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February 14, 2024

VIA E-FILING

The Honorable James Mortenson
Administrative Law Judge
Office of Administrative Hearings
600 North Robert Street
P.O. Box 64620
St. Paul, MN 55164-0620

Re: *In the Matter of the Application of Minnesota Power for a Certificate of Need and Route Permit for the HVDC Modernization Project in Hermantown, Saint Louis County*
OAH Docket No. 5-2500-39600; MPUC Docket Nos. E015/CN-22-607 and E015/TL-22-611

Dear Judge Mortenson:

On behalf of Minnesota Power, enclosed for filing in the above-referenced matters please find the Direct Testimony and Schedules of the following witnesses:

- Daniel Gunderson;
- Daniel McCourtney; and
- Christian Winter.

The Company has identified the Trade Secret and Non-Public Information contained in the Direct Testimony and Schedules pursuant to Minn. R. 7829.0500. The Company's justification for these designations is attached to this filing letter as Attachment 1.

The Direct Testimony and Schedules contain information that is **CRITICAL ENERGY INFRASTRUCTURE INFORMATION** and should be treated as **HIGHLY CONFIDENTIAL TRADE SECRET** information in accordance with Paragraph 20 of the Protective Order. The applicable documents are marked accordingly in both filename and in the header of the documents, themselves, where possible. Such information may only be reviewed by individuals that have properly entered into the requisite Non-Disclosure Agreement consistent with the Protective Order.

By copy of this letter, I am providing service to those listed on the service lists on file with the Minnesota Public Utilities Commission. If you have any questions regarding this filing, please contact me at (218) 723-3963 or dmoeller@allete.com.

Yours truly,

A handwritten signature in black ink that reads "David R. Moeller". The signature is written in a cursive, flowing style.

David R. Moeller
ALLETE Senior Regulatory Counsel

Enclosures
cc: Service Lists

**STATEMENT REGARDING JUSTIFICATION FOR EXCISING
TRADE SECRET INFORMATION**

**Direct Testimony
MPUC Docket Nos. E015/CN-22-607; E015/TL-22-611
OAH Docket No. 5-2500-39600**

Pursuant to the Minnesota Public Utilities Commission's Revised Procedures for Handling Trade Secret and Privileged Data in furtherance of Minn. Stat. § 13.37 and Minn. R. 7829.0500, Minnesota Power has designated portions of its Direct Testimony and schedules as Trade Secret.

The information constitutes information Minnesota Power considers to be trade secret, as defined by Minn. Stat. § 13.37, subd. 1(b). In addition, certain information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a).

Minnesota Power believes that the attached Index of Non-Public/Trade Secret Information Contained in Direct Testimony provide the justification as to why the information excised should remain a trade secret under Minn. Stat. § 13.37. The attached Index of Non-Public/Trade Secret Information Contained in Direct Testimony summarizes the portions of Direct Testimony and schedules that have been designated as non-public and/or trade secret and the justification for that designation. Minnesota Power respectfully requests the opportunity to provide additional justification in the event of a challenge to the trade secret designation provided herein.

**Index of Non-Public/Trade Secret Information Contained
in Direct Testimony**

Item/Location	Justification
Christian Winter Direct Testimony and Supporting Schedules	
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 5</p> <p>ATC IR 005.01 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: Center HVDC Reactive Power Assessment</p> <p>Author: Minnesota Power</p> <p>General Import: This study was performed by Minnesota Power to evaluate reactive resource coordination and system integration for the LCC HVDC alternative when it was being evaluated in 2020. The study report also documents the initial development of the internal power flow models that Minnesota Power has been using for most of its HVDC analysis. The study report, automation files, models, and raw results are provided.</p> <p>Date Prepared: May 27, 2020</p>

Item/Location	Justification
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 6</p> <p>ATC IR 005.02 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: Square Butte HVDC Upgrade Project Specification Studies, Reactive Power</p> <p>Author: RBJ Engineering Corp.</p> <p>General Import: This study was performed for Minnesota Power by RBJ Engineering to evaluate reactive resource requirements and reactive power supply design at the Arrowhead and Center HVDC converter stations for the LCC HVDC alternative when it was being evaluated in 2020. The study report received from the consultant is provided.</p> <p>Date Prepared: March 10, 2021</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 7</p> <p>ATC IR 005.03 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has</p>

Item/Location	Justification
	<p>been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: Square Butte HVDC Upgrade Project Specification Studies, Short Circuit Studies and SSTI Screening Analysis</p> <p>Author: RBJ Engineering Corp.</p> <p>General Import: This study was performed for Minnesota Power by RBJ Engineering to evaluate maximum and minimum short circuit levels at the Arrowhead and Center HVDC converter stations for the LCC HVDC alternative when it was being evaluated in 2020. The study also includes assessment of risk for subsynchronous torsional interactions (“SSTI”) for generating units near the Arrowhead converter station. The study report received from the consultant is provided.</p> <p>Date Prepared: October 28, 2020</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 8</p> <p>ATC IR 005.04 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company’s transmission studies. To maintain the Company’s competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions</p>

Item/Location	Justification
	<p>to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: Square Butte HVDC Upgrade Project Specification Studies, AC System Harmonic Impedance</p> <p>Author: RBJ Engineering Corp.</p> <p>General Import: This study was performed for Minnesota Power by RBJ Engineering to develop AC system harmonic impedance definitions at the Arrowhead and Center HVDC converter stations for the LCC HVDC alternative when it was being evaluated in 2020. Harmonic impedance definitions are used to evaluate the need for and design of AC filters when designing and integrating HVDC and FACTS devices into the system. The study report received from the consultant is provided.</p> <p>Date Prepared: September 5, 2020</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 9</p> <p>ATC IR 005.05 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p>

Item/Location	Justification
	<p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: HVDC Optimization Stability Analysis</p> <p>Author: Siemens</p> <p>General Import: This study was performed for Minnesota Power by Siemens PTI to evaluate transient stability impacts and performance requirements for the LCC HVDC alternative when it was being evaluated in 2020. The study report, models, and stability results received from the consultant are provided.</p> <p>Date Prepared: September 25, 2020</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 10</p> <p>ATC IR 005.06 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other</p>

Item/Location	Justification
	<p>reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: HVDC Fault Recovery Times Memorandum</p> <p>Author: Siemens</p> <p>General Import: This study was performed for Minnesota Power by Siemens PTI to evaluate transient stability impacts from varying HVDC fault recovery times associated with different HVDC technologies and configurations being evaluated by Minnesota Power. The summary memorandum and stability plots received from the consultant are provided.</p> <p>Date Prepared: April 26, 2022</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 11</p> <p>ATC IR 026.01 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information provided in this response has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p>

Item/Location	Justification
	<p>Because the Company has classified this entire document as trade secret information, the Company provides the following description of the excised material as required by Minn. Rule 7829.0500, subp. 3:</p> <p>Nature of the Material: 2022 Iron Range – Benton County – Cassie's Crossing (“IRBC”) Stability Study</p> <p>Author: Siemens Power Technologies International</p> <p>General Import: This study was performed for Minnesota Power and Great River Energy by Siemens Power Technologies International (“Siemens PTI”) to evaluate transient stability impacts of the Northland Reliability Project (formerly known as the Iron Range – Benton County – Cassie's Crossing Project) and other MISO LRTP Tranche 1 projects, with particular focus on transient voltage response and recovery</p> <p>Date Prepared: January 24, 2023</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 12</p> <p>ATC IR 005.07 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company’s transmission studies. To maintain the Company’s competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p>

Item/Location	Justification
	<p>Nature of the Material: HVDC Modernization Project Power Flow Analysis</p> <p>Author: Siemens</p> <p>General Import: This study was performed for Minnesota Power by Siemens PTI for the purpose of evaluating project scope optimization, performance requirements and system impacts from the Project and an HVDC Line capacity increase of up to 900 MW. The study report and power flow models received from the consultant are provided.</p> <p>Date Prepared: August 5, 2023</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 13</p> <p>ATC IR 005.08 Attach</p>	<p>The information designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: UMEX HVDC Project, Nelson Lake and St. Louis County 230/345 kV Transformer Energization Study Report</p> <p>Author: RBJ Engineering Corp.</p>

Item/Location	Justification
	<p>General Import: This study was performed for Minnesota Power by RBJ Engineering to evaluate the inrush current and corresponding voltage depression associated with energizing new 230 kV/345 kV transformers for the Project. The study results determine whether specialized equipment, such as pre-insertion resistors, would be required to integrate the Project transformers into the existing or future system. The study report received from the consultant is provided.</p> <p>Date Prepared: November 13, 2023</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 14</p> <p>2024 Arrowhead Alternative Concept Power Flow Study</p>	<p>The information designated as trade secret herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>MP Exhibit __ (Winter), Direct Schedule 14 contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, certain information provided in MP Exhibit __ (Winter), Direct Schedule 14 has been marked Non-Public, HIGHLY CONFIDENTIAL TRADE SECRET DATA. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 15</p> <p>ATC Response to DOC IR 11</p>	<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 15 contains information that is designated as HIGHLY CONFIDENTIAL TRADE SECRET INFORMATION because it has been designated as critical energy infrastructure information ("CEII"). Maintaining the information as non-public is important to protect the physical security of the electric transmission system and in maintaining a fair and competitive wholesale market. Therefore, ATC maintains</p>

Item/Location	Justification
	this information as confidential trade secret information under Minnesota law.
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 18</p> <p>ATC IR 032.01 Attach</p> <p>ATC IR 032.02 Attach</p> <p>ATC IR 032.03 Attach</p>	<p>See Minnesota Power's Response to ATC IR 032, MP Exhibit __ (Winter), Direct Schedule 18.</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 21</p> <p>ATC IR 021.09 Attach</p>	<p>The information designated as trade secret herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information also contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information provided in this document has been marked Non-Public, HIGHLY CONFIDENTIAL TRADE SECRET DATA. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: St. Louis County Substation Discussion</p> <p>Author: Minnesota Power</p> <p>General Import: Meeting materials for a Minnesota Power and ATC discussion regarding the St Louis County Substation and the ATC Arrowhead Alternative</p>

Item/Location	Justification
	Date Prepared: September 22, 2023
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 22</p> <p>ATC IR 021.01 Attach</p>	<p>The information designated as trade secret herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information also contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information provided in this document has been marked Non-Public, HIGHLY CONFIDENTIAL TRADE SECRET DATA. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: St. Louis County Substation Overview</p> <p>Author: Minnesota Power</p> <p>General Import: Minnesota Power internal planning document illustrating early planning concepts for the St Louis County Substation, including a configuration interconnecting to the ATC Arrowhead 345 kV Substation.</p> <p>Date Prepared: March 25, 2022</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 23</p> <p>ATC IR 021.08 Attach</p>	<p>The information designated as trade secret herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the</p>

Item/Location	Justification
	<p>public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information also contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information provided in this document has been marked Non-Public, HIGHLY CONFIDENTIAL TRADE SECRET DATA. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: St. Louis County Substation Alternatives</p> <p>Author: Minnesota Power</p> <p>General Import: Internal planning document update to ATC IR 021.05 Attach during development of the Certificate of Need Application.</p> <p>Date Prepared: December 21, 2022</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 24</p> <p>ATC IR 021.04 Attach</p>	<p>The information designated as trade secret herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information also contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information provided in this document has been marked Non-Public, HIGHLY CONFIDENTIAL TRADE SECRET DATA.</p>

Item/Location	Justification
	<p>The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: Minnesota Power-ATC HVDC Discussion</p> <p>Author: Minnesota Power</p> <p>General Import: Meeting materials from Minnesota Power's initial discussion with ATC regarding its investigation of the ATC Arrowhead Alternative.</p> <p>Date Prepared: September 23, 2022</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 25</p> <p>ATC IR 021.06 Attach</p>	<p>The information designated as trade secret herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information also contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information provided in this document has been marked Non-Public, HIGHLY CONFIDENTIAL TRADE SECRET DATA. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: HVDC St. Louis County Substation Alternatives</p>

Item/Location	Justification
	<p>Author: Minnesota Power</p> <p>General Import: Meeting materials from Minnesota Power's second discussion with ATC regarding its investigation of the ATC Arrowhead Alternative</p> <p>Date Prepared: October 10, 2022</p>
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 26</p> <p>ATC IR 021.07 Attach</p>	<p>The information designated as trade secret herein constitutes information related to the Company's transmission studies. To maintain the Company's competitiveness among other transmission owners, the Company maintains the confidentiality of the data that has been marked trade secret. This data derives independent economic value from not being generally known to the public and the Company has taken reasonable precautions to maintain its confidentiality, thus the information is trade secret pursuant to Minn. Stat. § 13.37.</p> <p>This information also contains confidential security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, the information provided in this document has been marked Non-Public, HIGHLY CONFIDENTIAL TRADE SECRET DATA. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3.</p> <p>Nature of the Material: Visio-HVDC St. Louis County Single Lines</p> <p>Author: Minnesota Power</p> <p>General Import: Internal planning document illustrating conceptual breaker arrangements for the Project and an alternative involving a new 345 kV connection to the ATC Arrowhead Substation.</p> <p>Date Prepared: October 10, 2022</p>

Item/Location	Justification
<p>Direct Testimony and Supporting Schedules, MP Exhibit __ (Winter), Direct Schedule 28</p>	<p>MP Exhibit __ (Winter), Direct Schedule 28 contains information designated as HIGHLY CONFIDENTIAL TRADE SECRET DATA that is security data that the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(a). Due to security information policies and concerns, certain information provided in MP Exhibit __ (Winter), Direct Schedule 28 has been marked Non-Public. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electric system for political or other reasons may learn which facilities to target to create the greatest disruption. Thus, Minnesota Power maintains this information as trade secret pursuant to Minn. Rule 7829.0500, subp. 3. Because the Company has classified this entire report as trade secret information, the Company provides the following description of the excised material as required by Minn. Rule 7829.0500, subp. 3:</p> <p>Nature of the Material: MISO – Forward Operations Operating Guide for the Minnesota Wisconsin Export Interface (MWEX) and Arrowhead – Stone Lake Interface (AHD-SLK)</p> <p>Author: MWEX Working Group</p> <p>General Import: MISO Op Guide establishing the Op Guide operating limits for MWEX and AHD-SLK interfaces under system intact conditions</p> <p>Date Prepared: April 25, 2023</p>

IN THE MATTER OF THE APPLICATION OF
MINNESOTA POWER FOR A CERTIFICATE OF NEED
FOR THE HVDC MODERNIZATION PROJECT IN
HERMANTOWN, SAINT LOUIS COUNTY

MPUC DOCKET No. E015/CN-22-607

IN THE MATTER OF THE APPLICATION OF
MINNESOTA POWER FOR A ROUTE PERMIT FOR
THE HVDC MODERNIZATION PROJECT IN
HERMANTOWN, SAINT LOUIS COUNTY

MPUC DOCKET No. E015/TL-22-611

CERTIFICATE OF SERVICE

Theresa Senart certifies that on the 14th day of February 2024, on behalf of Minnesota Power, she efiled true and correct copies of signed **Direct Testimony and Schedules** by posting the same on [eDockets](#) in the above referenced dockets. Said Testimony and Schedules are also served via U.S. Mail or email as designated on the attached Service Lists on file with the Minnesota Public Utilities Commission.

/s/ Theresa Senart

Theresa Senart

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Bill	Cook	bcook@rpu.org	Rochester Public Utilities	4000 East River Road NE Rochester, MN 55906	Electronic Service	No	OFF_SL_22-607_Official CC Service List
John	Crane	johncranefishing@gmail.com	Fishing	1250 Wee Gwaus DR SW Bemidji, MN 56601	Electronic Service	No	OFF_SL_22-607_Official CC Service List
George	Crocker	gwillc@nawo.org	North American Water Office	5093 Keats Avenue Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Thomas	Davis	atdavis1972@outlook.com	-	1161 50th Ave Sherburn, MN 56171	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Randall	Doneen	randall.doneen@state.mn.us	Department of Natural Resources	500 Lafayette Rd, PO Box 25 Saint Paul, MN 55155	Electronic Service	No	OFF_SL_22-607_Official CC Service List
John	Drawz	jdrawz@fredlaw.com	Fredrikson & Byron, P.A.	Suite 1500 60 South Sixth Street Minneapolis, MN 55402-4400	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Adam	Duininck	aduininck@ncsrcc.org	North Central States Regional Council of Carpenters	700 Olive Street St. Paul, MN 55130	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Cory	Dutcher	cory.dutcher@ge.com	GE Power and Water	1 River Rd. Bldg. 37-413 Schenectady, NY 12345	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Kristen	Eide Tollefson	healingsystems69@gmail.com	R-CURE	28477 N Lake Ave Frontenac, MN 55026-1044	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Kate	Fairman	kate.frantz@state.mn.us	Department of Natural Resources	Box 32 500 Lafayette Rd St. Paul, MN 551554032	Electronic Service	No	OFF_SL_22-607_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Annie	Felix Gerth	annie.felix-gerth@state.mn.us		Board of Water & Soil Resources 520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Lucas	Franco	lfranco@liunagroc.com	LIUNA	81 Little Canada Rd E Little Canada, MN 55117	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Karen A	Gebhardt	kageb1@gvtel.com		43901 253rd Ave Leonard, MN 56652-4026	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Todd	Green	Todd.A.Green@state.mn.us	Minnesota Department of Labor & Industry	443 Lafayette Rd N St. Paul, MN 55155-4341	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Valerie	Herring	vherring@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 S. Eighth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Kari	Howe	kari.howe@state.mn.us	DEED	332 Minnesota St, #E200 1ST National Bank Bldg St. Paul, MN 55101	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Scott	Johnson	Scott.Johnson@ci.medina.mn.us	City of Medina	2052 County Road 24 Medina, MN 55340-9790	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Tom	Karas	tomskaras@gmail.com		3171 309th Ave NW Cambridge, MN 55008	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Bruce	King	Brenda@ranww.org	Realtors, Association of Northwestern WI	Suite 3 1903 Keith Street Eau Claire, WI 54701	Electronic Service	No	OFF_SL_22-607_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Chad	Konickson	chad.konickson@usace.army.mil	U.S.Army Corps of Engineers	180 5th St # 700 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Stacy	Kotch Egstad	Stacy.Kotch@state.mn.us	MINNESOTA DEPARTMENT OF TRANSPORTATION	395 John Ireland Blvd. St. Paul, MN 55155	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Amber	Lee	amber.lee@stoel.com	Stoel Rives LLP	33 S. 6th Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Peter E.	Madsen	pmadsen@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Dawn S	Marsh	dawn_marsh@fws.gov	U.S. Fish & Wildlife Service	Minnesota-Wisconsin Field Offices 4101 American Blvd E Bloomington, MN 55425	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Dan	McCourtney	dmccourtney@mnpower.com	Minnesota Power	30 West Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Greg	Merz	greg.merz@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	No	OFF_SL_22-607_Official CC Service List
David	Moeller	dmoeller@allte.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-607_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James	Mortenson	james.mortenson@state.mn.us	Office of Administrative Hearings	PO BOX 64620 St. Paul, MN 55164-0620	Electronic Service	Yes	OFF_SL_22-607_Official CC Service List
Dan	Nelson	Dan.Nelson@ISGinc.com	I&S Group	115 E Hickory St Ste 300 Mankato, MN 56001	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Kevin	Peterson	kjp@ibew160.org	IBEW Local 160	1109 Northway Lane NE Rochester, MN 55906	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Angela	Piner	angela.piner@hdrinc.com	HDR, Inc.	Suite 600 701 Xenia Avenue South Suite 600 Minneapolis, MN 55416	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Larry	Rebman	larryemls@hotmail.com	EMLS, Inc	PO Box 122 Appleton, MN 56208	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_22-607_Official CC Service List
Margaret	Rheude	Margaret_Rheude@fws.gov	U.S. Fish and Wildlife Service	Twin Cities Ecological Services Field Office 4101 American Blvd. E. Bloomington, MN 55425	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Stephan	Roos	stephan.roos@state.mn.us	MN Department of Agriculture	625 Robert St N Saint Paul, MN 55155-2538	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Nathaniel	Runke	nrunke@local49.org	International Union of Operating Engineers Local 49	611 28th St. NW Rochester, MN 55901	Electronic Service	No	OFF_SL_22-607_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Elizabeth	Schmiesing	eschmiesing@winthrop.com	Winthrop & Weinstine, P.A.	225 South Sixth Street Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_22-607_Official CC Service List
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Electronic Service	Yes	OFF_SL_22-607_Official CC Service List
Tom	Slukich	tom@nationalconductor.com	National Conductor Constructors	18119 Hwy 371 North Braiderd, MN 56401	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Adam	Sokolski	adam.sokolski@edf-re.com	EDF Renewable Energy	10 Second Street NE Ste 400 Minneapolis, MN 55410	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Mark	Strohfus	mstrohfus@greenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Carl	Strohm	cjsmg@sbcglobal.net	SBC Global	105 East Edgewood Ave Indianapolis, IN 46227	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Tom	Swafford	tswafford@umsi.us	Utility Mapping Services, Inc	3947 E Calvary Rd Suite 103 Duluth, MN 55803	Electronic Service	No	OFF_SL_22-607_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Todd	Tadych	ttadych@atcllc.com	American Transmission Company LLC	5303 Fen Oak Dr Madison, WI 53718	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Jayne	Trusty	execdir@swrdc.org	SWRDC	2401 Broadway Ave #1 Slayton, MN 56172	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Jen	Tyler	tyler.jennifer@epa.gov	US Environmental Protection Agency	Environmental Planning & Evaluation Unit 77 W Jackson Blvd. Mailstop B-19J Chicago, IL 60604-3590	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Kodi	Verhalen	kverhalen@taftlaw.com	Taft Stettinius & Hollister LLP	80 S 8th St Ste 2200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Cynthia	Warzecha	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources	500 Lafayette Road Box 25 St. Paul, MN 55155-4040	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Elizabeth	Wefel	eawefel@flaherty-hood.com	Flaherty & Hood, P.A.	525 Park St Ste 470 Saint Paul, MN 55103	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Alan	Whipple	sa.property@state.mn.us	Minnesota Department Of Revenue	Property Tax Division 600 N. Robert Street St. Paul, MN 551463340	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Deanna	White	mncwa@cleanwater.org	Clean Water Action & Water Fund of MN	330 S 2nd Ave Ste 420 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_22-607_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Rachel	Wiedewitsch	wiedewitsch@fresh-energy.org	Fresh Energy	408 St Peter St #350 St. Paul, MN 55102	Electronic Service	No	OFF_SL_22-607_Official CC Service List
Jonathan	Wolfgram	Jonathan.Wolfgram@state.mn.us	Office of Pipeline Safety	445 Minnesota St Ste 147 Woodbury, MN 55125	Electronic Service	No	OFF_SL_22-607_Official CC Service List
David	Zoppo	DZoppo@perkinscoie.com	Perkins Coie LLP	33 E Main Street Suite 201 Madison, WI 53703	Electronic Service	No	OFF_SL_22-607_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Christopher J.	Cerny	ccerny@winthrop.com	Winthrop & Weinstine, P.A.	225 South Sixth Street Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_22-611_Official CC Service List
Adam	Duininck	aduininck@ncsrcc.org	North Central States Regional Council of Carpenters	700 Olive Street St. Paul, MN 55130	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Lucas	Franco	lfranco@liunagroc.com	LIUNA	81 Little Canada Rd E Little Canada, MN 55117	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Amber	Lee	amber.lee@stoel.com	Stoel Rives LLP	33 S. 6th Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Dan	McCourtney	dmccourtney@mnpower.com	Minnesota Power	30 West Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Greg	Merz	greg.merz@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	No	OFF_SL_22-611_Official CC Service List
David	Moeller	dmoeller@allte.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-611_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James	Mortenson	james.mortenson@state.mn.us	Office of Administrative Hearings	PO BOX 64620 St. Paul, MN 55164-0620	Electronic Service	Yes	OFF_SL_22-611_Official CC Service List
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_22-611_Official CC Service List
Nathaniel	Runke	nrunke@local49.org	International Union of Operating Engineers Local 49	611 28th St. NW Rochester, MN 55901	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Elizabeth	Schmiesing	eschmiesing@winthrop.com	Winthrop & Weinstine, P.A.	225 South Sixth Street Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_22-611_Official CC Service List
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Electronic Service	Yes	OFF_SL_22-611_Official CC Service List
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Kodi	Verhalen	kverhalen@taftlaw.com	Taft Stettinius & Hollister LLP	80 S 8th St Ste 2200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-611_Official CC Service List
Cynthia	Warzecha	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources	500 Lafayette Road Box 25 St. Paul, MN 55155-4040	Electronic Service	No	OFF_SL_22-611_Official CC Service List
David	Zoppo	DZoppo@perkinscoie.com	Perkins Coie LLP	33 E Main Street Suite 201 Madison, WI 53703	Electronic Service	No	OFF_SL_22-611_Official CC Service List