.2	Worker Safety and Health Protocol.....	17
4.6.3	Environmental Protection Measures and Policies.....	18
4.7	<i>Operation and Maintenance</i>	18
4.8	<i>Decommissioning</i>	18
5	SETBACKS	18
5.1	<i>PSC Requirements</i>	18
5.2	<i>County Requirements</i>	19

6 ENVIRONMENTAL ANALYSIS	19
6.1 <i>Demographics and Local Economics</i>	19
6.1.1 Description of Resources.....	19
6.1.2 Impacts/Mitigation	19
6.2 <i>Public Services.....</i>	19
6.2.1 Description of Resources.....	19
6.2.2 Impacts/Mitigation	20
6.3 <i>Public Health, Welfare, and Safety</i>	21
6.3.1 Description of Resources.....	21
6.3.2 Impacts/Mitigation	22
6.4 <i>Cultural Resources.....</i>	23
6.4.1 Description of Resources.....	23
6.4.2 Impacts/Mitigation	24
6.5 <i>Land Use, Vegetation, and Recreational Resources</i>	24
6.5.1 Description of Resources.....	24
6.5.2 Impacts/Mitigation	25
6.6 <i>Soils and Geologic Resources.....</i>	27
6.6.1 Description of Resources.....	27
6.6.2 Impacts/Mitigation	27
6.7 <i>Surface Water and Groundwater Resources</i>	28
6.7.1 Description of Resources.....	28
6.7.2 Impacts/Mitigation	29
6.8 <i>Wildlife and Rare and Unique Natural Resources</i>	30

6.8.1	Description of Resources	30
6.8.2	Impacts/Mitigation	34
7	POTENTIAL PERMITS/APPROVALS	35
8	FACTORS CONSIDERED	36
8.1	<i>Public Health and Welfare, Natural Resources, and the Environment.....</i>	<i>37</i>
8.2	<i>Technologies to Minimize Adverse Environmental Effects.....</i>	<i>37</i>
8.3	<i>Potential for Beneficial Uses of Waste Energy</i>	<i>37</i>
8.4	<i>Unavoidable Adverse Environmental Effects.....</i>	<i>37</i>
8.5	<i>Alternatives to Proposed Site</i>	<i>37</i>
8.6	<i>Irreversible and Irretrievable Commitment of Natural Resources</i>	<i>37</i>
8.7	<i>Direct and Indirect Economic Impacts.....</i>	<i>38</i>
8.8	<i>Existing Development Plans of the State, Local Government, and Private Entities at or in the Vicinity of the State.....</i>	<i>38</i>
8.9	<i>Effect of Site on Cultural Resources</i>	<i>38</i>
8.10	<i>Effect of Site on Biological Resources.....</i>	<i>38</i>
8.11	<i>Agency Comments</i>	<i>38</i>
9	QUALIFICATIONS OF CONTRIBUTORS	39
10	LITERATURE CITED.....	40

LIST OF TABLES

Table 1.	Project Analysis and Location Terms
Table 2.	Exclusion Areas
Table 3.	Avoidance Areas
Table 4.	Selection Criteria
Table 5.	Policy Criteria
Table 6.	Transmission Line Design Components
Table 7.	Estimated Temporary and Permanent Impacts
Table 8.	Setback Distances as Designated by the PSC
Table 9.	Land Cover
Table 10.	Threatened and Endangered Species
Table 11.	Potential Permits and Approvals Required
Table 12.	Qualifications of Contributors

LIST OF APPENDICES

Appendix A.	Project Figures
	Figure 1. Proposed Project (with Exclusion and Avoidance Areas)
	Figure 2. Proposed Project (with Land Use Categories)
Appendix B.	MPC Ten-Year Plan: 2024-2034
Appendix C.	Project Design Drawings
Appendix D.	Policies and Commitments Statement to Limit Environmental Impacts
Appendix E.	Cultural Resource Inventory Reports (Public Version)
Appendix F.	Unanticipated Discoveries Plan
Appendix G.	Agency Correspondence

ACRONYMS AND ABBREVIATIONS

APLIC	Avian Power Line Interaction Committee
Application	The Combined Application for a Certificate of Corridor Compatibility and Route Permit for the Milton R. Young Transmission Line Reroute Project
BGEPA	Bald and Golden Eagle Protection Act
BNI	BNI Coal, Inc.
Certificate	Certificate of Corridor Compatibility
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
EA	Environmental Assessment
EMF	electromagnetic fields
EMR	electromagnetic radiation
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRMs	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
ICBM	Intercontinental ballistic missile
IPaC	USFWS Information for Planning and Consultation
Juniper	Juniper, LLC
kV	kilovolt
MBTA	Migratory Bird Treaty Act
MLRAs	Major Land Resource Areas
MPC	Minnkota Power Cooperative, Inc.
MRY	Milton R. Young Station

NCI	National Cancer Institute
NDAC	North Dakota Administrative Code
NDCC	North Dakota Century Code
NDDA	North Dakota Department of Agriculture
NDDEQ	North Dakota Department of Environmental Quality
NDGF	North Dakota Game and Fish Department
NDGS	North Dakota Geological Survey
NDLMI	North Dakota Labor Market Information Center
NEPA	National Environmental Policy Act
NESC	National Electrical Safety Code
NIEHS	National Institute of Environmental Health Sciences
NRCS	Natural Resources Conservation Service
OPGW	Optical Ground Wire
OSHA	Occupational Safety and Health Administration
Project	Milton R. Young Transmission Line Reroute
PSC	North Dakota Public Service Commission
Route Permit	Transmission Facility Route Permit
SCADA	Supervisory Control and Data Acquisition
SCP	Species of Conservation Priority
SHPO	State Historical Society of North Dakota/State Historic Preservation Office
Siting Act	The North Dakota Energy Conversion and Transmission Facility Siting Act, NDCC Chapter 49-22
Siting Rules	North Dakota Administrative Code Article 69-06
SPCC	Spill Prevention, Control, and Countermeasure
SWAP	State Wildlife Action Plan
SWPPP	Storm Water Pollution Prevention Plan

U.S.C.	U.S. Code
USFWS	U.S. Fish and Wildlife Service
Waiver Request	MPC's request for waiver of procedures and time schedules pursuant to NDCC Section 49-22-07.2

Completeness Checklist

Description		Section(s) Addressed
NDAC 69-06-05-01 - Transmission Facility Permit		
Subsection 2 – Contents		
2.	The application must contain:	
a.	A description of the following:	
	(1) The type of facility proposed.	1.0, 4.1
	(2) Purpose of the facility.	1.0, 2.0
	(3) The technology to be deployed.	1.0, 4.1
	(4) The type of product to be transmitted.	1.0, 4.1
	(5) The source of the product to be transmitted.	1.0, 2.1
	(6) The final destination of the product to be transmitted.	1.0, 2.1
	(7) The proposed size and design and any alternate size or design that was considered, including:	1.0, 2.2, 4.1
	(a) The width of right-of-way;	
	(b) The approximate length of the facility;	
	(c) The estimated span length for electric facilities;	
	(d) The anticipated type of structure for electric facilities;	
	(e) The voltage for electric facilities; and	
	(f) The requirement for and location of any new associated facilities	
b.	The anticipated time schedule for accomplishing major events, including:	1.5, 1.6
	(1) Obtaining the certification of corridor compatibility;	
	(2) Obtaining the route permit;	
	(3) Completing right-of-way acquisition;	
	(4) Starting construction;	
	(5) Completing construction;	
	(6) Testing operations; and	
	(7) Commencing operations.	
c.	A copy of each evaluative study or assessment of the environmental impact of the proposed facility submitted to the agencies listed in Section 69-06-01-05 and each response received.	6.0, 8.11, Appendix E
d.	An analysis of the need for the proposed facility based on present and projected demand for the product transmitted, including the most recent system studies supporting the analysis of the need.	1.0, 2.1
e.	A description of any feasible alternative methods for serving the need	2.2
f.	The width of a corridor must be at least 10% of its length, but not less than one mile or greater than six miles unless	1.3

Description		Section(s) Addressed
	another appropriate width is determined by the commission.	
g.	A study area that includes a proposed corridor of sufficient width to enable the commission to evaluate the factors addressed in North Dakota Century Code section 49-22-09.	1.3
h.	A discussion of the factors in North Dakota Century Code section 49-22-09 to aid the commission's evaluation of the proposed route.	2.0, 3.0, 6.0, 8.0
i.	A discussion of the applicant's policies and commitments to limit the environmental impact of its facilities, including copies of board resolutions and management directives.	4.6.3, 6.0, Appendix D
j.	Identification and map of the criteria that led to the proposed route location within the designated corridor, including exclusion areas, avoidance areas, selection criteria, policy criteria, design construction limitations, and economic considerations.	3.0, Appendix A
k.	A discussion of the relative value of each criteria and how the applicant selected the proposed corridor location, giving consideration to all criteria and how the location, construction, and operation of the facility will affect each criteria.	3.0, 4.0, 6.0
l.	A discussion of the general mitigative measures that the applicant will take to minimize adverse impacts that result from a route location in the proposed corridor and the construction and operation of the facility.	6.0
m.	The qualifications of each person involved in the corridor location study.	9.0
n.	A map identifying the criteria that led to the proposed route location within the designated corridor and the location of any new associated facilities. Several different criteria may be shown on each map depending on the map scale and the density and nature of the criteria.	Appendix A
o.	An 8.5-inch by 11-inch black and white map suitable for newspaper publication depicting the site area	N/A
p.	A discussion of present and future natural resource development in the area	6.0
q.	Map and GIS requirements. The applicant shall provide information that is complete, current, presented clearly and concisely, and supported by appropriate references to technical and other written material available to the commission...	Appendix A; electronically submitted
NDAC 69-06-08-02 - Transmission Facility Corridor and Route Criteria		
The following criteria must guide and govern the preparation of the inventory of exclusion and avoidance areas, and the corridor and route suitability evaluation process:		

Description		Section(s) Addressed
1.	Exclusion Areas	3.1
2.	Avoidance Areas	3.2
3.	Selection Criteria	3.3
4.	Policy Criteria	3.4
NDCC 49-22-08 - Application for a certificate - Notice of filing - Amendment - Designation of a site or corridor.		
1. An application for a certificate must be in such form as the commission may prescribe, containing the following information:		
a.	A description of the size and type of facility.	1.0, 4.1
b.	A summary of any studies which have been made of the environmental impact of the facility.	6.0
c.	A statement explaining the need for the facility.	1.0, 2.0
d.	An identification of the location of the preferred site for any electric energy conversion facility	1.4
e.	An identification of the location of the preferred corridor for any electric transmission facility	1.4
f.	A description of the merits and detriments of any location identified and a comprehensive analysis with supporting data showing the reasons why the preferred location is best suited for the facility	6.0
g.	A description of mitigative measures that will be taken to minimize all foreseen adverse resulting from the location, construction, and operation of the proposed facility.	4.5, 4.6, 4.7, 6.0
h.	An evaluation of the proposed site or corridor with regard to the applicable considerations set out in Section 49-22-09 and the criteria established pursuant to Section 49-22-05.1.	3.0, 6.0, 8.0
i.	Such other information as the applicant may consider relevant or the commission may require.	Complete Application including Appendices
NDCC 49-22-08.1 - Application for a permit - Notice of filing - Amendment - Designation of a route.		
1. An application for a route permit for a transmission facility within a designated corridor shall be filed no later than two years after the issuance of the certificate and must be in such form as the commission may prescribe, containing the following information:		
a.	A description of the type, size, and design of the proposed facility.	1.0, 4.1
b.	A description of the location of the proposed facility.	1.4
c.	An evaluation of the proposed route with regard to the applicable considerations set out in Section 49-22-09 and the criteria established pursuant to Section 49-22-05.1.	3.0, 6.0, 8.0
d.	A description of mitigative measures that will be taken to minimize all foreseen adverse impacts resulting from the	4.5, 4.6, 4.7, 6.0

Description		Section(s) Addressed
	location, construction, and operation of the proposed facility.	
e.	A description of the right-of-way preparation and construction and reclamation procedures.	1.5, 4.0
f.	A statement setting forth the manner in which:	
	(1) The utility will inform affected landowners of easement acquisition, and necessary easement conditions and restrictions.	1.5
	(2) The utility will compensate landowners for easements, without reference to the actual consideration to be paid.	1.5
g.	Such other information as the utility may consider relevant or the commission may require.	Complete Application including Appendices
NDCC 49-22-09 - Factors to be considered in evaluating applications and designation of sites, corridors, and routes.		
1. The commission shall be guided by, but is not limited to, the following considerations, where applicable, to aid the evaluation and designation of sites, corridors, and routes:		
a.	Available research and investigations relating to the effects of the location, construction, and operation of the proposed facility on public health and welfare, natural resources, and the environment.	6.0, 8.1
b.	The effects of new energy conversion and electric transmission technologies and systems designed to minimize adverse environmental effects.	6.0, 8.2
c.	The potential for beneficial uses of waste energy from a proposed electric energy conversion facility.	N/A
d.	Adverse direct and indirect environmental effects that cannot be avoided should the proposed site or route be designated.	6.0, 8.4
e.	Alternatives to the proposed site, corridor, or route which are developed during the hearing process, and which minimize adverse effects.	2.2, 8.5
f.	Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated.	6.0, 8.6
g.	The direct and indirect economic impacts of the proposed facility.	6.1, 8.7
h.	Existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site, corridor, or route.	6.2, 8.8
i.	The effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites.	6.4, 8.9, Appendix E

Description		Section(s) Addressed
j.	The effect of the proposed site or route on areas unique because of biological wealth or because the areas are habitats for rare and endangered species.	6.8, 8.10
k.	Problems raised by federal agencies, other state agencies, and local entities.	8.11

1 INTRODUCTION

Pursuant to North Dakota Century Code (NDCC) Sections 49-22-07 and 49-22-08.2, Minnkota Power Cooperative, Inc. (MPC) submits to the North Dakota Public Service Commission (PSC) this consolidated application (Application) for a Certificate of Corridor Compatibility (Certificate) and Transmission Facility Route Permit (Route Permit) to re-locate two short segments of an existing 230-kilovolt (kV) line (Project). The existing 230-kV line is located within the fence of the Milton R. Young (MRY) Station, an existing coal-fired power plant owned by MPC. The Project will re-locate two segments of the existing line approximately 1,309 feet south and still within the MRY fence-line to accommodate future construction. The MRY Station and Project are located in Oliver County, North Dakota, and Project maps are included in **Appendix A**.

MPC is a regional generation and transmission power cooperative headquartered in Grand Forks, North Dakota, providing wholesale power to 11 member-owner rural electric distribution cooperatives in eastern North Dakota and northwestern Minnesota. MPC also acts as the operating agent of the Northern Municipal Power Agency, which serves the electric needs of 12 municipalities in the same geographic region as the MPC member-owners.

MPC's primary generating resource is the two-unit MRY Station, a mine-mouth lignite coal-fired power plant. The mine, which provides the lignite coal for MRY Station, is owned and operated by BNI Coal, Inc. (BNI) and is located adjacent to the MRY Station. The Project's purpose is to re-locate two sections of the existing transmission line to accommodate construction of Project Tundra, the initiative to retrofit the MRY with a carbon capture facility. The proposed Project will remain on land owned entirely by MPC and currently used for industrial purposes.

MPC is also submitting with this Application a request for waiver of procedures and time schedules pursuant to NDCC Section 49-22-07.2 (Waiver Request). As discussed in the Waiver Request, the Project is of such length, design, location, and purpose that it will produce minimal adverse effects and, therefore, MPC requests that the PSC waive the public hearing and notice of opportunity for hearing procedures. In the event a notice of opportunity for hearing is issued, MPC requests that the time for hearing requests and comments be limited to 10 calendar days (a reasonable time under the circumstances, consistent with NDAC § 69-02-04-05); that notice be issued as soon as possible; and that an order be issued granting a Certificate of Corridor Compatibility and Route Permit for the Project conditioned upon the comment period expiring without a request for hearing. Such a conditional permit allows MPC to proceed at the earliest possible time to meet the Milton R. Young Station (defined further below) outage timeframe, which is scheduled to commence September 4 through October 15.

1.1 Compliance with the Energy Conversion and Transmission Facility Siting Act

The North Dakota Energy Conversion and Transmission Facility Siting Act, NDCC Chapter 49-22 (Siting Act) requires the proponent of an electric transmission facility to obtain a Certificate and Route Permit from the PSC in order to locate, construct, and operate a transmission facility in the state of North Dakota. An electric transmission

facility is defined as an electric transmission line and associated facilities with a design in excess of 115-kV that is one or more miles in length. An application must meet certain criteria set forth in the Siting Act, as well as in North Dakota Administrative Code (NDAC) Article 69-06 (Siting Rules). The siting of a transmission facility is to be made in an orderly manner compatible with environmental preservation and the efficient use of resources (NDCC Section 49-22-02).

In this Application, MPC presents the information required by the Siting Act and the Siting Rules. MPC considered the exclusion and avoidance areas, the selection criteria, and the policy criteria in the design of the Project, in accordance with NDAC Sections 69-06-05-01 and 69-06-08-02 and NDCC Sections 49-22-08, 49-22-08.1, and 49-22-09. Information regarding Project design and technical information has been included in this Application to aid in review by the PSC, regulatory agencies, and the public. A Completeness Checklist is provided at the beginning of the Application identifying where applicable statutory and rule requirements are addressed.

1.2 U.S. Department of Energy Environmental Assessment

The U.S. Department of Energy (DOE) has selected Project Tundra to receive federal funding through its Carbon Capture Demonstration Projects Program. Since receipt of federal funding is a federal action requiring compliance with the requirements of the National Environmental Policy Act (NEPA). In accordance with NEPA, the DOE has prepared a draft Environmental Assessment (EA) to evaluate the potential environmental, cultural, and socioeconomic impacts of DOE providing cost-sharing financial assistance to MPC for Project Tundra. The DOE initially issued a draft EA for public review and comment in August 2023. On April 13, 2024, the DOE issued a revised draft EA for public review and comment, and that comment period closed on May 13, 2024. At present, the DOE is completing its review of, response to, and/or incorporation of comments received into the revised draft EA.¹ It is anticipated that a Finding of No Significant Impact (FONSI) will be issued by the DOE by the third quarter of 2024.

The Project has been analyzed both by MPC and by the DOE in connection with this NEPA process. Relevant information from that process has been incorporated into this Application.

1.3 Project Analysis and Location Terms

Relevant Project analysis and location terms used in this Application are defined in Table 1 and are depicted on Figures 1 and 2 in **Appendix A**.

¹ A copy of the revised draft EA is available at: <https://www.energy.gov/nepa/articles/doeea-2197-revised-draft-environmental-assessment-april-2024>.

Table 1. Project Analysis and Location Terms

Term	Definition/Description
Project Route	In accordance with NDCC Section 49-22-03(12), “Route” is defined as “the location of an electric transmission facility within a designated corridor” and is also referred to as the centerline.
Project Corridor	The Project Corridor is 300 feet wide (150 feet each side of center of each line in the Project), encompasses the Project Route, and was surveyed for the cultural resources.
Study Area	The Study Area analyzed for the Project is one mile wide (0.5 mile on either side of the Project Route), and encompasses approximately 990.8 acres. ¹

¹ NDAC Section 69-06-05-01(2)(f) states that “[t]he width of a corridor must be at least 10 percent of its length, but not less than one mile [] or greater than six miles [] unless another appropriate width is determined by the commission.” MPC proposes a one-mile-wide Study Area, with a 300-foot-wide Project Corridor, the combination of which is sufficient to evaluate the factors addressed in NDCC Section 49-22-09.

1.4 Project Location

The Project is located near Center in Oliver County, North Dakota. The Project Route, Project Corridor, and Study Area are entirely on land owned by MPC. The Project Route and Corridor are located in Section 5, Township 141 North, Range 83 West, Oliver County. The Study Area is located in Sections 4, 5, and 8, Township 141 North, Range 83 West, Oliver County.

1.5 Land Rights

The Project is entirely located on MPC-owned property.

1.6 Project Schedule

Key Project schedule milestones include:

1. **DOE NEPA Process:** The DOE is currently completing its review of, response to, and/or incorporation of comments received into the revised draft EA. It is anticipated that a FONSI will be issued by the DOE by the third quarter of 2024.
2. **Local Permitting:** The Project is considered a component of the MRY Station, which is a permitted conditional use. MPC will obtain a building permit from Oliver County for the transmission line structures, if needed, prior to structure installation.
3. **Certificate and Route Permit:** This Application is submitted in Q3 2024 with approval anticipated shortly thereafter.
4. **Equipment Procurement, Manufacture, and Delivery:** MPC has ordered the transmission conductor cables and other items and eagerly anticipates commencing with the Project as soon as practical following issuance of the Certificate and Route

Permit.

5. **Construction:** Anticipated to begin in September 2024 and be completed by December 2024.
6. **Test and Operations:** Anticipated in December 2024.
7. **Commercial Operation:** Anticipated in December 2024.

1.7 Project Ownership

MPC owns the existing transmission line and will own and operate the proposed Project as part of the existing line. MPC will manage Project construction, including selecting a qualified third-party contractor to perform Project construction.

1.8 Project Cost

The total cost of the Project is estimated to be \$3,200,000.00.

2 NEED FOR FACILITY

2.1 Need Analysis

As discussed above, MPC is in the final phase of developing Project Tundra, a next-generation CO₂ capture system and CO₂ secure geologic storage facility, which will be located immediately next to the MRY Station. Currently, the existing transmission line, consisting of two 230-kV 3-phase alternating current electric transmission lines, extends west from MRY Unit 1, then turns south and then east around MRY, with each segment ultimately extending northwest and southeast, respectively, to separate substations.

In order to accommodate the future construction, portions of the existing transmission line need to be re-located approximately 1,309 feet south of their present location. Once re-located, the existing segments of the transmission line would be removed.

Figures 1 and 2 in **Appendix A** show both the existing 230-kV transmission line and the proposed Project Route and Corridor.

2.2 Alternatives Considered

MPC believes that the Project Route is the most viable route, and also complies with the exclusion areas, avoidance areas, selection criteria, and policy criteria identified in NDAC Section 69-06-08-02. No other routes were considered because the proposed Route: (1) remains on MPC-owned land; (2) is out of the path of future construction; (3) avoids existing infrastructure and MPC assets; and (4) remains in close proximity to the generation resource and transmission infrastructure the existing line currently serves.

2.3 Ten-Year Plan

MPC filed a Ten-Year Plan with the PSC on July 1, 2024 pursuant to NDCC Section 49-22-04 (Case No. PU-24-265), and a copy is provided in **Appendix B**. This Project is needed to accommodate MPC's development of Project Tundra, which is discussed in the Ten-Year Plan on file with the PSC.

3 SITE SELECTION CRITERIA

The Project Corridor and Route were selected to avoid a planned location for future construction and use, existing infrastructure, and existing operations, while remaining on MPC-owned land. Additional factors in selection of the Project Corridor include existing environmental characteristics (including information obtained through field surveys), review of applicable Oliver County and PSC requirements, and communications with local, state, and federal agencies. In its analysis, MPC considered the criteria in NDAC Section 69-06-08-02 in the Route selection and Project design. These criteria are discussed in this section.

3.1 Exclusion Areas

In accordance with NDAC Section 69-06-08-02(1), which implements NDCC Section 49-22-05.1, the geographical areas listed in Table 2 must be excluded in the consideration of a transmission facility route. Exclusion areas may be located within a corridor, but at no given point can such an area or areas encompass more than 50 percent of the corridor width unless there is no reasonable alternative. NDAC Section 69-06-08-02 further specifies that a buffer zone of a reasonable width to protect the integrity of the area must be included. Natural screening may be considered in determining the width of the buffer zone. As shown in Table 2, no exclusion areas are located within the Project Corridor or Route.

Table 2. Exclusion Areas

Exclusion Area	Present in Corridor/ Route	Description	Section(s) Addressed
Designated or registered national: parks; memorial parks; historic sites and landmarks; natural landmarks; monuments; and wilderness areas.	No	N/A	1.5, 6.4, 6.5, 8.9
Designated or registered state: parks; historic sites; monuments; historical markers; archaeological sites; and nature preserves.	No	Based on a Class I literature review and Class III field surveys, no cultural resources are located within the Project Corridor or crossed by the Project Route.	1.5, 6.4, 6.5, 8.9
County parks and recreational areas; municipal parks; and parks owned or administered by other governmental subdivisions.	No	N/A	1.5, 6.2, 6.5
Areas critical to the life stages of threatened or endangered animal or plant species.	No	N/A	6.8
Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged.	No	N/A	6.8
Areas within 1,200 feet of the geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	No	N/A	5.1, 1.4
Areas within 30 feet on either side of a direct line between ICBM launch facility and a missile alert or launch control facilities to avoid microwave interference.	No	N/A	5.1, 1.4

3.2 Avoidance Areas

In accordance with NDAC Section 69-06-08-02(2), the geographical areas listed in Table 3 cannot be approved as a site for routing of a transmission facility unless the applicant shows that, under the circumstances, there is no reasonable alternative. Avoidance areas may be located within a corridor, but at no given point can such an area or areas

encompass more than 50 percent of the corridor width unless there is no reasonable alternative. NDAC Section 69-06-08-02(2) further requires a buffer zone of a reasonable width to protect the integrity of the area. Natural screening may be considered in determining the width of the buffer zone. Figure 1 in **Appendix A** depicts the avoidance areas in relation to the proposed Project Corridor and Route. As shown in Table 3, one avoidance area (MYR, a business) is present, but there is no reasonable alternative but for the Project to be located on the MYR site.

Table 3. Avoidance Areas

Avoidance Areas	Present in Corridor/Route	Description	Section(s) Addressed
Designated or registered national: historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.	No	N/A	1.5, 6.4, 6.5
Designated or registered state: wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands.	No	N/A	1.5, 6.5
Historical resources which are not specifically designated as exclusion or avoidance areas.	No	Based on a Class I literature review and Class III field surveys, no cultural resources are located within the Project Corridor or crossed by the Project Route.	6.4, 8.9
Areas which are geologically unstable.	No	N/A	6.6.2
Within 500 feet of a residence, school, or place of business.	No	The nearest place of business is the MRY Station, which is over 500 feet from the proposed Project. The nearest residence is over two miles from the Project.	5.1
Reservoirs and municipal water supplies.	No	N/A	6.7
Water sources for organized rural water districts.	No	N/A	6.2
Areas of recreational significance which are not designated as exclusion areas.	No	N/A	6.5

3.3 Selection Criteria

In accordance with NDAC Section 69-06-08-02(3), a site can be approved in an area only

when the applicant demonstrates to the PSC that any significant adverse effects resulting from the location, construction, and operation of the facility in that area, as they relate to the criteria listed in Table 4, will be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum.

Table 4. Selection Criteria

Selection Criteria	Potential Effects	Section(s) Addressed
The impact upon agriculture:		
Agricultural production.	N/A. No agricultural production present.	1.0, 6.5.2
Family farms and ranches.	N/A. No family farms and ranches present.	1.5, 6.5.2
Land which the owner demonstrates has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation.	N/A. No agricultural production or irrigation present.	6.6, 6.7
Surface drainage patterns and ground water flow patterns.	No change in baseline. No wetlands are within the proposed Corridor or Route and the Project will span a tributary of Square Butte Creek, thereby avoiding impacts. MPC will implement best management practices to avoid and/or minimize potential impacts to existing surface drainage and ground water flow patterns.	6.5, 6.7
The impact upon:		
Sound-sensitive land uses.	The Project will not produce long-term sound impacts. Construction activities will generate sound, but those activities will be temporary and construction activities will occur on an industrial site with existing operations.	6.3
The visual effect on the adjacent area.	The Project is a relocation of an existing line on an industrial site with existing infrastructure, so any visual changes will be minimal.	1.0, 8.4, Appendix A
Extractive and storage resources.	The Project will not impact subsurface resources.	6.5
Wetlands, woodlands, and wooded areas.	N/A. No tree removal necessary and no wetlands will be crossed by the Route.	6.5, 6.7
Radio and television	No impacts anticipated.	6.2

Selection Criteria	Potential Effects	Section(s) Addressed
reception, and other communication or electronic control facilities.		
Human health and safety.	No impacts anticipated. The center of the existing lines and the proposed center of the Project are within the same section and are only approximately 1,309 feet apart. The Project is located on industrial land used for the operation of coal-fired generating units, which is secured and not open to public access.	1.0, 1.5, 6.3
Animal health and safety.	No impacts anticipated. The center of the existing lines and the proposed center of the Project are within the same section and are only approximately 1,309 feet apart. The Project is located on industrial land used for the operation of coal-fired generating units. No threatened or endangered species are anticipated to be present in the area. MPC will mark the Project in accordance with Avian Power Line Interaction Committee (APLIC) guidance.	1.0, 6.8
Plant life.	Minimal impacts anticipated, as the Project is located on a previously-disturbed industrial site. Areas disturbed by construction activities will be reseeded, as necessary.	1.5, 6.5, 6.6

3.4 Policy Criteria

In accordance with NDAC Section 69-06-08-02(4), the PSC may give preference to an applicant that will maximize benefits that result from the adoption of the policies and practices listed in Table 5 and may require the adoption of such policies and practices as appropriate.

Table 5. Policy Criteria

Policy Criteria	Potential Benefits	Section Addressed
Location and design.	The center of the existing lines and the proposed center of the Project are within the same section and are only approximately 1,309 feet apart. The Project is located on industrial land used for the operation of coal-fired generating units.	1.0, 1.4, 40
Training and utilization of available labor in this state for the general and specialized skills required.	The Project involves relocation of two lines, each less than one mile. It is anticipated that MPC will complete the work with a small, experienced crew of contracted personnel.	6.1, 4.1
Economies of construction and operation.	The Project involves relocation of an existing portion of the MPC transmission system and will be coordinated with other system activities (e.g., the planned outage of MRY) and components have been obtained from existing suppliers. The Project will be operated by MPC as part of its broader transmission system.	6.1, 4.5, 1.0
Use of citizen coordinating committees.	The Project has been extensively studied as part of the DOE NEPA process and MPC has conducted significant outreach. As a result, no citizen coordinating committees are warranted.	1.2, 8.11
A commitment of a portion of the transmitted product for use in this state.	The Project will re-locate two short segments of an existing transmission line, which transmits electric energy on the MPC transmission system for ultimate distribution by MPC's 11 distribution cooperatives, half of which distribute to eastern North Dakota.	1.0
Labor relations.	MPC maintains positive labor relations and does not expect this Project to impact labor relations.	4.5, 6.1, 8.7
The coordination of facilities.	The Project is a result of coordination between existing facilities and future construction on the MPC site.	1.0, 2.0

Policy Criteria	Potential Benefits	Section Addressed
Monitoring of impacts.	The Project involves relocation of a small segment of an existing transmission line, and will be monitored as part of that existing transmission line following construction.	1.0, 4.7
Utilization of existing and proposed rights-of-way and corridors.	The center of the existing lines and the proposed center of the Project are within the same section and are only approximately 1,309 feet apart on industrial land owned and used by MPC.	1.0, 1.5
Other existing or proposed transmission facilities.	The Project involves relocation of two short segments of an existing transmission line. The Route was selected to accommodate future construction, and to avoid impacts to existing electric lines in the area.	1.0, 2.0, 4.0

3.5 Design and Construction Limitations

The Project Route is the most direct route that also minimizes impacts to the criteria identified in NDAC Section 69-06-08-02. Constraints present within the Project vicinity include the existing MYR and BNI mining operations, as well as the proposed scope of future activities and operations. The Corridor and Route were selected to minimize impacts to these areas to the extent possible, while remaining on MPC-owned property, minimizing reroute length, and minimizing environmental impacts.

3.6 Economic Considerations

There are many economic considerations in the design and routing of a transmission line and associated facilities. In general, minimizing the length of the route and minimizing the number of angle structures decreases the cost of the transmission line by minimizing the material and construction costs. The selection of materials and structure types also affects the cost of a transmission line. The Project Corridor and Route effectively balance the economic considerations of the overall length of the lines and design with the need to avoid impacts to existing and future land use activities and environmental resources.

4 DESIGN AND CONSTRUCTION

4.1 Project Design

The Project will consist of re-locating two segments (each less than one mile long) of an existing 230-kV transmission line, approximately 1,309 feet south and still within the MRY fence-line, to accommodate future construction. In total, the Project will require 15 new transmission line structures consisting of one steel single-pole switch structure, four dead end steel three-pole structures and 10 steel H-frame structures (angle and tangent). There will be 11 existing structures removed that are wood, steel, and aluminum lattice. The new structures will be direct embed steel structures ranging in height from approximately 95 feet to 140 feet due to the existing topography of this area. The span between structures will range from 370 feet to 988 feet and average approximately 700 feet, depending on topography. Taller structures are being used for crossing an existing transmission line and where large changes in terrain exist. Figures showing the typical configuration of the single-pole, three-pole, and H-frame structures are provided in **Appendix C**. The existing conductor is 959 ACSS/TW 22/8 Suwannee, the optical ground wire (OPGW) is DNO 3825 CC 57/465, and the shield wire is 3/8 EHS 7 strand. The new line will match these specifications. Table 6 includes a description of various Project design component characteristics.

Table 6. Transmission Line Design Components

Description of Design Component	Values
Voltage (kV)	230 kV
Length of transmission line	1.9 miles
Approximate total number of structures	15
Approximate number of single-pole switch structures	1
Approximate number of H-frame structures (angle and tangent)	10
Approximate number of dead end structures	4
Conductor size	0.8762 inches
Typical minimum and maximum span distances between structures	370 to 988 feet
Average span	700 feet
Minimum and maximum structure height	95 to 140 feet
Average height of structures 120 feet	117.5 feet
Average number of structures	7.5 per mile
Minimum conductor-to-ground clearance	30 feet to ground, 50 feet to haul roads

The existing transmission line utilizes a Supervisory Control and Data Acquisition (SCADA) system to relay messages between interconnection points. Hard-wire system communications utilize fiber optics within the OPGW and microwave communications equipment is installed for SCADA redundancy and to facilitate voice and data communications by field personnel. The Project includes the necessary fiber upgrades to continually allow the segment to interconnect to and use the broader transmission line SCADA system during operations.

Project construction and design will meet the requirements of the National Electrical Safety Code (NESC), Rural Utilities Service, and other applicable local or national building codes.

4.2 Project Access

On-site construction access to the new transmission structure locations will use existing private, MPC-owned and maintained roadways around the MRY. Temporary access points from these roadways to new structure locations will be utilized as needed. Existing access roads (typically maintained with a gravel or aggregate base) will be used in their original condition. Temporary overland access trails between structure sites will not require new construction and will result in temporary minor disturbances. Natural grassland vegetation along these temporary access routes will recover quickly, primarily because grading will not be required for access. Temporary overland access routes will be located within the Project Corridor, which was surveyed for cultural resources.

4.3 Temporary Workspace

A temporary work site will be located at each structure location within the Project Corridor. The area, which will not be graded, will act as a staging point for equipment to drill and set poles. Pulling and tensioning (stringing) locations will be within and in proximity to these temporary work sites. Existing private roadways and overland trails within the Corridor will be for access between structures, as indicated under Project Access above.

Temporary laydown yards will be used for the duration of construction for staging materials. Laydown yard locations have been identified on MPC property around the plant where an existing gravel base is already in place and utilized by plant personnel for various activities. No new site grading will be required for these laydown yards.

Estimated temporary land requirements associated with Project access and construction activities are provided in Table 7 below.

4.4 Estimated Temporary and Permanent Impacts

Permanent impacts are those required to host facilities needed for Project operations, consisting mostly of individual structure locations. facilities needed for Project operations, consisting mostly of individual structure locations. Permanent land disturbance has been estimated for self-supporting single circuit tangent structures, guyed dead-end structures, and single guyed switch structure.

Temporary impacts are impacts associated only with Project construction that will be removed and/or reclaimed, as needed, once construction is completed. This includes temporary disturbance areas around structures, stringing areas, crane walks, and overland access areas (the existing laydown area and existing private roadways have been excluded). All temporary construction activities will occur within the Study Area.

Estimated temporary and permanent ground disturbance impacts for the main components of Project construction are provided in Table 7 below.

Table 7. Estimated Temporary and Permanent Impacts

Project Component	Temporary Disturbance Assumptions	Permanent Disturbance Assumption	Per Unit Temporary Impact (acres)	Per Unit Permanent Impact (acres)	Impact Multiplier (qty)	Temporary Impact (acres)	Permanent Impact (acres)
Dead End	60'x60'	20'x20'	0.10	0.01	4	0.40	0.04
Tangent	50'x50'	10'x10'	0.06	0.01	10	0.60	0.10
Switch	40'x40'	10'x10'	0.04	0.01	1	0.04	0.01
Stringing Areas	20'x20'	N/A	0.02	0.00	4	0.08	0.00
Total (acres)						1.12	0.15

4.5 Construction Activities

Transmission line construction will generally follow a sequential set of activities performed by crews proceeding along the length of the line. The sequential nature of construction will minimize activities at a given work site. MPC estimates that approximately 10-12 construction personnel will be required to construct the Project. The activities involved in Project construction are discussed further below.

4.5.1 Pre-construction Surveying

MPC will not require any additional survey or geotechnical activities at the site for this Project. Existing data acquired by MPC will be utilized.

4.5.2 Site Preparation

It is anticipated that at some structure locations, grading of small areas (up to 40 feet by 40 feet for crane and manlift landings) may be required to level the ground surface to allow the safe operation of the equipment with respect to outriggers. Blading will be confined to the Project corridor and will be accomplished using skid steers. Soil disturbed during leveling will be segregated, stockpiled, and replaced following construction activities in accordance with PSC requirements. The ground will be restored to the approximate original contours and revegetated when the work is completed. All

disturbances will occur on MPC-owned property.

4.5.3 Borehole Excavation

Crews will use a truck-mounted auger or tracked vehicle equipped with a power auger to drill holes for the structures along the Project Route and within the Project Corridor, both located on MPC-owned property. Total disturbance at each structure location will vary depending on terrain and equipment; however, the disturbance will be confined to the Project Corridor on MPC owned property.

Borings for direct embed structures will have an average diameter of 3 feet and a depth of 11-16 feet for tangents and 17-20 feet for dead ends. The structures will be lowered by crane into boreholes and the annulus around the structure will be backfilled with crushed granular material or excavated material as needed. Surplus material will be spread around the base of structures or stockpiled on MPC property if necessary for use at the MRY.

4.5.4 Structure Assembly and Erection

Structure components (i.e., structure segments, crossarms, braces, hardware, insulators, and related materials) will be trucked from the laydown yard via existing private roadways to structure work site locations and assembled. Hardware, insulators, and other appurtenances will be attached to the poles while on the ground at each structure location, within the Project Corridor. Erection crews will place the structure in the borehole (directly embedded) using cranes or large boom trucks. The structures will then be plumbed and the hole backfilled, as previously described.

4.5.5 Conductor Stringing and Tensioning

Following structure erections, crews will install the conductors, shield wire, and OPGW using conductor stringing sheave blocks and line pulling and tensioning equipment. The conductor and OPGW will be kept under tension during the stringing process to keep the conductor clear of the ground and obstacles that could damage the conductor and/or OPGW surfaces.

Due to the overall length of the new line segment, only 3-4 pulling and tensioning sites will be required and will likely be located at dead end structure locations. Stringing equipment generally consists of wire pullers, tensioners, conductor reels, OPGW wire reels, and sheave blocks. Existing conductor will be reused on nearly half of the new line sections. After the conductor/ground wire is pulled for a section of line, it is tightened or sagged to the required design tension in compliance with the NESC. The process will be repeated until all the conductor and OPGW are pulled through all sheaves. Conductor stringing also will require access to each structure for securing the conductor to the insulators or OPGW to each structure once final line sag is established. Proposed pulling and tensioning areas are shown on Figures 1 and 2 in **Appendix A**. A typical temporary pulling and tensioning work site and temporary splicing site are shown schematically in **Appendix C**.

All new line segments are being constructed on private MPC-owned property within the area of restricted access; therefore, there will not be public access to the Project Corridor during stringing activities.

4.5.6 Reclamation

Following construction, disturbed areas for new transmission line segments will be reclaimed to pre-construction form. Areas will be revegetated, as needed, in accordance with applicable permits.

4.6 Construction Environmental Protection, Health, and Safety Measures

4.6.1 Construction Waste Management

Typical waste materials generated from construction activities include miscellaneous lumber and shipping materials used to protect equipment during transportation, paper products, beverage and food-related materials, and sanitary waste. Waste from construction materials and rubbish from all construction areas will be collected, hauled away, and disposed of in an approved landfill. Sanitary waste will be disposed of through arrangements with local municipal sanitary waste treatment facilities.

4.6.2 Worker Safety and Health Protocol

Human health and safety hazards will be mitigated by complying with applicable federal and state Occupational Safety and Health Administration (OSHA) regulations, NESC regulations, and utility design and safety standards. MPC personnel and contractors will perform activities according to MPC's standard operating health and safety procedures. Prior to beginning work each day, an Authorization to Work, Pre-Task Analysis form will be prepared and discussed. Heavy equipment will be up to OSHA safety standards and personal safety equipment will be required for all workers on site. Any accidents or incidents will be reported to the designated safety officer.

Access to the construction site will be restricted to minimize risks to the general public. The highest risk to the general public would be from increased traffic volume on the roadways near or adjacent to the Project as a result of commuting construction workers and transportation of equipment and materials, and would be temporary. No residences are located in proximity to the Project. MPC maintains current safety and environmental programs, which will be implemented during Project design and construction.

All on-site construction crews will be required to complete MPC safety training prior to mobilizing. Crews will be required to access BNI mine roads during construction and therefore Mine Safety and Health Administration training will be required by all personnel prior to commencing construction activities. Lastly, the Project Corridor is secured on MPC property by an existing security fence, and all on-site personnel are required to check in at the plant front security gate each day before entering the job site.

4.6.3 Environmental Protection Measures and Policies

Project-specific mitigation measures for construction and operations have been developed to avoid or minimize potential environmental impacts. These measures are discussed throughout Section 4.0 and in Section 5.0. See also MPC’s policy statement in **Appendix D**.

4.7 Operation and Maintenance

The following operation and maintenance activities would be performed throughout the life of the Project:

- Visual ground inspection of lines periodically throughout the year; and
- Aerial patrol of lines yearly.

4.8 Decommissioning

If the transmission line is abandoned or rebuilt, decommissioning and removal of structures, conductor, and ancillary equipment will be conducted in accordance with applicable regulations in place at the time.

5 SETBACKS

5.1 PSC Requirements

The Project complies with or exceeds the exclusion area and avoidance area setbacks for transmission lines provided in NDAC Section 69-06-08-02(1)-(2) and listed in Table 8 below. Setbacks were measured from the outermost portion of the transmission line facility to the nearest point of the applicable feature.

Table 8. Setback Distances as Designated by the PSC

Setback Type	Setback Distance
The geographic center of an ICBM launch or launch control facility.	1,200 feet ¹
Areas on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference.	30 feet
Residence, school, or place of business.	500 feet ²

¹ The nearest ICBM launch or launch control facility is greater than 1,200 feet from the MRY site in its entirety.

² Per NDCC 49-22-05.1(3), the residence, school, or place of business setback may be waived in writing by the owner of the residence. Other than MRY, no businesses or residence are within 500 feet of the Project.

5.2 County Requirements

The Project is authorized as an accessory use to the MRY Station, which is a permitted conditional use in Oliver County. MPC will obtain a building permit for Project structures, as needed, prior to structure installation. The Project meets applicable Oliver County requirements, and no setbacks are specified.

6 ENVIRONMENTAL ANALYSIS

6.1 Demographics and Local Economics

6.1.1 Description of Resources

The Project is located in a rural area in Oliver County, North Dakota. The closest incorporated community is the city of Center, which is located northwest of the Project. According to Job Service North Dakota Labor Market Information Center (NDLMI), Oliver County's population in 2023 was 1,879 (NDLMI 2024). As of 2023, the city of Center was the largest city (incorporated place) in Oliver County with a population of 581 (NDLMI 2024). The unemployment rate for Oliver County in June 2024 was 3.6 percent (NDLMI 2024). One year prior, the unemployment rate was 3.1 percent (NDLMI 2024). There were 18 job openings for Oliver County in July 2024 (NDLMI 2024). According to data from the U.S. Census Bureau, the top three industries in Oliver County are agriculture, forestry, fishing and hunting, and mining; educational services, and health care and social assistance; and transportation and warehousing, and utilities (U.S. Census Bureau 2024).

6.1.2 Impacts/Mitigation

The Project is not anticipated to impact the local population or long-term population trends. No residents will be displaced and no effects on permanent housing are anticipated. During construction, out-of-town laborers will likely use lodging facilities in and around the cities of Bismarck/Mandan.

The Project involves relocation of two short segments of transmission line, each less than one mile in length. Therefore, it is anticipated that MPC will complete the work with a small, experienced crew of contracted personnel. Expenditures made for equipment, energy, fuel, operating supplies, and other products and services will benefit businesses in the county and the state.

6.2 Public Services

6.2.1 Description of Resources

Local Government Services

Within the Study Area is a network of established roads and utilities that provide access and necessary services to MRY. There are no incorporated or unincorporated cities within the Study Area. The nearest community is Center.

Transportation

Roads located within the Study Area are local roads (paved, gravel graded, and drained roads), private roads, section lines, and coal mine access roads. Roads within the Study Area fall under the North Dakota Department of Transportation District Boundaries of Bismarck, North Dakota.

Air Traffic

The closest airport/airstrip is the Mercer County Regional Airport. The nearest airport certified for commercial carrier operations is the Bismarck Airport. Aerial spraying will not occur within the Study Area, as the land is owned by MPC and used for industrial purposes.

Water Supply

MRY maintains an existing water appropriation for use in operation of the MRY, and any water to be used on the Project would be consistent and within the scope of the appropriation. In the surrounding area, water is supplied by Southwest Water Authority and through private wells. The water supply for local nearby communities is not anticipated to be affected by the Project.

Telecommunications

The corona-induced broadband electromagnetic radiation (EMR) from transmission lines can produce interference with some communications signals if there is an overlap in the signal and EMR frequencies. Broadband corona EMR discharge typically occurs in the frequency spectrum from below 100 kilohertz to approximately 1,000 megahertz, which overlaps with the frequencies used for AM and FM radio and some television signals.

6.2.2 Impacts/Mitigation

Local Government Services

No impact is expected to local services.

Transportation

The transportation of materials and equipment on public roadways will be conducted in accordance with applicable local and state road/highway regulations. All necessary provisions will be made to conform to safety requirements for maintaining the flow of public traffic.

Air Traffic

No part of the Project will exceed 200 feet in height above ground level, and no impacts to air traffic are anticipated.

Water Supply

No water use is anticipated for the Project, and construction activities are not anticipated to impact local water supply.

Telecommunications

No telephone or fiber optic cables are located within the Project Corridor; thus, no impacts are anticipated.

With sufficient corona activity, some radio and television interference can be noticeable; however, the radio sound generated by a transmission line is very low in power and interference is generally only experienced in very close proximity to the transmission line. These effects are most pronounced directly underneath the line conductors and decrease with distance from the transmission line. The level of interference with reception of a radio signal also depends on the relative locations of the radio transmitter, the radio receiver, and the transmission line. A transmission line that is directly between a radio transmitter and a listener's receiver may be more likely to interfere with that listener's reception, whereas a transmission line behind or beside the listener in relation to the transmitter will not necessarily cause interference depending on the radio receiver's antenna.

As digital signal processing has been integrated into television and radio receivers, the potential interference impact of corona-generated radio sound has been further reduced. Moreover, the advent of cable and satellite television service, and the federally mandated conversion to digital television broadcast in June 2009 have greatly reduced the occurrence of corona-generated interference. Newer digital television receivers are equipped with systems to filter out interference.

Given its location and the factors noted above, the Project is not anticipated to result in radio or television interference.

6.3 Public Health, Welfare, and Safety

6.3.1 Description of Resources

Audible Sound, Corona Discharge, and Aeolian Vibration

Corona from transmission line conductors can generate electromagnetic "noise" at the same frequencies transmitted by radio and television signals. Corona consists of the breakdown or ionization of air within a few centimeters of conductors and hardware. Aeolian vibration is produced when a steady flow of wind interacts with an object such as a transmission line. Wind must blow steadily and perpendicular to the lines to set up oscillating forces.

The Study Area is primarily industrial. There are no populated towns within the Study Area. The existing acoustic environment is defined primarily by sound from the nearby

operating electric generating units and will also include sound from mining traffic and other highway and road traffic. In addition to anthropogenic sound sources, wind would also be a contributing sound source. Windy conditions can generate sound caused by the rustling of grass and tree leaves.

Electromagnetic Fields

Power frequency electromagnetic fields (EMF) are created wherever electricity flows. Leading U.S. and international scientific organizations, such as the National Cancer Institute and the World Health Organization, have evaluated EMF research. These organizations generally conclude that overall, the body of scientific research does not show that exposure to EMF causes or contributes to any type of cancer or any other disease or illness (National Institute of Environmental Health Sciences [NIEHS] 1999; National Cancer Institute [NCI]).

Hazardous Materials/Hazardous Waste

Fuels, hydraulic fluids, and other hazardous substances may be used during construction of the Project. Other potential hazards may exist in rural areas from farm dumps and agricultural chemicals.

6.3.2 Impacts/Mitigation

Sound from Maintenance and Construction

Project construction and maintenance may cause short-term sound impacts due to construction activities and equipment. Construction and maintenance activities will also generate traffic that will have potential sound effects, such as trucks travelling to and from the Project on public roads. As noted above, the Project is located on an industrial site with existing industrial operations. Thus, while Project construction will generate sound, the impacts will be minimal.

Once the Project has been built, no significant sound impacts are anticipated. Project maintenance will occur periodically but is not expected to result in significant sound generation.

Corona Discharge

Corona effects occur when air molecules near conducting wire are ionized due to changes in the electric field intensity at the conductor surface. Measures such as carefully handling the conductor during construction to avoid nicking or scraping or otherwise damaging the surface and using hardware with no sharp edges or points are typically adequate to control corona. The sound is most noticeable when conductors are wet because of precipitation. Corona effects are expected to be low enough that no objectionable audible sound will result outside the Project Corridor.

Aeolian Vibration

Aeolian vibration is produced when a steady flow of wind interacts with an object such as a transmission line. Wind must blow steadily and perpendicular to the lines to set up oscillating forces. The resulting vibration can produce resonance if the frequency of the vibration matches the natural frequency of the line. However, aeolian vibration is expected to be minimal outside of the Project Corridor.

Electromagnetic Fields

Many studies of EMF have been conducted, but none has identified a cause-and-effect relationship between EMF exposure and health effects or a mechanism by which EMF could cause disease (NIEHS 1999; NCI). No impacts from EMF are expected.

Hazardous Materials/Hazardous Waste

As with any construction activity, there is the possibility of accidentally spilling fuel, hydraulic fluid, or other hazardous substances during construction of the Project. The potential of such events will be minimized through implementation of best management practices, which will include the following:

- Construction equipment will be equipped with spill cleanup kits.
- Equipment refueling will take place at secure areas, away from wetlands or drainages.
- Workers will be trained in spill clean-up and the use of spill cleanup kits.
- Burning waste materials within the Project Corridor will not be permitted and all waste materials will be disposed of at permitted waste disposal areas or landfills.

These measures will ensure that surface and groundwater quality will not be degraded through inadvertent spillage of contaminants.

6.4 Cultural Resources

6.4.1 Description of Resources

Juniper, LLC (Juniper) conducted a Class I Literature Review and Class III Cultural Resource Inventory for the Project under the direction of Barr Engineering Co., with Class III Intensive Pedestrian scope being developed in consultation with the SHPO. The results of these studies are summarized in the report included in **Appendix E**. The area of investigation for Class I encompasses the corridor and laydown areas and the Class III intensive was performed in coordination and consultation with SHPO, with any previously undisturbed acres within the identified corridor and other impact areas of the Project. Two separate study reports were generated because the transmission re-route was under separate need from the majority of the laydown acreage (consultation through

Department of Energy).

Class I Literature Review

Prior to field work, Juniper conducted a literature review of the archives at the SHPO site and manuscript files for a one-mile radius around the proposed Project. The file search indicated 75 cultural resources and 16 cultural resource investigations lay within the study area. No known cultural resources were identified within Project Corridor (see **Appendix E**).

Class III Cultural Resource Inventories

Juniper conducted a Class III Cultural Resource Inventory for the Project on August 23 and 24, 2023. Juniper archaeologists conducted the Class III Intensive Pedestrian Inventory by walking zig-zag transects spaced no more than 15 meters apart covering the 300 foot Project Corridor. No cultural resources were identified within the Project Corridor. The Class III Cultural Resource Inventory report is included in **Appendix E**. On May 31, 2024, the SHPO concurred with the findings in the report, and a copy of this letter is provided in **Appendix G**.

Small portions of the stringing areas were not covered by the August 2023 inventory. However, those areas were covered by a Class III Cultural Resource Inventory conducted by Juniper in November 2023 for Project Tundra workspaces. No cultural resource were identified within the stringing areas. This Class III Cultural Resource Inventory report is also included in **Appendix E**. On June 28, 2024, the SHPO concurred with the findings in the report, and a copy of this letter is also provided in **Appendix G**.

6.4.2 Impacts/Mitigation

MPC has selected a route that avoids impacts to cultural resources; as a result, no impacts to cultural resources are anticipated. An Unanticipated Discovery Plan has been prepared that outlines the procedure utilized to address any unanticipated discoveries of cultural resources, including possible human remains, and is provided in **Appendix F**.

6.5 Land Use, Vegetation, and Recreational Resources

6.5.1 Description of Resources

Land Use

The Study Area is in rural North Dakota in an area exclusively comprised of industrial activities associated with MRY power generation, which are the dominant land uses at and surrounding the MRY. Land cover classifications, including acreage within the Study Area and Project Corridor, are shown in Table 9 and on Figure 2 in **Appendix A**

Table 9. Land Cover

Land Cover	Acreage within Study Area	Acreage within Project Corridor
Grazed	210.8	1.5
Industrial/Disturbed	452.8	27.9
Wetlands/Riparian	39.7	0.2
Crops / Hay	70.4	--
Landscaped / Undeveloped / Valleys	103.8	--
Open Water	101.6	--
Roads / Roadsides	11.8	--
TOTAL	990.8	29.6

Vegetation

The proposed Project site consists of previously disturbed land used for industrial purposes, including general storage of coal and materials. Currently, the Project site is reclaimed and largely unused, except for some material storage and the existing Project Tundra well pad. Vegetation in the broader Study Area consists of grasses within graveled areas, open grassy areas, and small sparingly wooded riparian areas near the reservoirs surrounding Nelson Lake.

Noxious Weeds

There are 13 state noxious weeds: absinth wormwood (*Artemisia absinthium*), Canada thistle (*Cirsium arvense*), dalmatian toadflax (*Linaria genistifolia*), diffuse knapweed (*Centaurea diffusa*), houndstongue (*Cynoglossum officinale*), leafy spurge (*Euphorbia esula*), musk thistle (*Carduus nutans*), palmer amaranth (*Amaranthus palmeri*), purple loosestrife (*Lythrum salicaria*), Russian knapweed (*Acroptilon repens*), Saltcedar (*Tamarix chinensis*, *T. parviflora*, *T. ramosissima*), spotted knapweed (*Centaurea maculosa*), and yellow toadflax (*Linaria vulgaris*). (North Dakota Department of Agriculture [NDDA] 2024).

County and city weed boards may develop and compile their own list of noxious weeds, provided the list includes all weeds determined to be noxious by the North Dakota Agriculture Commissioner. Oliver County has not listed any additional noxious weeds.

6.5.2 Impacts/Mitigation

Land Use

The Project will not result in a significant change in land use. MPC owns the property crossed by the Project, and the land is used for industrial purposes.

Vegetation

The Project may impact vegetation within areas used for construction, but is not anticipated to have significant long-term impacts. To minimize potential impacts, MPC will implement the following measures:

- The proposed construction and laydown areas would be predominantly located in previously disturbed lands used for general MRY storage. Construction areas and laydown areas that would be temporarily affected would be restored to original conditions. Existing vegetation within the Project Corridor will be preserved whenever feasible.
- Surface disturbance areas will be reclaimed using native species, as approved by the U.S. Department of Agriculture, Natural Resources Conservation Science (NRCS) or county extension agency, and will be planted at the appropriate times to reestablish vegetative cover and minimize the potential for invasion by non-native species.
- Erosion and sedimentation controls will be implemented to minimize indirect impacts to wetlands and riparian areas.
- If herbicides are used to remove woody species that become established in the Project Corridor and pose a hazard to the transmission line, they will be used in an appropriate manner.
- Mulch and seeds used for revegetation, erosion, and sediment control will be certified as weed-free.

Noxious Weeds

- If noxious weeds are observed in the surface disturbance areas, populations will be controlled with the application of herbicides, which will be applied by a certified herbicide applicator in accordance with label instructions and State and local County Weed Board regulations. Biological control methods (e.g., use of spurge beetles) or mechanical control methods (e.g., mowing) also may be considered for weed control, in consultation with appropriate agencies.
- Herbicides will not be used near surface water.
- Prior to the initiation of construction activities, construction vehicles and equipment will be thoroughly cleaned to prevent the possible spread of noxious weed seeds within the Project Corridor.
- The Project Corridor and other surface disturbance areas will be monitored annually for noxious weeds for a 3-year period following construction and reclamation.
- Herbicide applications will occur in late spring or early summer to eradicate or

control noxious weeds before they mature.

6.6 Soils and Geologic Resources

6.6.1 Description of Resources

Major Land Resource Areas (MLRAs) represent landscape-level areas with distinct physiography, geology, climate, water, soils, biological resources, and land uses. The Study Area lies within MLRA 54, the Rolling Soft Shale Plain, characterized by Borolls with a frigid soil temperature regime and mixed mineralogy (NRCS 2022). These soils are generally moderately deep to very deep, well drained, and clayey or loamy (NRCS 2022).

Soil map units were assessed using the NRCS Web Soil Survey (NRCS 2023a). The dominant soil map unit located within the Study Area consists of Amor-Werner-Farnuf loams (E2609C). These well-drained soils are derived from loamy residuum weathered from mudstone parent material and characterized by fine loamy surface textures. A majority of the soils within the proposed Project area were previously disturbed from the construction of the MRY facility. See land cover types in Figure 2 in **Appendix A**, showing the majority of the Corridor as industrial/disturbed.

The Project would be located on the eastern flank of the Williston Basin. Surface conditions and geology in the vicinity of the MRY facility are associated with the Sentinel Butte Formation, a relatively flat-lying sedimentary formation, up to 600 feet in thickness, overlying the Bullion Creek Formation. Both formations are part of the Williston Basin, which is a large intracratonic sedimentary basin extending from western South Dakota and North Dakota to eastern Montana and into southern Saskatchewan. The Sentinel Butte is composed of fluvial and lacustrine deposits, including lignite coal beds, from the Paleocene Epoch. Outcrops of poorly lithified portions of the Sentinel Butte are common and contain assemblages of non-marine plant and animal fossils (North Dakota Geological Survey [NDGS] 2021).

6.6.2 Impacts/Mitigation

The Project will have minimal impacts on soil and geologic resources. A geotechnical analysis has been performed which has been used to inform Project design. MPC will implement the following measures to minimize potential impacts from Project construction:

- Excess subsoils and rock will be hauled off-site to an approved landfill.
- Erosion and sediment controls will be established prior to construction, then maintained and controlled through application of the Storm Water Pollution Prevention Plan (SWPPP).
- Sediment control measures (e.g., installation of silt fences) will be used, where appropriate, to prevent sediment from moving off-site and into waterbodies.

- Temporary laydown areas are located in previously disturbed areas.

6.7 Surface Water and Groundwater Resources

6.7.1 Description of Resources

Surface waters include rivers, streams, creeks, lakes, ponds, reservoirs, oceans, or any other body of water found on the earth's surface. Surface water is a part of the larger hydrologic cycle (water cycle), maintained by precipitation and water runoff that can be lost through evaporation, seepage into the ground, or use by plants and animals. Typical beneficial surface water uses include drinking water, public supply, irrigation, agriculture, thermoelectric generation, mining, and other industrial uses.

The Headwater Square Butte Creek watershed is comprised of 190,069 acres and contains numerous sub-watersheds under U.S. Geological Survey Hydrologic Unit Code (HUC) 12. The Nelson Lake-Square Butte sub-watershed encompasses over 31,078 acres. Drainage basins funnel all the streams, snowmelt, and rainfall to a common outlet such as the outflow of a reservoir, or mouth of a bay. Surface runoff from the Project site would drain to the Square Butte Creek (Nelson Lake) via overland flow and continue southeast within the creek, eventually draining into the Missouri River south of Harmon, North Dakota.

In 1968, Square Butte Creek was dammed to provide water cooling supplies for the MRY Station. Nelson Lake makes up a large portion of the surface water present in the Nelson Lake-Square Butte sub-watershed, spanning 581 acres with 12.5 miles of shoreline (North Dakota Game and Fish Department [NDGF] 2020). Nelson Lake is not a 303(d)-listed water. Assessment information from 2018, indicates that the waterbody is in good condition for all assessed uses (e.g., agricultural, fish and aquatic biota, fish consumption, industrial, and recreation) (U.S. Environmental Protection Agency [EPA] 2018a). Nelson Lake is maintained at a maximum of 1,926 feet above mean sea level, averages 14.4 feet in depth, and has a storage capacity of 8,322.8 acre-feet (NDGF 2020). Recreational and industrial activities associated with MRY power generation are the dominant land uses at and surrounding Nelson Lake.

The lake is owned and maintained by MPC, and primarily functions to provide cooling water for the power plant complex as well as provide a source of recreation and scenic beauty for the citizens of the area. MPC also maintains and operates Nelson Lake Dam.

Section 404 of the CWA requires approval from the U.S. Army Corps of Engineers before placing dredged or fill material into waters of the United States, including rivers, streams, ditches, coulees, lakes, ponds, or adjacent wetlands. According to the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer Viewer, digital data is unavailable for the unincorporated areas in Oliver County (FEMA 2023). Using the flood maps service center, Flood Insurance Rate Maps (FIRMs) are unavailable for the proposed Project area (FEMA 2023). A review of the North Dakota Risk Assessment Map Service through the North Dakota Water Commission was conducted. The Project would not be located within any FEMA-mapped 100- or 500-year floodplains (North

Dakota Water Commission 2023). Reviews of 1987 FIRMs confirmed the lack of floodplains present in the Project area and surrounding region (FEMA 1987).

Based on US Fish and Wildlife Service (USFWS) National Wetland Inventory data, no wetlands are present within the Project Corridor (USFWS 2024). See wetland/waterbody data on Figure 1 in **Appendix A**.

The Project would not be located within any FEMA mapped 100- or 500-year floodplains (North Dakota Water Commission 2023).

The hydrogeology of western North Dakota comprises several shallow freshwater-bearing formations of Quaternary, Tertiary, and upper Cretaceous-aged sediments underlain by multiple saline aquifer systems of the Williston Basin. These saline and freshwater systems are separated by the Cretaceous Pierre Shale of the Williston Basin. The Pierre Shale is a regionally extensive, dark gray to black marine shale between 1,000 and 1,500 feet thick which forms the lower boundary of the Fox Hills–Hell Creek formations (Thamke and others 2014). Freshwater aquifers provide water for domestic and agricultural purposes. No sole source aquifers are located in North Dakota (EPA 2018b).

6.7.2 Impacts/Mitigation

The Project is not anticipated to impact surface water or groundwater resources. No wetlands or floodplains are present in the proposed Project's construction footprint; therefore, no filling, excavating, or clearing would occur in these resources. The Project will span the Square Butte Creek, thereby avoiding impacts. MPC will also implement the following measures to avoid potential impacts to surface and groundwater resources during Project construction:

- A 100-foot buffer will be established adjacent to wetlands and streams, where practicable, to prevent or minimize impacts to those ecosystems. Construction vehicles and equipment will not traverse through wetlands and riparian areas, thereby avoiding direct impacts to these sensitive areas.
- Staging areas and refueling areas will not be located near surface waterbodies.
- Areas that need to be cleared during construction will be revegetated with an approved native seed mix as soon as technically feasible to minimize soil erosion and sediment runoff.
- Refueling of construction vehicles will occur at commercial fueling facilities and staging areas if on-site fuel storage is needed for refueling.
- A SWPPP will be developed and implemented prior to initial construction activities. The SWPPP will include an analysis of materials that will be utilized and site activities that could potentially impact storm water and the associated mitigation measures to minimize that potential. SWPPP implementation will include regular inspections of areas under construction, material storage and laydown areas, and

structural devices for storm water management. All construction personnel will be trained and required to comply with SWPPP's requirements and the maintenance of all environmental protection measures. The SWPPP will be maintained until final stabilization of all disturbed areas has been completed.

6.8 Wildlife and Rare and Unique Natural Resources

6.8.1 Description of Resources

Information regarding wildlife species and habitat within the Project area was gathered and analyzed by MPC and the DOE in connection with the DOE's development of an EA for Project Tundra. Information was obtained from existing published sources and site-specific wildlife and habitat information provided by MPC, the USFWS, and the NDGF. This information is summarized below.

General Wildlife Resources

The proposed Project Corridor and Route are located within the existing MRY site and have minimal, low-quality wildlife habitat due to the disturbed and industrial nature of the area. The areas surrounding the Project are generally low-quality wildlife habitat, including the adjacent landfill, coal mines, and industrial facilities.

Typical wildlife species likely to occur in the Project vicinity could include squirrels, rabbits, fox, songbirds, shorebirds, grassland birds, raptors, coyotes (*Canis latrans*), skunks, raccoons (*Procyon lotor*), otters, white-tailed deer (*Odocoileus virginianus*), toads, turtles, snakes, and butterflies (NDGF 2023a). Given the active power generation facility, coal and industrial operations, landfill, and the roadways in the vicinity of the Project, species likely to occur in the proposed Project corridor would be those acclimated to more developed environments.

Federally Listed Species

The Endangered Species Act (ESA) of 1973, 16 United States Code (U.S.C.) 1531 et seq., establishes a national program for the conservation of threatened and endangered species of fish, wildlife, and plants, as well as the preservation of the supporting habitats and ecosystems. A review of the USFWS Information for Planning and Consultation (IPaC) system indicates five federally threatened or endangered species and one candidate species have the potential to occur within the vicinity of the Project based on known range and distribution (USFWS IPaC 2023a). These species are identified in Table 10 below. However, based on habitat requirements, the proposed Project site does not support suitable habitat for any of these species.

North Dakota does not have a threatened and endangered species list; however, it recognizes those federally listed under the ESA

Table 10. Threatened and Endangered Species

Common Name	Scientific Name	Status	Potential to Occur within the Project Vicinity	Recommended Determination of Effect
Birds				
Piping plover	<i>Charadrius melodus</i>	T	Unlikely to occur; preferred habitat includes Alkali Lakes and Missouri River sandbars. The property site is an existing industrial site. Oliver County also contains critical habitat for the piping plover.	No Effect
Red knot	<i>Calidris cantus</i>	T	May occur; migrates through North Dakota in mid-May and mid-September to October in “extremely low numbers.” Breeding and nesting habitat is marine, while Red Knots have been observed during migration in the Missouri River system, sewage lagoons, and large permanent freshwater wetlands.	Not Likely to Adversely Affect
Whooping crane	<i>Grus americana</i>	E	May occur; migrates through North Dakota in April to mid-May and September to early November, found along wetlands and ponds.	Not Likely to Adversely Affect
Mammals				
Northern Long-eared bat	<i>Myotis septentrionalis</i>	E	Unlikely to occur; hibernates in caves and mine shafts during the winter months, and roosts in wooded areas during the summer months.	No Effect
Insects				
Dakota skipper	<i>Hesperia dacotae</i>	T	May occur; preferred habitat of mixed-grass prairies dominated by bluestem, purple coneflower, and needlegrasses may exist within project area, and species has been documented in Oliver County.	Not Likely to Adversely Affect

Common Name	Scientific Name	Status	Potential to Occur within the Project Vicinity	Recommended Determination of Effect
Monarch butterfly	<i>Danaus plexippus</i>	C ^a	May occur; preferred habitat of prairies, meadows, grasslands, and right-of-way ditches along roadsides. Eggs laid on milkweed host plant (primarily <i>Asclepias</i> spp.).	Not Likely to Jeopardize

Source: USFWS IPaC 2023a, NDGF 2015

BGEPA = Bald and Golden Eagle Protection Act; E = Endangered; T = Threatened; C = Candidate Species

^a Federal candidate species are not currently listed and consultation under the ESA is not required.

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The USFWS has statutory authority and responsibility for enforcing the Migratory Bird Treaty Act (16 U.S.C. 703-712) (MBTA). Most native bird species (birds naturally occurring in the United States) are protected under the MBTA, and the list of protected species is identified in 50 CFR 10.13, which is reviewed and updated regularly.

The bald eagle was officially removed from the federal threatened and endangered species list in 2007 but is still protected under the federal Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) (BGEPA) as well as the MBTA. The BGEPA protects bald and golden eagles by prohibiting anyone without a permit issued by the Secretary of the Interior from “taking” a bald or golden eagle, including their parts, nests, or eggs.

The Fish and Wildlife Conservation Act, as amended in 1988, requires the USFWS to identify birds of conservation concern, which include species, subspecies, and populations of all migratory nongame birds that could become candidates for listing under the ESA if additional conservation actions are not taken (USFWS 2021).

There is a low occurrence potential for migratory bird species in the Project area, given the current conditions and lack of vegetation communities and other habitat components at the site and the occurrences would be isolated to individuals briefly passing through the area.

Species of Conservation Priority

The state of North Dakota has developed a list of numerous avian, mammal, reptiles/amphibians, and fish Species of Conservation Priority (SCP) based on varying degrees of rarity, geographic range, breeding status, and other factors as part of its State Wildlife Action Plan (SWAP) (NDGF 2015). Per the SWAP, the Project is located in the Missouri River System/Breaks Focus Area.

While direct impacts to the aforementioned species groups would not be anticipated,

indirect impacts associated with the proposed Project could include increased construction-related noise, human presence, and the use of artificial lighting. A discussion for SCP in the region surrounding the Project is provided below.

Birds

Bird species listed as key SCP in the Missouri River System/Breaks Focus Area are as follows: bald eagle, golden eagle, piping plover, red knot, least tern (*Sterna antillarum athalassos*), and red-headed woodpecker (*Melanerpes erythrocephalus*) (NDGF 2015).

The least tern was delisted in January 2021 (NDGF 2021). The species prefers sparsely vegetated sandbars or shoreline salt flats along the Missouri River System but was not noted to occur near Nelson Lake or Square Butte Creek (NDGF 2015). The Yellowstone River, Missouri River, Lake Sakakawea, and Lake Oahe are the only areas in the state where the species resides (NDGF 2015). Direct impacts to the least tern would not be expected as a result of Project development.

The red-headed woodpecker is listed as a SCP species due to population decline and habitat destruction or degradation (NDGF 2015). The species has been found in deciduous woodlands, river bottoms, parks, shelterbelts, roadsides, agricultural areas, or in cities (NDGF 2015). Key areas for this species include the upper portion of the Little Missouri River, the lower Missouri River Valley, and the southern portion of the Red River Valley (NDGF 2015). Given the lack of key area presence in conjunction with the regularly occurring industrial activities, direct impacts to the red-headed woodpecker as a result of project development would not be expected.

Mammals

Mammal species listed as key SCP in the Missouri River System/Breaks Focus Area are as follows: river otter (*Lontra canadensis*), northern long-eared bat (*Myotis septentrionalis*), western small-footed bat (*Myotis ciliolabrum*), long-legged bat (*Macrophyllum macrophyllum*), long-eared bat (*Myotis evotis*), little brown bat (*Myotis lucifugus*), and big brown bat (*Eptesicus fuscus*) (NDGF 2015). The northern long-eared bat is federally listed as endangered and is included in Table 10 above.

The river otter is listed as a SCP species due to historic occurrences throughout North Dakota; however, the species is currently considered uncommon in the state (NDGF 2015). River otters inhabit wetlands and woodland riparian habitat within approximately 300 yards of a river or stream (NDGF 2015). Notably, habitats that retain open water are critical for providing food sources for the species. Key areas for the species include the Red River of the North (and associated tributaries); reports of occurrence in the Missouri River have been noted, but no population has been identified as of 2015 (NDGF 2015). Direct impacts to the species from the Project would not be anticipated.

Direct impacts to the western small-footed bat, long-legged bat, long-eared bat, little brown bat, and big brown bat are not anticipated. The western small-footed bat, long-legged bat, and long-eared bat species are considered rare in North Dakota, while the little brown bat and big brown bat are considered common residents (NDGF 2015). Although little brown bats and big brown bats are considered common residents, no potential bat roosting or foraging habitat exists within the Project site or would be disturbed during construction or operation of the proposed Project. Additionally, no

hibernacula are present within the Project Corridor or surrounding area. Given the lack of suitable roosting and foraging habitat within the proposed Project site, in conjunction with the industrial operations presently occurring at the site, impacts to SCP bat species would be unlikely.

Reptiles/Amphibians

Reptile and amphibian species listed as key SCP in the Missouri River System/Breaks Focus Area are as follows: smooth softshell turtle (*Apalone mutica*), spiny softshell turtle (*Apalone spinifera*), and false map turtle (*Graptemys pseudogeographica*) (NDGF 2015).

The smooth softshell turtle is listed as a year-round resident with a rare abundance in the state (NDGF 2015). The species has only been verified in the extreme lower portion of the Missouri River system, where a large river with sandy beaches or sandbars is present (NDGF 2015). The habitat alteration of the Missouri River has adversely impacted the species habitat, leading to only a handful of documented occurrences (NDGF 2015).

The spiny softshell turtle is listed as a year-round resident with a rare abundance in the state (NDGF 2015). The species has only been documented in the tributaries of the Missouri River below Garrison Dam and the head waters of Lake Oahe (NDGF 2015). Like the smooth softshell, the species prefers large rivers with sandy beaches or sandbars (NDGF 2015). The habitat alteration of the Missouri River has adversely impacted the species habitat, leading to only a marginal number of documented occurrences (NDGF 2015).

The false map turtle is listed as a year-round resident with a rare abundance in the state (NDGF 2015). Similar to the spiny softshell turtle, this species has only been documented in the tributaries of the Missouri River below Garrison Dam (NDGF 2015). Much of the habitat alternation in and surrounding the Missouri River has led to the habitat and population decline of the false map turtle (NDGF 2015).

Due to a lack of suitable riverine habitat in the proposed Project area, it is unlikely that activities associated with the Project would impact SCP turtle species.

Fish

Fish species listed as key SCP in the Missouri River System/Breaks Focus Area are as follows: sturgeon chub (*Macrhybopsis gelida*), sicklefin chub (*Macrhybopsis meeki*), northern redbelly dace (*Chrosomus eos*), flathead chub (*Platygobio gracilis*), blue sucker (*Cycleptus elongatus*), paddlefish (*Polyodon spathula*), pallid sturgeon (*Scaphirhynchus albus*), and burbot (*Lota lota*) (NDGF 2015).

Direct impacts to the sturgeon chub, sicklefin chub, northern redbelly dace, flathead chub, blue sucker, paddlefish, pallid sturgeon, and burbot would not be expected as a result of the proposed Project. All of the aforementioned species are considered to be rare, uncommon, or declining in North Dakota (NDGF 2015). The Project is not anticipated to impact SCP fish species.

6.8.2 Impacts/Mitigation

The Project is anticipated to have minimal impacts on wildlife and associated habitat.

While wildlife may potentially use the area, the past and present disturbances for MRY operations provide limited, minimally vegetated wildlife habitat.

As discussed above, federally listed species are not anticipated to be present in the Project area. As a result, the Project is not anticipated to impact federally listed species.

Migratory bird species have a low potential to occur in the vicinity of the Project due to the lack of suitable nesting and foraging habitat, and direct impacts to migratory birds are not anticipated. Indirect impacts could occur to migratory bird species residing in habitats adjacent to the Project site due to increased noise, fugitive dust, and human presence associated with construction activities. However, any impacts from the Project would be short-term and similar to existing activities at the MRY site.

Based on a general lack of suitable habitat in the proposed Project area, the Project is unlikely to have direct or indirect impacts on SCP. Any indirect impacts would be temporary and similar to those described for migratory birds. Given the lack of suitable roosting and foraging habitat within the proposed Project site, in conjunction with the industrial operations presently occurring at the site, impacts to SCP bat species would be unlikely. Additionally, no tree clearing is needed for the Project.

Additionally, the DOE is engaged in Section 7 consultation with the USFWS and the results of that ongoing consultation will be considered in the ultimate determination made by the DOE in its NEPA review, which is anticipated to be issued in the third quarter of 2024.

7 POTENTIAL PERMITS/APPROVALS

Table 11 outlines the federal, state, county, and township permits or approvals that have been identified as potentially required for the construction and operation of the Project. Permits dependent on the final Project design will be applied for after receiving PSC approval, but prior to construction.

Table 11. Potential Permits and Approvals Required

Agency	Type of Approval	Status	Need
Federal			
USFWS	Section 7 Consultation	Complete	Effects determination for NEPA compliance.
State Historical Society of North Dakota/State Historic Preservation Office of North	Section 106, National Historic Preservation Act Compliance	Complete	Required for any projects that receive federal funding, permits, or approvals.

Agency	Type of Approval	Status	Need
Dakota			
DOE	NEPA Compliance	In process	Required for any project with a federal nexus. Federal agency must analyze and make a determination regarding the environmental consequences of the proposed action.
State			
PSC	Certificate of Site Compatibility and Route Permit Transmission Facility	In process	Required for construction of transmission facility.
North Dakota Department of Environmental Quality	National Pollutant Discharge Elimination System Permit: General Construction Storm	To be obtained (as needed)	Required for disturbance of over one acre of land and a stormwater pollution prevention plan must be prepared.
North Dakota Highway Patrol	Oversize/Overweight Permit	To be obtained (as needed)	Required to transport oversize loads on state roads.
County/Townships			
Oliver County	Building Permit	To be obtained (as needed)	Required for new uses, altered permitted uses, and conditional uses.
Oliver County or Organized Township(s)	Oversize/Overweight Permit	To be obtained (as needed)	Required to transport oversize loads on local roads.

8 FACTORS CONSIDERED

The North Dakota Energy Conversion and Transmission Facility Siting Act lists 11 factors to guide the PSC in the evaluation and designation of the site of the facility (NDCC Section 49-22-09).

8.1 Public Health and Welfare, Natural Resources, and the Environment

The preceding sections discuss the research and investigations relating to the effects of the Project on public health and welfare, natural resources, and the environment. These effects and the proposed measures to minimize these effects are summarized in Section 6.0.

8.2 Technologies to Minimize Adverse Environmental Effects

The Applicant will utilize the most current technologies that minimize impacts to the environment. Current technologies include the use of bundled conductors to minimize corona sound and EMF effects. The Project will be designed and constructed according to APLIC standards (APLIC 2012) to limit potential impacts to raptors, bat, and avian species.

8.3 Potential for Beneficial Uses of Waste Energy

This factor is not applicable to the Project. No waste energy is produced by a transmission line.

8.4 Unavoidable Adverse Environmental Effects

Unavoidable adverse environmental effects are described for each resource area in Section 6.0. Installation of Project structures will have a permanent impact. However, as a re-location Project, the additional impact is minimal and the Project is located within a previously disturbed, industrial site. Additional unavoidable effects include visual effects and sound and air emissions related to construction.

8.5 Alternatives to Proposed Site

No other routes were considered because the proposed Route: (1) remains on MPC owned land; (2) is out of the path of future construction; (3) avoids existing infrastructure and MPC assets; and (4) remains in close proximity to the generation resource and transmission infrastructure the existing line currently serves. Additionally, the Project Route was selected to comply the exclusion, avoidance, selection, and policy criteria identified in NDAC Section 69-06-08-02.

8.6 Irreversible and Irretrievable Commitment of Natural Resources

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the use of these resources have on future generations. Irreversible effects primarily result from use or destruction of a specific resource that cannot be replaced within a reasonable timeframe.

Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action. There are few commitments of resources associated with this Project that are irreversible and irretrievable, but these include those resources primarily related to construction.

Labor and natural resources will be used in the fabrication and preparation of construction materials. These materials are usually not retrievable. Construction resources that will be used include aggregate resources, steel, and hydrocarbon fuel. Each structure requires the construction of a direct embedded foundation approximately 3 feet in diameter and approximately 11 to 16 feet deep (tangent structures) and 17-20 feet deep (dead end structures). During construction, vehicles will be traveling to and from the site, utilizing hydrocarbon fuels. These resources are not in short supply, and their use will not have an adverse effect on the availability of these resources. In addition, the anticipated benefits of the Project will balance the irretrievable commitment of resources resulting from the construction of the Project.

8.7 Direct and Indirect Economic Impacts

Direct economic impacts include wages paid to consultants, construction workers, and resource providers (e.g., gravel) during Project development and construction. Indirect economic impacts would include recirculation of dollars paid within the surrounding community.

8.8 Existing Development Plans of the State, Local Government, and Private Entities at or in the Vicinity of the State

No conflicts are anticipated with existing state and local government and private entities' development plans. Rather, as discussed above, the purpose of the Project is to enable construction of Project Tundra, while also avoiding impacts to the existing industrial uses on the MPC site and allowing continued use of the existing 230-kV transmission line.

8.9 Effect of Site on Cultural Resources

As discussed in Section 6.4, the Project will not impact existing scenic areas, historic sites or structures, or paleontological or archaeological sites.

8.10 Effect of Site on Biological Resources

Detailed discussion of potential impacts and proposed mitigation measures on biological resources is provided in Section 6.8. The Project will be designed and constructed following APLIC recommendations (APLIC 2012) to minimize the risk of electrocution for raptor, bat, and avian species.

8.11 Agency Comments

Tribal, agency, and entity coordination has been conducted as part of the DOE's EA development process. The following were sent consultation letters and/or notification of the availability of the EA by the DOE:

- Bureau of Indian Affairs
- National Association of State Energy Officials
- National Association of Tribal Historic Preservation Officers

- North Dakota Department of Environmental Quality (NDDEQ)
- NDGF
- North Dakota Industrial Commission
- State and Tribal Government Working Group
- Army Corps of Engineers
- Department of the Interior, Regional Environmental Officer
- EPA, Region 8
- USFWS
- Forest Service (Local Office)
- Apache Tribe of Oklahoma
- Fort Belknap Indian Community of the Fort Belknap Reservation of Montana
- Three Affiliated Tribes of the Fort Berthold Reservation, North Dakota

Of the above agencies, entities, and Tribes, comments were provided by the EPA and the NDDEQ. Additionally, the DOE is engaged in formal Section 7 and Section 106 consultation processes with the USFWS and the SHPO/area Tribes, respectively. As noted in Section 6.4 above, the SHPO issued concurrence letters on reports covering areas within the Project Corridor and adjacent workspaces. Copies of the EPA, NDDEQ, and SHPO correspondence are provided in **Appendix G**.

9 QUALIFICATIONS OF CONTRIBUTORS

Table 12. Qualifications of Contributors

Name	Responsibilities	Education and Experience
Shannon Mikula	Environmental Manager	Juris Doctorate, 11 years
Samuel Schmitz	Deputy General Counsel	Juris Doctorate, 14 years
Ryan Brorby	Substation Manager	P.E., 19 years
Kacey Borin	Environmental Specialist	B.S. Ecology & Biodiversity, 2 years
Wayne Lembke	Engineering Manager – Transmission & GIS	P.E., 18 years
Elijah Sack	GIS Specialist	B.S., 6 years

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