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November 30, 2022

VIA E-FILING

Mr. Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101

Re: *In the Matter of the Application of Minnesota Power for the HVDC Modernization Project*
MPUC Docket No. E015/CN-22-607

Dear Mr. Seuffert:

Minnesota Power respectfully submits this Request for Exemptions from Certain Certificate of Need Application Content Requirements to the Minnesota Public Utilities Commission pursuant to Minnesota Rule 7849.0200, Subp. 6.

If you have any questions regarding this filing, please contact me at (218) 723-3963 or dmoeller@allete.com.

Yours truly,

David R. Moeller
Senior Regulatory Counsel

Enclosure
cc: Service List

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

IN THE MATTER OF THE APPLICATION OF
MINNESOTA POWER FOR A CERTIFICATE OF
NEED FOR THE HVDC MODERNIZATION
PROJECT

MPUC Docket No. E015/CN-22-607

**REQUEST FOR EXEMPTIONS FROM
CERTAIN CERTIFICATE OF NEED
APPLICATION CONTENT
REQUIREMENTS**

I. INTRODUCTION

Minnesota Power (or the “Company”) respectfully submits this request for exemptions from certain content requirements for a Certificate of Need application for the High-Voltage Direct-Current (“HVDC”) Modernization Project, (the “HVDC Modernization Project” or “Project”), pursuant to Minn. R. 7849.0200, subp. 6. Minnesota Power intends to file a combined Application for a Certificate of Need and Route Permit for the Project pursuant to Minn. Stat. §§ 216B.243 and 216E.03 in the first quarter of 2023.

The Project involves modernizing and upgrading both HVDC terminals for the 465-mile-long HVDC transmission line (“HVDC Line”) and interconnecting the upgraded HVDC terminals to the existing alternating-current (“AC”) transmission system. These HVDC terminals are currently located near the Arrowhead Substation in Hermantown, Minnesota and the Center Substation in Center, North Dakota. In order to modernize the HVDC terminals and implement the latest technology, new buildings and electrical infrastructure need to be constructed on a new site near the existing HVDC terminals. In Minnesota, to connect the new HVDC terminal to the existing AC system, the Project would require the construction of a new St Louis County 345 kilovolt (“kV”)/230 kV substation located less than one mile west of the current Arrowhead Substation. The new HVDC terminal would be connected to the St Louis County Substation by less than one mile of 345 kV large high-voltage transmission line (“LHVTL”)¹ and the new St Louis County Substation would be connected to the existing Arrowhead Substation by two parallel 230 kV LHVTLs less than one mile in length. Additionally, a short portion of the existing ±250 kV HVDC Line

¹ As defined by Minn. Stat. § 216B.2421, subd. 2(2); Minn. R. 7849.0010, subp. 14. The exemption found in Minn. Stat. 216B.243, subd. 8(a)(4) for “a high-voltage transmission line of one mile or less required to connect a new or upgraded substation to an existing, new, or upgraded high-voltage transmission line” does not apply because the proposed LHVTL in Minnesota is greater than one mile in length.

in Minnesota will need to be reconfigured to terminate at the new HVDC terminal. The Project is currently scheduled to be in service in 2027.

The HVDC Modernization Project is needed to modernize aging HVDC assets, continue to position the transmission grid for clean energy transition, and improve the reliability of the transmission system in Minnesota and North Dakota. The existing HVDC terminal has operated for 45 years, 15 years in excess of its 30-year design life. In recent years Minnesota Power has experienced HVDC terminal outages due to failures in the control system, power electronics, transformers, and other components. Based on experience with other electric system components, the failure rate is expected to increase in both frequency and duration, which is of particular concern for the existing HVDC system because of limited parts availability. The orderly replacement of the HVDC terminal equipment is prudent to ensure continuous efficient delivery (and potential expansion) of Minnesota Power's renewable, carbon-free energy resources into the future.

In addition to the replacement of the existing HVDC terminals, the new HVDC technology implemented for the Project will be designed to provide voltage regulation, frequency response, blackstart capability, and bidirectional power transfer capability; all of which will enable Minnesota Power and the region to continue to support our clean energy transition.

A Certificate of Need is required under Minn. Stat. § 216B.243 before a high voltage transmission line of the voltage and length proposed for the Project is constructed. Minnesota Power believes that certain Certificate of Need application content requirements in Minn. R. Ch. 7849 should be modified to better address the nature of this Project. These rules were broadly drafted to encompass the content requirements for both LHVTLs, like the Project, and large generation facilities. This petition seeks exemptions to those requirements that are not applicable to a transmission line project. The Minnesota Public Utilities Commission ("Commission") has previously allowed similar adjustments for other transmission line projects.² Therefore, Minnesota Power respectfully requests that the Commission grant exemptions from certain requirements as provided under Minn. R. 7849.0200, subp. 6. In lieu of some content requirements, Minnesota Power proposes to submit alternative information that it believes will better inform the Commission's decision regarding the need for the Project.

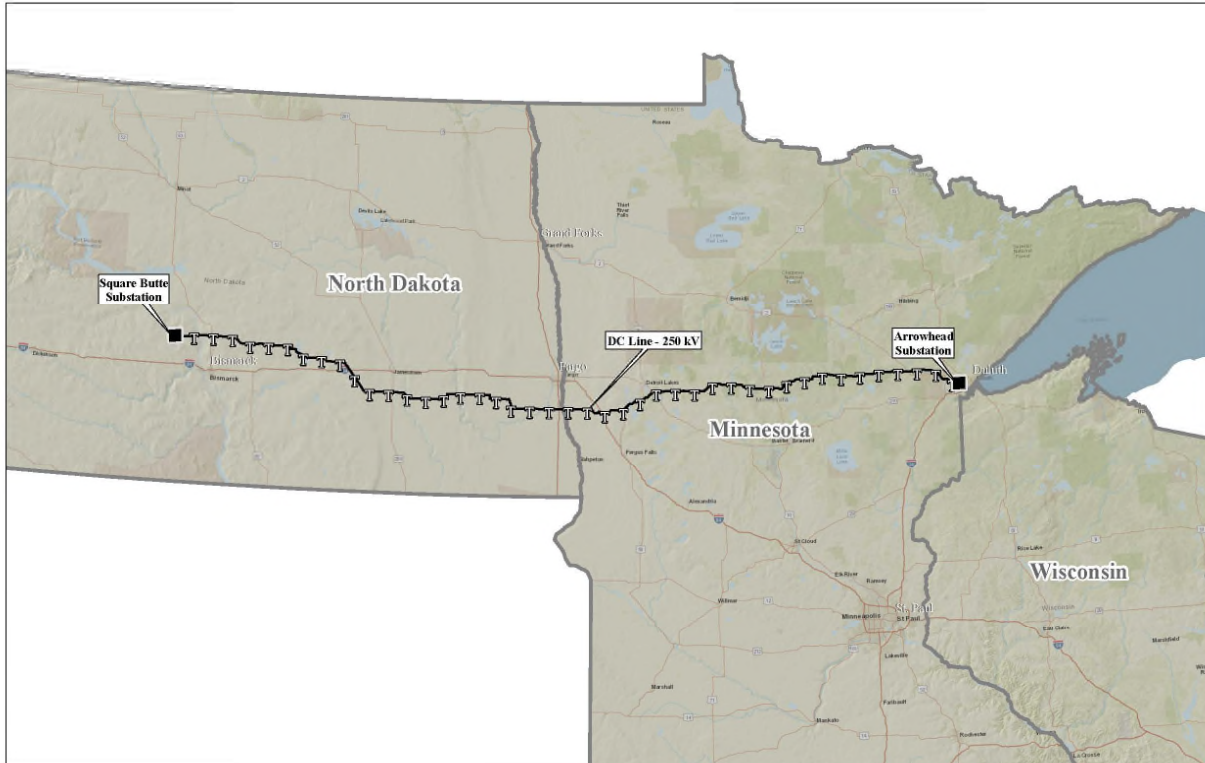
II. BACKGROUND

In early 2010, Minnesota Power finalized its purchase of a 465 mile, ±250 kV HVDC line with HVDC terminals located in Center, North Dakota, and Hermantown, Minnesota. After

² See *In re Application of Minnesota Power for a Certificate of Need for the Duluth Loop Reliability Project in St. Louis Cnty.*, Docket No. E-015/CN-21-140, Order Approving Notice Plan and Granting Variances and Exemptions (May 17, 2021); *In re Request of Minnesota Power for a Certificate of Need for the Great Northern Transmission Line*, Docket No. E-015/CN-12-1163, Order Approving Notice Plan, Granting Variance Request, and Approving Exemption Request (Feb. 28, 2013); *In re Application of Great River Energy and Minnesota Power for a Certificate of Need for a 115 kV High Voltage Transmission Line in St. Louis and Carlton Counties*, Docket No. E-002/CN-10-973, Order Approving Exemptions and Proposed Provision of Alternative Data (Nov. 2, 2010).

a contested case proceeding, the Commission approved the Company’s purchase of the HVDC Line from the Square Butte Cooperative, finding the proposed transactions associated with the acquisition to be reasonable, prudent, and in the public interest.³ This HVDC system is shown in Figure 1.

Figure 1. Existing HVDC Line Path Map



The HVDC Line and its HVDC terminals at the Center and Arrowhead substations were built in the 1970s to bring electricity from the coal-fired Milton R. Young 2 (“Young 2”) generating station in Center, North Dakota, directly to Minnesota Power’s customers. Minnesota Power’s purchase of the HVDC Line in 2010 cleared the way for the line to be repurposed to facilitate the delivery of wind power generated in North Dakota directly to Minnesota Power’s customers. Minnesota Power subsequently purchased and developed a portfolio of approximately 600 MW of North Dakota wind that now relies on the HVDC Line for reliable and efficient transmission deliverability. In recent years, Minnesota Power has been evaluating the need for modernization of the HVDC terminals to extend the life and expand the usefulness of the HVDC Line.

The Center and Arrowhead HVDC terminals were originally designed by General Electric (“GE”) for a 30 year operating lifetime. They have now been operating reliably for over 45

³ See *In re Minnesota Power’s Petition to Purchase Square Butte Cooperative’s Transmission Assets and for Restructuring Power Purchase Agreements from Milton R. Young Unit 2 Generating Station*, Docket No. E-015/PA-09-526, Order Granting Petition with Conditions (Dec. 21, 2009).

years, 15 years in excess of their original design life. The main components of the HVDC terminals include power electronics (thyristor valves) and their associated cooling system, converter transformers, smoothing reactors, harmonic filters and reactive resources to complete the conversion between AC and direct current (“DC”), as well as the control system that governs the operation of the line. The original vendor, GE, left the HVDC business in the 1980s and in recent years it has been increasingly difficult to procure spare parts for the components of the HVDC terminals as the technology has become obsolete and the original designers are well into retirement. Minnesota Power has researched reverse engineering solutions to this technology issue, but has had limited results and thus spare and replacement parts for the HVDC terminals are becoming increasingly limited. As component failures continue to occur and spare parts are consumed, the risk of extended outages due to failures in the HVDC terminals will continue to grow. At some point, one or both poles may be rendered inoperable due to critical component failures.

Modernizing the HVDC terminals by replacing the original HVDC terminal equipment with the latest HVDC technology will greatly reduce the frequency and duration of outages due to component failures in the HVDC terminals. In addition to replacement of the existing HVDC terminals, the new HVDC technology implemented for the Project will be designed to provide value-added support to the grid which will enable Minnesota Power and the regional to continue to support our clean energy transition.

A. Need for Replacement of Existing HVDC Terminals

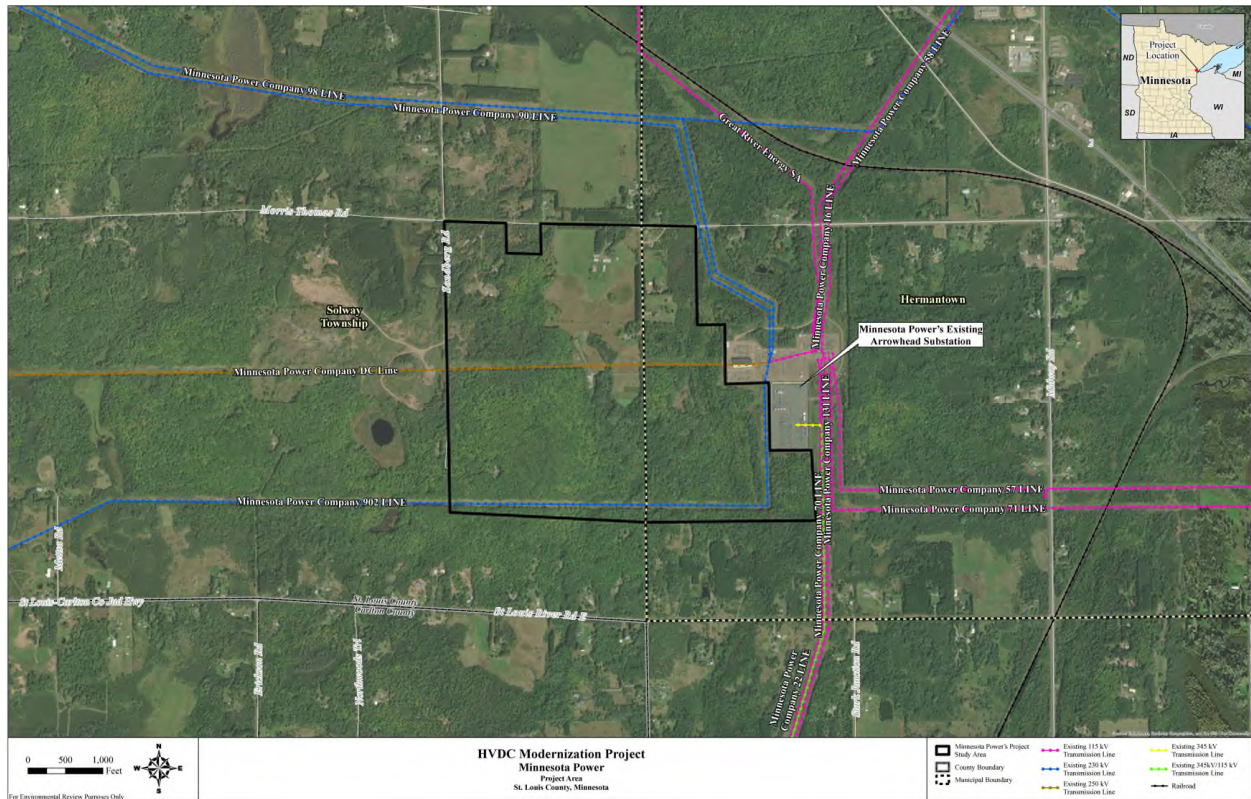
The HVDC Line connecting energy-rich North Dakota to northeastern Minnesota is increasingly valuable for bringing renewable energy from North Dakota to customers in the Company’s service territory. As noted above, the existing HVDC terminal equipment is now over 45 years old, well past its original design life. While the HVDC Line equipment has been reliable for most of its history, forced (unplanned) and scheduled outage hours have increased significantly in the last five years. This is of particular concern for the HVDC system because of limited parts availability for equipment such as pulse transformers, racking, filters, and control equipment. As the frequency and duration of outages due to HVDC terminal equipment failures increases, so does the risk of significant impacts to Minnesota Power’s ability to efficiently deliver its North Dakota wind generation to customers in Northeastern Minnesota.

The Company’s current risk assessment, which is updated annually based on current market prices, has seen significant increases in forward energy market prices for replacement energy. In addition to the high forward market prices, MISO (and neighboring markets like SPP) are seeing unprecedented congestion between generation and load, which the HVDC Line helps to mitigate for Minnesota Power’s wind generation assets. The Company expects future years to show higher replacement energy prices as more baseload coal units retire and grid congestion patterns continue to change.

The HVDC Modernization Project will mitigate risks associated with HVDC terminal equipment outages by replacing the aging HVDC infrastructure with newer and more

reliable HVDC terminal equipment. A visual overview of the HVDC Modernization Project area in Minnesota is provided in Figure 2.

Figure 2: HVDC Modernization Project – Minnesota Portion



The HVDC Modernization Project is currently in the MISO MTEP Appendix B (MTEP Project #4295) and has been reported in the Minnesota Biennial Transmission Projects Report since 2013 under tracking number 2013-NE-N16. Minnesota Power currently anticipates that the HVDC Modernization Project will be completed and placed in service by the end of 2027.

B. Upgrades to HVDC Terminals Will Provide Value-Added Grid Support

The Company proposes to upgrade the HVDC terminals with technology that provides greater grid support functionality to the surrounding transmission system while also being more flexible and adaptable to navigate rapidly-changing system conditions. The orderly replacement of the HVDC terminal equipment is prudent to ensure continuous efficient delivery (and potential expansion) of Minnesota Power's renewable, carbon-free energy resources into the future. This new technology and optionality will enhance the value of the HVDC converter stations for the local and regional power grid in the near-term and over the next several decades.

C. AC Transmission Needed for the HVDC Modernization Project

To complete the modernization and upgrade of the Company's HVDC facilities and keep the existing HVDC Line in service as much as possible to serve its customers and the region, the Company must develop new HVDC terminals on both ends of the line at the Center and Arrowhead substations. As part of the HVDC Modernization Project, the existing ± 250 kV HVDC Line will be rerouted to the new HVDC terminals so that the existing HVDC terminals can be retired. To interconnect the new HVDC terminals to the existing AC transmission system in Minnesota, a new St Louis County 345 kV/230 kV substation will be constructed. The HVDC terminal will be connected to St Louis County Substation by a new 345 kV transmission line, and the St Louis County Substation will be connected to the existing Arrowhead Substation by two parallel 230 kV lines. The new sites will also be designed to accommodate future expansion of the HVDC system and support regional extra-high voltage AC transmission development.

In Minnesota, the Company determined that the most suitable parcels for relocation of the HVDC terminals are located west of the existing Arrowhead Substation. This site is preferable due to its proximity to the existing Arrowhead Substation, the existing HVDC terminal, and the existing HVDC line

III. LEGAL STANDARD AND SUMMARY OF EXEMPTION REQUESTS

Minn. R. 7849.0220, subp. 2, part 7849.0240, and parts 7849.0260 to 7849.0340 specify the content requirements for Certificate of Need applications for LHVTL projects. The Commission has authority to grant exemptions from the requirements of Minnesota Rules Chapter 7849 pursuant to Minn. R. 7849.0200, subp. 6, which provides:

Before submitting an application, a person is exempted from any data requirement of parts 7849.0010 to 7849.0400 if the person (1) requests an exemption from specified rules, in writing to the commission, and (2) shows that the data requirement is unnecessary to determine the need for the proposed facility or may be satisfied by submitting another document. A request for exemption must be filed at least 45 days before submitting an application. The commission shall respond in writing to a request for exemption within 30 days of receipt and include the reasons for the decision. The commission shall file a statement of exemptions granted and reasons for granting them before beginning the hearing.

Based on the standard set forth in this rule, the Commission may grant exemptions when the data requirements: (1) are unnecessary to determine need in a specific case; or (2) can be satisfied by submitting documents other than those required by the rules.⁴ For the

⁴ *In re Application for a Certificate of Need for the Appleton – Canby 115 kV Line*, Docket No. E-017/CN-06-0677, Order Granting Exemptions and Approving Notice Plan (Aug. 1, 2006).

Project, Minnesota Power requests that the Commission grant exemptions from the following rules as they are either unnecessary to determine the need for the Project or can be satisfied by submitting alternative data:

Minnesota Rules	Scope of Exemption
<p><i>Minn. R. 7849.0270, subps. 1-6</i> (Peak Demand and Annual Consumption Forecast; System Revenue Requirements)</p>	<p>Request exemption from providing forecasting and capacity information for Minnesota Power’s system and to provide forecast information from Minnesota Power’s most recent Annual Forecast Report (“AFR”). Request exemption from providing system revenue requirements and provide explanation of how MISO spreads wholesale electricity costs and a general estimate of rate impact of Project on Minnesota Power customers.</p>
<p><i>Minn. R. 7849.0280</i> (System Capacity)</p>	<p>Request full exemption from providing a discussion of the ability of the existing system to meet the forecasted demand for electrical energy identified in response to Minn. R. 7849.0270.</p>
<p><i>Minn. R. 7849.0290</i> (Conservation)</p>	<p>Request exemption from discussing conservation programs and their effect on the forecast information required by Minn. R. 7849.0270. Minnesota Power proposes to provide substitute information on its conservation efforts from its most recent Conservation Improvement Plan and Integrated Resource Plan filings.</p>
<p><i>Minn. R. 7849.0300</i> (Consequences of Delay)</p>	<p>Request to be exempt from providing analysis using three confidence levels. Minnesota Power proposes to provide substitute data regarding potential impacts caused by delay in implementing the Project.</p>
<p><i>Minn. R. 7849.0340</i> (No Facility Alternative)</p>	<p>Request to be exempt from providing analysis using three confidence levels. Minnesota Power proposes to provide substitute data regarding potential impacts caused by no build alternative.</p>

Each of these requests is discussed in more detail below. This request is being made at least 45 days prior to submitting an application for a Certificate of Need as required by Minn. R. 7849.0200, subp. 6.⁵

IV. REQUESTED EXEMPTIONS

A. Minn. R. 7849.0270, subps. 1-6– Peak Demand and Annual Consumption Forecast and System Revenue Requirements

1. Rule 7849.0270, subp. 1 – Peak Demand and Annual Consumption Data

Minn. R. 7849.0270, subp. 1 requires information concerning peak demand and annual consumption for the applicant's entire service area and system. The Project is not proposed to address growing peak demand or system capacity issues. Instead, the Project is designed to upgrade and modernize the existing infrastructure of the HVDC terminals to assure reliability for the coming decades given the age of the infrastructure and the increasing failure rates of certain critical components, while ensuring expandability options for future development. Minnesota Power will provide forecast information from its most recent AFR filed on June 24, 2022 in Docket No. E999/PR-22-11.

2. Rule 7849.0270, subps. 2(A) and 2(B) – Customer Annual Consumption Data

Minn. R. 7849.0270, subps. 2(A) and 2(B) requires an applicant to estimate the number of customers and the amount of energy consumed annually by nine classes of customers (residential, commercial, industrial, farming, etc). Energy consumption data is not relevant to establishing the need for a proposed Project. Transmission systems must be sized so that they have sufficient capacity to operate reliably during periods of peak demand. It is the demand for power during peak times, not the amount of power consumed annually, that is key to determining the need for transmission facilities. Since energy consumption data has no direct impact on transmission planning, the Commission should exempt Minnesota Power from providing this data and accept substitute data in the form of AFR forecast information.⁶

3. Minn. R. 7849.0270, subps. 2(C) and 2(D) – System Demand and Peak Demand

Minn. R. 7849.0270, subp. 2(C) seeks an estimate of the demand for power in the system at the time of annual system peak demand. Minn. R. 7849.0270, subp. 2(D) calls for

⁵ A proposed completeness checklist of the Certificate of Need requirements, reflecting this exemption request, is provided at Attachment A.

⁶ *In re Application of Minnesota Power for a Certificate of Need for the Duluth Loop Reliability Project in St. Louis Cnty.*, Docket No. E-015/CN-21-140, Order Approving Notice Plan and Granting Variances and Exemptions (May 17, 2021); *In re Application of Great River Energy and Minnesota Power for a Certificate of Need for a 115 kV High Voltage Transmission Line in St. Louis and Carlton Counties*, Docket No. E-002/CN-10-973, Order Approving Exemptions and Proposed Provision of Alternative Data (Nov. 2, 2010).

monthly system peak demand data. Instead of the information called for in Minn. R. 7849.0270, subps. 2(C) and (D), the Company proposes to provide data actually utilized in studying and planning the Project and AFR forecast information.

4. Minn. R. 7849.0270, subp. 2(E) – System Revenue Requirements

Minn. R. 7849.0270, subp. 2(E) requires an estimate of the “annual revenue requirement per kilowatt-hour for the system in current dollars.” Minnesota Power proposes to provide the general rate impact of the Project on Minnesota Power’s customers. The Commission has previously granted similar exemption requests for other transmission projects.⁷

5. Minn. R. 7849.0270, subp. 2(F) – Weekday Load Factor

Minn. R. 7849.0270, subp. 2(F) requires an applicant’s average system weekday load factor for each month. Minnesota Power requests an exemption from this requirement because load factor is not a relevant consideration when evaluating the need for a transmission facility. Load factor is a measure of how demand varies over time and is relevant to the need determination for new generation. Load factor has no bearing on the need for a new transmission line. Rather, transmission capacity must be designed to meet peak demand and other system power flow circumstances. This is done to ensure there is sufficient transmission capacity to meet lower levels of instantaneous demand. Thus, Minnesota Power respectfully requests an exemption from this requirement which the Commission has granted in the past for other transmission projects.⁸

6. Minn. R. 7849.0270, subps. 3-6 – Forecast Methodology, Data Base, Assumptions, and Coordination of Forecasts

Minn. R. 7849.0270, subps. 3-6 require the applicant to detail the forecast methodology employed, identify the database used for the forecast, detail the assumptions made in preparing the forecasts provided under subpart 2 of the same Rules part, and a description of load forecast coordination efforts with other systems. As stated above, the need for transmission facilities is not prompted by energy consumption, but rather, by demand during peak times. Thus, instead of providing energy consumption forecasts, Minnesota Power believes that the Company’s most recent AFR will better enable the Commission to evaluate the need for this Project. The AFR discusses forecast

⁷ *In re Application of Minnesota Power for a Certificate of Need for the Duluth Loop Reliability Project in St. Louis Cnty.*, Docket No. E-015/CN-21-140, Order Approving Notice Plan and Granting Variances and Exemptions (May 17, 2021); *In re Application of Great River Energy and Minnesota Power for a Certificate of Need for a 115 kV High Voltage Transmission Line in St. Louis and Carlton Counties*, Docket No. ET2,E-015/CN-10-973, Order Approving Exemptions and Proposed Provision of Alternative Data (Nov. 2, 2010).

⁸ *In re Application of Minnesota Power for a Certificate of Need for the Duluth Loop Reliability Project in St. Louis Cnty.*, Docket No. E-015/CN-21-140, Order Approving Notice Plan and Granting Variances and Exemptions (May 17, 2021); *In re Request of Minnesota Power for a Certificate of Need for the Great Northern Transmission Line*, Docket No. E-015/CN-12-1163, Order Approving Notice Plan, Granting Variance Request, and Approving Exemption Request (Feb. 28, 2013); *In the Matter of the Application of Great River Energy and Minnesota Power for a Certificate of Need for a 115 kV High Voltage Transmission Line in St. Louis and Carlton Counties*, Docket No. ET2,E-015/CN-10-973, Order Approving Exemption Request (Nov. 2, 2010).

methodology, databases, forecast assumptions, and coordination of forecasts with other systems. Minnesota Power respectfully requests an exemption from this requirement, which the Commission has granted in the past for other transmission projects.⁹

In sum, Minnesota Power requests an exemption from the data requirements of Minn. R. 7849.0270, subs. 1-6 and will provide the relevant AFR forecast information. This substitute information is better tailored to the need for the Project and will assist the Commission in evaluating whether the Project is needed.

B. Minn. R. 7849.0280 – System Capacity

Minn. R. 7849.0280 pertains to system capacity and generation data. The general purpose of this section is to provide a discussion of the ability of the existing system to meet the forecasted demand for electrical energy in response to Minn. R. 7849.0270. Part 7849.0280 (A) through (I) pertain to an examination of generation adequacy and do not address transmission planning considerations. Minnesota Power therefore requests that the Commission grant an exemption from part 7849.0280 (A) through (I). The Commission has previously granted exemption requests from part 7849.0280 in several other transmission line Certificate of Need dockets where issues of transmission adequacy, rather than generation adequacy, were at issue.¹⁰

C. Minn. R. 7849.0290 – Conservation

Minnesota Power requests an exemption from Minn. R. 7849.0290, which relates to conservation programs the applicant has in place and their effect on the forecast information called for in Minn. R. 7849.0270. This rule is intended to ensure that regulated load serving utilities fully consider conservation as well as generation when planning for future needs of their customers.¹¹ Minnesota Power's conservation and efficiency information is examined in detail in the resource planning process. All of the information requested by Minn. R. 7849.0290 is contained in Minnesota Power's Integrated Resource Plan and Conservation Improvement Plan ("CIP") filings.¹² Instead of replicating that information in this application, Minnesota Power proposes to present a summary of these filings. This will allow interested parties to pursue their investigation into this issue further through those materials if they wish. The Commission has granted Minnesota Power an

⁹ See, e.g., *In re Application of Minnesota Power for a Certificate of Need for the Duluth Loop Reliability Project in St. Louis Cnty.*, Docket No. E-015/CN-21-140, Order Approving Notice Plan and Granting Variances and Exemptions (May 17, 2021).

¹⁰ *In re Application of Minnesota Power for a Certificate of Need for the Duluth Loop Reliability Project in St. Louis Cnty.*, Docket No. E-015/CN-21-140, Order Approving Notice Plan and Granting Variances and Exemptions (May 17, 2021); *In re Application of Great River Energy and Minnesota Power for a Certificate of Need for a 115 kV High Voltage Transmission Line in St. Louis and Carlton Counties*, Docket No. ET2,E-015/CN-10-973, Order Approving Exemptions and Proposed Provision of Alternative Data (Nov. 2, 2010).

¹¹ *In re Application of Rapids Power LLC for a Certificate of Need for its Grand Rapids Cogeneration Project*, Docket No. IP4/CN-01-1306, Order Granting Exemptions from Filing Requirements at 6 (Oct. 9, 2001).

¹² See Docket Nos. E-015/RP-21-33 and E-015/CIP-20-476.

exemption from this requirement in prior dockets and it is appropriate to do so here as well.¹³

D. Minn. R. 7849.0300 – Consequences of Delay and Minnesota Rule 7849.0340 – No Facility Alternative

Minn. R. 7849.0300 requires detailed information regarding the consequences of delay on three specific statistically-based levels of demand and energy consumption. Similarly, Minn. R. 7849.0340 requires a discussion of the impact on existing generation and transmission facilities at the three levels of demand specified in part 7849.0300 for the no-build alternative. While Minnesota Power will discuss the consequences of delay and a no build alternative in its application, there is no need to discuss these items in terms of three levels of demand. Rather, as noted above, for transmission planning purposes, the relevant inquiry is whether the system can meet peak demand. The Commission has approved similar partial exemption requests from the requirements of Minn. R. 7849.0300 and 7849.0340 in other transmission line Certificate of Need dockets.¹⁴

V. CONCLUSION

Minnesota Power respectfully requests that the Commission grant the requested exemptions to allow Minnesota Power to provide information in its application that is relevant to determining the need for the HVDC Modernization Project without imposing unnecessary filing burdens.

¹³ *In re Application of Minnesota Power for a Certificate of Need for the Duluth Loop Reliability Project in St. Louis Cnty.*, Docket No. E-015/CN-21-140, Order Approving Notice Plan and Granting Variances and Exemptions (May 17, 2021); *In re Request of Minnesota Power for a Certificate of Need for the Great Northern Transmission Line*, Docket No. E015/CN-12-1163, Order Approving Notice Plan, Granting Variance Request, and Approving Exemption Request (Feb. 28, 2013).

¹⁴ *In re Request of Minnesota Power for a Certificate of Need for the Great Northern Transmission Line*, Docket No. E-015/CN-12-1163, Order Approving Notice Plan, Granting Variance Request, and Approving Exemption Request (Feb. 28, 2013); *In re Application of Northern States Power Company d/b/a Xcel Energy and Great River Energy for a Certificate of Need for the Upgrade of the Southwest Twin Cities (SWTC) Chaska Area 69 kV Transmission Line to 115 kV Capacity*, Docket No. E-002/CN-11-826, Order Granting The Company' Exemption Request (Nov. 4, 2011).

November 30, 2022

Respectfully submitted,

MINNESOTA POWER

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ATTORNEYS FOR MINNESOTA POWER

**HVDC Modernization Project
Certificate of Need Application
Completeness Checklist**

Authority	Required Information	Location in Application
Minn. R. 7829.2500, Subp. 2	Brief summary of filing on separate page sufficient to apprise potentially interested parties of its nature and general content	
Minn. R. 7849.0200, Subp. 2	Title Page and Table of Contents	
Minn. R. 7849.0200, Subp. 4	Cover Letter	
Minn. R. 7849.0220, Subp. 3	Joint Ownership and Multiparty use	N/A
Minn. R. 7849.0240	Need summary and additional considerations	
Subp. 1	Summary of the major factors that justify the need for the proposed facility	
Subp. 2	Relationship of the proposed facility to the following socioeconomic considerations:	—
A.	Socially beneficial uses of the output of the facility	
B.	Promotional activities that may have given rise to the demand for the facility	
C.	Effects of the facility in inducing future development	
Minn. R. 7849.0260	Proposed LHVTL and Alternatives	—
A.	A description of the type and general location of the proposed line, including:	—
(1)	Design voltage	
(2)	Number, sizes and types of conductors	

Authority	Required Information	Location in Application
(3)	Expected losses under projected maximum loading and under projected average loading in the length of the line and at terminals or substations	
(4)	Approximate length of the proposed line	
(5)	Approximate locations of DC terminals or AC substations on a map	
(6)	List of likely affected counties	
B.	Discussion of the available alternatives including:	
(1)	New generation	
(2)	Upgrading existing transmission lines	
(3)	Transmission lines with different voltages or conductor arrays	
(4)	Transmission lines with different terminals or substations	
(5)	Double circuiting of existing transmission lines	
(6)	If facility for DC (AC) transmission, an AC (DC) transmission line	
(7)	If proposed facility is for overhead (underground) transmission, an underground (overhead) transmission line	
(8)	Any reasonable combination of alternatives (1) – (7)	
C.	For the facility and for each alternative in B, a discussion of:	—
(1)	Total cost in current dollars	
(2)	Service life	

Authority	Required Information	Location in Application
(3)	Estimated average annual availability	
(4)	Estimated annual O&M costs in current dollars	
(5)	Estimate of its effect on rates system wide and in Minnesota	
(6)	Efficiency expressed for a transmission facility as the estimated losses under projected maximum loading and under projected average loading in the length of the transmission line and at the terminals or substations	
(7)	Major assumptions made in subitems (1) – (6)	
D.	A map (of appropriate scale) showing the applicant’s system or load center to be served by the proposed LHVTL	
E.	Such other information about the proposed facility and each alternative as may be relevant to determination of need.	
Minn. R. 7849.0270	Content of Forecast	—
Minn. R. 7849.0270, Subp. 1	Peak demand and annual consumption data within the applicant’s service area and system	EXEMPT provided alternative data is supplied
	ALTERNATIVE DATA –Minnesota Power’s most recent Annual Electric Utility Forecast Report	
Minn. R. 7849.0270, Subp. 2	Minnesota forecast data; forecast demand data by customer class, peak period, and month; estimated system annual revenue per kilowatt hour; estimated average weekday system load factor by month.	EXEMPT except as noted below and provided alternative data is supplied
	ALTERNATIVE DATA –Minnesota Power’s most recent Annual Electric Utility Forecast Report	
	Subp. 2 (E) – Alternative explanation of how wholesale electricity costs are	

Authority	Required Information	Location in Application
	spread and general financial effect on Minnesota Power customers.	
Minn. R. 7849.0270, Subp. 3	Detail of the forecast methodology used in subp. 2.	EXEMPT provided alternative data is supplied
Minn. R. 7849.0270, Subp. 4	Discussion of database used in current forecasting.	EXEMPT provided alternative data is supplied
Minn. R. 7849.0270, Subp. 5	Discussion of each essential assumption made in forecast preparation and sensitivity to variations in assumptions.	EXEMPT provided alternative data is supplied
Minn. R. 7849.0270, Subp. 6	Coordination of forecasts.	EXEMPT provided alternative data is supplied
	ALTERNATIVE DATA FOR SUBPS. 3-6 – Minnesota Power’s most recent Annual Electric Utility Forecast Report	
Minn. R. 7849.0280	System Capacity	—
	Description of ability of existing system to meet demand forecast including:	—
A.	Power planning programs	EXEMPT
B.	Seasonal firm purchases and sales	EXEMPT
C.	Seasonal participation purchases and sales	EXEMPT
D.	Load and generation capacity data requested in subitems 1-13 for summer and winter seasons for each forecast year, including anticipated purchases, sales, and capacity retirements and additions except those that depend on a not yet issued certificate of need.	EXEMPT
E.	Summer and winter season load generation and capacity in years subsequent to application contingent on proposed facility	EXEMPT

Authority	Required Information	Location in Application
F.	Summer and winter season load generation and capacity including all projected purchases, sales and generation in years subsequent to application	EXEMPT
G.	List of proposed additions and retirements in generating capacity for each forecast year subsequent to application	EXEMPT
H.	Graph of monthly adjusted net demand and capability with difference between capability and maintenance outages plotted	EXEMPT
I.	Appropriateness and method of determining system reserve margins	EXEMPT
Minn. R. 7849.0290	Conservation Programs	—
A.	Persons responsible for energy conservation and efficiency programs	EXEMPT provided alternative data is supplied
B.	List of energy conservation and efficiency goals and objectives	EXEMPT provided alternative data is supplied
C.	Description of programs considered, implemented and rejected	EXEMPT provided alternative data is supplied
D.	Description of major accomplishments in conservation and efficiency	EXEMPT provided alternative data is supplied
E.	Description of future plans with respect to conservation and efficiency	EXEMPT provided alternative data is supplied
F.	Quantification of the manner by which these programs impact the forecast	EXEMPT provided alternative data is supplied
	ALTERNATIVE DATA FOR A-F – Minnesota Power will provide a summary of its 2021 Integrated Resource Plan and Conservation Improvement Program filings.	
Minn. R. 7849.0300	Consequence of Delay	EXEMPT from three levels of demand

Authority	Required Information	Location in Application
Minn. R. 7849.0310	Required Environmental Information	
Minn. R. 7849.0330	Transmission Facilities	—
	Data for each alternative that would require LHVTL construction including:	—
A.	For overhead transmission lines	—
(1)	Schematics showing dimensions of support structures	
(2)	Discussion of electric fields	
(3)	Discussion of ozone and nitrogen oxide emissions	
(4)	Discussion of radio and television interference	
(5)	Discussion of audible noise	
B.	For underground transmission facilities:	N/A
(1)	Types and dimensions of cable systems	N/A
(2)	Types and qualities of cable system materials	N/A
(3)	Heat released in kW per foot of cable	N/A
C.	Estimated right-of-way required for the facility	
D.	Description of construction practices	
E.	Description of O&M practices	

Authority	Required Information	Location in Application
F.	Estimated workforce required for construction and O&M	
G.	Description of region between endpoints in likely area for routes emphasizing a three mile radius of endpoints including:	—
(1)	Hydrological features	
(2)	Vegetation and wildlife	
(3)	Physiographic regions	
(4)	Land use types	
Minn. R. 7849.0340	No-Facility Alternative	EXEMPT from three levels of demand

IN THE MATTER OF THE APPLICATION OF
MINNESOTA POWER FOR THE HVDC
MODERNIZATION PROJECT

MPUC DOCKET No. E015/CN-22-607

CERTIFICATE OF SERVICE

Roshelle L. Herstein certifies that on the 30th day of November, 2022, on behalf of Minnesota Power, she efiled a true and correct copy of **Request for Exemption from Certain Certificate of Need Application Content Requirements** via eDockets (www.edockets.state.mn.us) by uploading the same to Docket No. E015/CN-22-607. Said document was also served as designated on the attached service list on file with the Minnesota Public Utilities Commission, designated as “PPSA General List 7850.2100-1A Permit Filings.”

/s/ Roshelle L. Herstein

Roshelle L. Herstein

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