

Direct Testimony and Schedule  
Michael D. Aasen

Before the Minnesota Public Utilities Commission  
State of Minnesota

In the Matter of the Application of Northern States Power Company  
for a Certificate of Need, Site Permit, Route Permit, and Pipeline Permit for the  
Lyon County Generating Station Project in Lyon County, Minnesota

MPUC Docket Nos. E002/TL-25-161, G002/GS-25-154, G002/GP-25-163  
CAH Docket No. 5-2500-41123

**Project Management**

January 12, 2026

1 **I. INTRODUCTION AND QUALIFICATIONS**

2

3 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

4 A. My name is Michael Aasen. My business address is 414 Nicollet Mall,  
5 Minneapolis, MN 55401.

6

7 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

8 A. I am employed as a Generation Development Project Manager by Northern  
9 States Power Company, doing business as Xcel Energy (Xcel Energy).

10

11 Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

12 A. I graduated from Iowa State University in 2001 with my bachelor's degree in  
13 Mechanical Engineering. I have been a licensed Professional Engineer in the  
14 state of Minnesota since 2012. Nearly all my 24 years of professional  
15 experience has been related to the engineering and construction of industrial  
16 facilities with more than 15 years of experience related specifically to power  
17 generation projects. For the past three years I have been developing new  
18 thermal generation projects and more recently have begun developing the  
19 portfolio of projects for Xcel Energy. My Statement of Qualifications is  
20 included as Exhibit\_\_\_(MDA-1), Schedule 1.

21

22 Q. FOR WHOM ARE YOU TESTIFYING?

23 A. I am testifying on behalf of the applicant in this proceeding, Xcel Energy.

24

25 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

26 A. The purpose of my testimony is generally to describe the Lyon County



1 constructed as part of the Minnesota Energy Connection Project  
2 (MNEC).<sup>1</sup>

- 3 • Pipeline: An approximately 1,000-foot natural gas pipeline, consisting of  
4 approximately 700 feet of 12-inch diameter pipe and two “branches” of  
5 eight-inch diameter pipe, each connecting to a Generator, and associated  
6 facilities (the Pipeline). The Pipeline is anticipated to operate at  
7 approximately 550 pounds per square inch gauge (psig). The Pipeline will  
8 be fed from an existing Northern Border Pipeline Company (Northern  
9 Border) pipeline.

10  
11 Additional detail on the Project, including associated facilities, is provided in  
12 Section 1.2 and Section 3 of the Application.

13  
14 Q. WHY IS XCEL ENERGY PROPOSING THE PROJECT?

15 A. Xcel Energy is proposing the Project to meet a portion of its identified need  
16 for firm dispatchable generation to serve its electric customers. The need for  
17 firm dispatchable generation was initially identified in the 2020-2034  
18 Integrated Resource Plan (IRP) proceeding<sup>2</sup> and confirmed again in the 2024-  
19 2040 IRP proceeding.<sup>3</sup> The Generation Project will be operated as peaking  
20 units, with an anticipated annual capacity factor of approximately 5-10 percent  
21 based on current resource plan modeling. As described further in Section 1.3

---

<sup>1</sup> See Docket Nos. E002/CN-22-131 and E002/TL-22-132.

<sup>2</sup> *In the Matter of the 2020-2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy*, MPUC Docket No. E002/19-368, Order Approving Plan with Modifications and Establishing Requirements for Future Filings at 14 (Apr. 15, 2022).

<sup>3</sup> *In the Matter of Northern States Power Company d/b/a Xcel Energy’s 2024-2040 Integrated Resource Plan and In the Matter of Xcel Energy’s Competitive Resource Acquisition Process for up to 800 Megawatts of Firm Dispatchable Generation*, MPUC Docket Nos. E002/RP-24-67 and E002/CN-23-212, Order Approving Settlement Agreement with Modifications at Ordering ¶ 11 (Apr. 21, 2025).

1 of the Application, the Project will provide reliable peaking firm dispatchable  
2 generation and system stability support for the connection of significant  
3 renewable assets to MNEC while reusing Xcel Energy's existing  
4 interconnection rights at the Sherburne County Generating Station (Sherco).  
5 Additional information is also provided in Sections 1.4 and 1.5 of the  
6 Application.

7  
8 Q. WHY DID XCEL ENERGY SELECT THE PROPOSED PROJECT SITE?

9 A. Xcel Energy selected the location for the proposed Project because of its  
10 proximity to an existing natural gas pipeline and the MNEC transmission  
11 facilities. In addition, Xcel Energy was able to enter into an agreement with a  
12 willing landowner.

13  
14 Q. HAS XCEL ENERGY ACQUIRED ALL LAND RIGHTS NECESSARY FOR THE  
15 PROJECT?

16 A. Yes.

17  
18 **III. PROJECT SCHEDULE**

19  
20 Q. WHAT IS XCEL ENERGY'S ANTICIPATED SCHEDULE FOR COMPLETING THE  
21 PROJECT?

22 A. As described in Section 2.3 of the Application, Xcel Energy currently plans  
23 for commercial operation of the Project in December 2028.

24

1 Q. WHEN DOES XCEL ENERGY PLAN TO BEGIN CONSTRUCTION OF THE  
2 PROJECT?

3 A. To achieve the anticipated December 2028 in-service date, Xcel Energy needs  
4 to begin construction of the Project as soon as possible after the Minnesota  
5 Public Utilities Commission (Commission) approves the Project. We currently  
6 anticipate that the first step in construction will be vegetation clearing, topsoil  
7 removal, and rough grading of the Project site.

8

9 Q. HOW DOES THIS CONSTRUCTION START TIMING DIFFER FROM WHAT IS IN THE  
10 APPLICATION?

11 A. The Application indicated a July 2026 start of construction. Based on further  
12 detailed design, planning, and coordination with our construction contractor,  
13 Xcel Energy has determined that the construction start time I describe above  
14 is needed to meet the scheduled in-service date and minimize the risk of  
15 related cost increases.

16

17 Q. IS XCEL ENERGY REQUESTING ANY REVISIONS TO THE COMMISSION'S  
18 TYPICAL SITE AND ROUTE PERMIT CONDITIONS TO ACHIEVE TIMELY  
19 CONSTRUCTION AND OPERATION OF THE PROJECT?

20 A. Yes. Xcel Energy is requesting that the Commission authorize limited  
21 construction on the site immediately upon the Commission's written order of  
22 the Site Permit. Specifically, we request that the Commission's order allow  
23 Xcel Energy to commence vegetation clearing,<sup>4</sup> topsoil removal, and grading  
24 of the site within the area depicted on Figure 1-2 of the Application, provided

---

<sup>4</sup> The site is currently in agricultural use and does not have tree cover. Thus, the only vegetation that would need to be cleared is residual agricultural vegetation.

1 that Xcel Energy submits a filing documenting:<sup>5</sup> (1) it has provided notice to  
2 adjacent landowners of Project construction at least five days in advance; and  
3 (2) Xcel Energy has received all other required permits and approvals for the  
4 proposed activities.<sup>6</sup> Specifically, Xcel Energy requests that the following  
5 provision be included in the Project's Site Permit:

6 *Permittee may conduct vegetation clearing, topsoil removal, and grading*  
7 *of the site shown on Figure 1-2 of the Application immediately upon*  
8 *issuance of this Site Permit, provided that the Permittee submit a filing*  
9 *to the Commission confirming that: (1) Permittee provided notice to*  
10 *adjacent landowners of Project construction at least five days in advance,*  
11 *including contact information for Permittee's field representative; and*  
12 *(2) Permittee has received all required permits and approvals for the*  
13 *activity to be conducted.*

#### 14 **IV. PROJECT COST**

15  
16  
17 Q. DID XCEL ENERGY INCLUDE INFORMATION REGARDING THE COST OF THE  
18 PROJECT IN THE APPLICATION?

19 A. Yes. Detailed cost information was provided in Appendix K of the  
20 Application. The information was designated as NONPUBLIC because it is  
21 considered proprietary and trade secret. Disclosure of detailed cost

---

<sup>5</sup> Consistent with Minn. Stat. § 216I.05, subd. 12(e), Xcel Energy may submit this filing after a Commission oral decision, and prior to a written order. Likewise, given the July 2026 timeframe for full construction mobilization, Xcel Energy also plans to submit other compliance filings after an oral decision and prior to a written order.

<sup>6</sup> Xcel Energy may have additional proposed revisions to draft permits issued as part of the Environmental Assessment and will provide any such comments in a separate comment filing.

1 information could harm Xcel Energy’s negotiations with potential suppliers  
2 and contractors.

3  
4 Q. SINCE FILING THE APPLICATION, HAS XCEL ENERGY CONTINUED TO  
5 ANALYZE THE POTENTIAL COST OF THE PROJECT?

6 A. Yes. Since filing the Application, Xcel Energy released our Engineering,  
7 Procurement, and Construction (EPC) contractor to generate a “bottoms-up”  
8 Project cost estimate. This was a months-long effort for the contractor to  
9 finalize the detailed scope of the Project, develop a model of the facility,  
10 generate preliminary schematics to optimize the site layout, determine specific  
11 material quantities, more specifically size equipment, and obtain vendor  
12 pricing. This effort also included adding an appropriate contingency to the  
13 Project cost that reflects current market realities related to materials and labor.  
14 Once the EPC contractor’s initial estimate was reviewed, our teams work  
15 together for two months to “value engineer” the Project—*i.e.*, further refine  
16 Project scope and pricing. We have also issued contracts for the Generators  
17 and Generator Step Up Transformers (GSUs).

18  
19 Q. AS A RESULT OF XCEL ENERGY’S CONTINUED ANALYSIS, HAVE YOU UPDATED  
20 THE COST ESTIMATE FOR THE PROJECT?

21 A. Yes. As a result of the detailed analysis I described above, we currently  
22 anticipate that the total capital costs for the Project continue to be in the \$650  
23 – \$800 million range, excluding Allowance for Funds Used during  
24 Construction. Xcel Energy will provide additional information on the updated  
25 cost estimate in forthcoming written comments.

26

1 Q. WHAT FACTORS ARE AFFECTING THE LATEST COST ESTIMATE OF THE  
2 PROJECT?

3 A. The primary factors -include:

- 4 • Continually rising cost of equipment associated with the Project. Since  
5 2022, we have seen combustion turbine costs nearly double.  
6 Transformers and other critical electrical equipment have seen similar  
7 increases.
- 8 • The clutch design, which will enable the generators to act as synchronous  
9 condensers, is a new offering on these units. As their design has been  
10 developed, additional equipment has been needed, which has also driven  
11 up sizing of cooling equipment for the plant. These costs are still far less  
12 than the cost of stand-alone synchronous condensers.
- 13 • Previous estimates had assumed local union labor would be available to  
14 provide the majority of craft labor needed for the Project. However, the  
15 bottoms-up found that during the time of construction, local labor was  
16 not expected to be available, which will require the Project to seek labor  
17 from the Twin Cities area and other major cities in the Midwest. This  
18 resulted in labor rates increasing 20-35 percent and the need to pay a per  
19 diem.
- 20 • Site-specific geotechnical investigation has determined that deep  
21 foundations will be required for the major equipment at the site.

22  
23 **V. CONCLUSION**

24  
25 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

26 A. Yes.

## MICHAEL D. AASEN, P.E.

### PROFESSIONAL EXPERIENCE

Principal Engineer/Project Manager – Generation Development June 2021 – Present  
*Xcel Energy. – Minneapolis, MN*

- Project Manager
  - Managing the long term planning of projects to meet the needs of the company’s forecasted load requirements on a 15-year basis.
  - Leading the development of new generation projects, both brownfield and greenfield, for the NSP region of the company. Responsible for project initiation, coordination of technical design, environmental permitting, regulatory, and contracting needs for projects.
- Principal Engineer
  - Acted as project engineer for two brownfield repowering projects replacing a total of nearly 400MW of retiring generating units. Supported the procurement of an F-Class combustion turbine generator and eight 9MW reciprocating engines for these projects.
  - Guided the company’s three Refuse Derived Fuel (RDF) generating plants into compliance with company policies for base capital projects while training a new project engineer to properly execute the portfolio of projects at those facilities.

Mechanical Dept. Manager & Senior Mechanical Engineer/Project Manager Jan 2019 – June 2021  
*Stanley Consultants, Inc. – Minneapolis, MN*

- Mechanical Department Manager
  - Responsible for the management of a staff of seven mechanical engineers and designers within the firm’s Minneapolis office. Tasks included balancing workload of staff, coaching and mentoring, developing a team environment, hiring of new staff, annual evaluations and pay increases.
  - Drafted detailed proposals for multi-discipline design projects for a range of industrial and higher education clients.
- Senior Mechanical Engineer/Project Manager
  - Led multi-discipline architectural/engineering design teams on a variety of new construction and renovation projects for industrial, federal, and higher education clients.
  - Developed mechanical designs to upgrade existing industrial facilities’ utility systems including chillers, closed loop cooling systems, steam and condensate, air compressors and dryers, potable water, and cooling towers.
  - Acted as technical reviewer for a mechanical projects involving HVAC, Plumbing, and utility systems.

Senior Mechanical Engineer/Project Lead – Engineering & Construction Nov 2009 – Dec 2018  
*Xcel Energy – Minneapolis, MN*

- Project Lead
  - Sherco 3 Superheat and Reheat Pendant Replacements – \$31 million – Responsible for contractor RFP review and recommendation, quality control and tracking of fabricated components and maintaining project budget and schedule. This project won an “I Deliver Award” for excellence in safety, quality, adherence to schedule, and came in \$3 million under budget.
  - Sherco 3 HP/IP Turbine Replacement – \$20 million – Oversaw procurement and installation of new HP and IP turbine rotors. Developed project schedule, estimate and cash flow for negotiations with Xcel Energy’s insurance companies.
  - Sherco 1/2 Mercury Controls and Air Compressor Replacement – Responsible for construction and startup planning and oversight of mechanical systems on the project. Took over project lead responsibility to drive the closeout of the project.

## **MICHAEL D. AASEN, P.E.**

- Sherco 1/2 2015 Dual Unit Outage LPI Steam Supply Isolation Valves – Developed the project and planned its execution during a short window during a critical dual unit outage. Using a detailed CPM schedule was able to minimize the time both units needed to be offline.
- Project Engineer
  - Sherco 3 Restoration Project – Acted as Lead Mechanical Engineer on the nearly \$300MM repair of Sherco 3 after a catastrophic turbine generator failure. Managed several multi-million dollar construction contracts and directed consulting engineers to execute the successful inspection and repair of BOP systems including high energy piping, turbine lube oil system repair and flushing among many others.
  - Sherco 3 Uprate Project – Upgrades to 925MW Steam Turbine including HP and IP steam turbine retrofits, GSU transformer replacement, and other major component upgrades.

### Mechanical Engineer/Project Manager

Aug 2005 – Jul 2009

*Karges-Faulconbridge, Inc. Engineers – St. Paul, MN*

- Responsible for project management and coordination between all engineering disciplines for two 55MMGPY ethanol plants. Led project design meetings, procured major plant equipment, including package boilers, cooling towers and centrifuges, and developed a web based document control procedure using Webex.
- Performed feasibility studies on how to make use of waste heat from turbine compressor stations along a natural gas pipeline and how to reduce or eliminate discharge water from an ethanol plant to meet permit limits.
- Created flow models to simulate major utility systems (steam/condensate, chilled water, etc.) of 150 buildings at a major university for current and future campus loads to provide a detailed analysis of potential system limitations along with cost effective solutions for the client's capital projects budget.
- Modeled flow in a vacuum system for a medical device manufacturer and eliminated bottlenecks to improve system performance by 50 percent.
- Worked as a field engineer on an industrial construction site. Responsible for promptly responding to RFI's, designing equipment and piping supports and resolving design conflicts.
- Performed stress analysis on steam systems for 12 bio-fuel plants.
- Responsible for creating project and equipment specifications and procuring equipment for industrial and commercial projects.

### Project Estimator/Project Manager

Aug 2003 – Jun 2005

*SECOA Inc. - Champlin, MN*

- Estimated multiple projects simultaneously, determining material and installation costs for theatre rigging bids of up to \$3 million based on the project drawings and specifications.
- Consulted with customers, architects, and contractors to design creative and cost effective solutions to meet project needs.
- Managed projects by submitting engineered drawings to the end user for approval and coordinating with the contractors on-site to ensure a proper installation.
- Increased sales by developing relationships with competitors in new markets.
- Created specifications for customers and architects to use on their projects.
- Represented the company at conventions and trade shows to promote products, develop relationships with new and existing customers and stay current with the newest available technology for our industry.

## **MICHAEL D. AASEN, P.E.**

### Lead Estimator/Warranty Administrator

January 2002 – July 2003

*Kiewit Industrial Company - Lenexa, KS*

- Lead estimator on a bid for the installation of mechanical equipment associated with a \$200 million offshore gas compression platform.
- Compiled materials and labor costs from completed projects as reference for the Estimating Department on new bids.
- Developed a crane handbook to aid in job planning and estimating.
- Responsible for resolving all warranty claims from power plant owners on existing projects.

### **EDUCATION**

BS in Mechanical Engineering - *Iowa State University*

December 2001

### **TRAINING**

- OSHA 10 Hour Certification - Construction Safety and Health - 2019
- Mechanical Dynamics and Analysis – Steam Turbine Fundamentals May 2016
- Xcel Energy – Path to Leadership Program Class of 2014
- Xcel Energy – Turbine Conference 2014, 2015
- Xcel Energy – Power Plant Fundamentals Aug 2014
- Xcel Energy – Project Management 101 2013
- ASME – Pump and Valve Selection for Optimum System Performance
- ASME – B31.3 Process Piping Design
- Bentley AutoPipe XM Training (Pipe Stress Analysis)
- Pipe 2000 Training (Flow Modeling)