Direct Testimony and Schedule
Jessica R. Keller

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

Air Permitting

January 12, 2026

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jessica R. Keller. My business address is 401 Nicollet Mall, Minneapolis, MN 55401.

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

A. I am employed as an Environmental Analyst by Northern States Power Company, doing business as Xcel Energy (Xcel Energy).

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I am an Environmental Analyst at Xcel Energy and have been working in air permitting and compliance for over 18 years serving in industry, consulting and government. I have over ten years of experience working in the power plant industry and have prepared and managed air permit applications and negotiated air permits with the Minnesota Pollution Control Agency (MPCA), along with ensuring compliance at Xcel Energy's facilities located in Minnesota. My Statement of Qualifications is included as Exhibit___(JRK-1), Schedule 1.

Q. FOR WHOM ARE YOU TESTIFYING?

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

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is generally to describe the air permitting process for the Project, including emission limitations and compliance

demonstrations, as well as the control technologies that Xcel Energy will install as part of the Project.

Q. ARE YOU SPONSORING ANY PORTIONS OF THE COMBINED APPLICATION FOR A CERTIFICATE OF NEED, SITE PERMIT, TWO TRANSMISSION LINE ROUTE PERMITS, AND A PIPELINE ROUTING PERMIT AND PARTIAL EXEMPTION (APPLICATION) SUBMITTED BY XCEL ENERGY FOR THE PROJECT?

A. Yes. I am sponsoring the following sections of the Application:

- 3.1.7 Air Emission Control
- 7.4.1 Air Quality

Q. ARE YOU SPONSORING ANY SCHEDULES?

A. Yes. My Statement of Qualifications is attached as Schedule 1.

II. AIR PERMITTING

Q. WHAT AIR PERMIT IS REQUIRED FOR THE PROJECT?

A. A Clean Air Act Title V Air Permit from the MPCA is required for the Project.

Q. HAS XCEL ENERGY APPLIED FOR THE REQUIRED AIR PERMITS?

A. Yes, Xcel Energy has applied for the required air permit.

Q. WHEN DO YOU ANTICIPATE THAT THE REQUIRED AIR PERMITS WILL BE ISSUED?

A. It is anticipated that the Title V air permit will be issued in early 2026.

Q. HAS XCEL ENERGY BEEN COORDINATING WITH MPCA REGARDING THE PROJECT'S AIR PERMITTING?

A. Yes, permit negotiations are currently underway. Xcel Energy has been communicating with the MPCA during weekly meetings and via email, as needed.

III. CONTROL TECHNOLOGIES

Q. WHAT IS A CONTROL TECHNOLOGY?

A. A control technology is a measure, process, method, system or technique that limits the emissions of air pollutants.

Q. WHAT CONTROL TECHNOLOGIES WILL XCEL ENERGY INSTALL AS PART OF THE PROJECT?

A. The Project will control nitrogen oxides (NOx) emissions through the use of dry low-NOx burners in the combustion turbines. Good combustion practices will be used to control emissions of carbon monoxide (CO), volatile organic compounds (VOCs) and particulate matter (PM). Combusting low sulfur, low ash fuel natural gas (with up to 30 percent hydrogen) will help limit emissions of PM, PM less than 10 microns (PM10), PM less than 2.5 microns (PM2.5) and sulfur dioxide (SO2).

Q. WILL THE PROJECT MEET APPLICABLE EMISSIONS REQUIREMENTS?

A. Yes. The Project will be required to obtain a Title V air permit from the MPCA. The air permit will contain regulatory requirements, limits, and

compliance demonstration requirements, as needed to ensure compliance with all applicable regulations, discussed in further detail below.

Q. WILL THE PROJECT BE CONSIDERED A MAJOR EMITTING FACILITY UNDER PREVENTION OF SIGNIFICANT DETERIORATION (PSD)?

A. No. A "Major Emitting Facility" with respect to PSD is defined as a facility that has the potential to emit greater than 100 tons per year of any regulated New Source Review (NSR) pollutant and falls into one of 28 specific source categories or any source that has the potential to emit greater than 250 tons per year of any regulated NSR pollutant and is not part of one of the 28 specific source categories.

The Project does not meet the definition of a major emitting facility as it does not fall into one of the 28 specific source categories (does not include steam, like a combined-cycle plant) and does not have the potential to emit greater than 250 tons per year of any regulated NSR pollutant as limits will be established in the Title V air permit to ensure non-applicability. Therefore, the Project will not require PSD review.

Q. WILL THE PROJECT BE CONSIDERED A MAJOR SOURCE OF HAZARDOUS AIR POLLUTANTS (HAPS)?

A. No. The Project will be a minor (area) source of HAPs as it will emit less than 10 tons of any single HAP and less than 25 tons of combined HAPs from all emission sources. Potential Formaldehyde emissions from the Project are calculated to be greater than 10 tons per year; therefore, a 9.0 ton per year

limit will be included in the air permit to ensure the facility remains a minor source for HAPS.

Q. PLEASE DESCRIBE THE EMISSION LIMITS FOR THE PROJECT.

A. The Project will include several emission limits as discussed above to ensure that the facility is classified as a minor source under PSD and HAPs. The facility will utilize continuous emission monitoring systems (CEMS) to measure NOx and CO and will comply with all requirements and limits as outlined in the final air permit.

Q. DID XCEL ENERGY CONDUCT AIR DISPERSION MODELING TO CONFIRM THE PROJECT WILL MEET NATIONAL AND MINNESOTA AMBIENT AIR QUALITY STANDARDS?

A. Yes. An air dispersion modeling analysis was performed for the Project. The purpose of the modeling analysis was to determine whether emissions from the Project would or would not cause or contribute to a violation of the Minnesota Ambient Air Quality Standards (MAAQS) and National Ambient Air Quality Standards (NAAQS). Preliminary modeling was conducted in accordance with U.S. Environmental Protection Agency's (EPA) *Guideline on Air Quality Models* (Appendix W to 40 CFR Part 51, "Modeling Guideline") and MPCA's *Air Dispersion Modeling Practices* to determine whether emissions from the Project alone would result in any predicted maximum ambient concentrations of criteria pollutants above the significant impact levels (SILs) and/or NAAQS. Since the Project is not subject to Federal PSD modeling requirements, the Project was modeled in accordance with MPCA's modeling requirements.

Q. WAS AN AIR EMISSIONS RISK ASSESSMENT (AERA) ALSO COMPLETED?

A. Yes. As required per MPCA guidance for any proposed electric production facility greater than or equal to 25 megawatts, an AERA was completed for the Project. The AERA is used to determine human health risks from air pollution emitted by a facility, particularly focused on air toxics (or HAPs). The risk assessment screening spreadsheet (RASS), a screening spreadsheet tool created by MPCA, was used to determine the impacts of the Project on nearby communities. As the Project was determined to not negatively impact human health by the RASS, the analysis was considered complete.

Q. WHAT FEDERAL REGULATIONS WILL APPLY TO THE PROJECT AND WHAT ARE THE COMPLIANCE DEMONSTRATIONS?

A. The combustion turbines will be subject to New Source Performance Standards (NSPS). Applicable regulations include 40 CFR Part 60 Subpart KKKK: Standards of Performance for Stationary Combustion Turbines (NSPS KKKK) and Subpart TTTTa: Standards of Performance for Greenhouse Gas Emissions (NSPS TTTTa). Under NSPS KKKK, the combustion turbines will be limited to 15 ppm NOx at 15 percent oxygen (O2) (4-hour rolling average) when the turbine is operating at or above 75 percent of peak load and when operating at 0°F or above and 96 ppm NOx at 15 percent O2 (4-hour rolling average) when the turbine is operating at less than 75 percent of peak load or when operation at less than 0°F. To meet this limit, the low NOx burners installed will be capable of meeting 9 ppm during normal operation. To demonstrate compliance with this limit, CEMS will be installed to continuously monitor emissions of NOx. In addition, SO2

emissions will be limited by the combustion of low sulfur fuel. Compliance will be demonstrated by maintaining records of fuel composition, representative fuel sampling, or by contract specifications verifying the sulfur content of the fuel. Lastly, Xcel Energy will satisfy NSPS TTTTa by meeting the carbon dioxide (CO2) limit for low load units by limiting the annual capacity factor of the turbines as described under the Rule and by maintaining fuel purchase records of pipeline quality natural gas. The potential co-firing of hydrogen in the future will also aid in achieving compliance with the applicable CO2 limit in either the low or intermediate category under the Rule.

IV. CONCLUSION

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

A. Yes.

Statement of Qualifications

Jessica Keller

OVERVIEW

I am an Environmental Analyst at Xcel Energy and have been working in air permitting and compliance for over 18 years serving in industry, consulting and government. I have over ten years of experience working in the power plant industry and have prepared and managed air permit applications and negotiated air permits with the Minnesota Pollution Control Agency (MPCA), along with ensuring compliance at Xcel Energy's facilities located in Minnesota.

PROFESSIONAL EXPERIENCE SUMMARY

9/2022-Present — **Senior Environmental Analyst**
Xcel Energy

- Prepare air quality air permit applications for Xcel facilities located in Minnesota including emission calculation preparation and rule review.
- Collaborate and negotiate with the MPCA during the permit drafting process.
- Serve as air quality permit subject matter expert for multiple Xcel facilities and provide guidance to Plant Environmental Analysts and Plant Management on air quality permits and other documents.

6/2014-3/2021 & 11/2021-9/2022 — **Environmental Analyst**
Xcel Energy

- Ensured compliance with Air and Water Quality Permits for the Sherburne County Generating Plant (Sherco).
- Managed environmental incidents and ensured corrective action was achieved and proper reporting was completed

3/2021-11/2021 — **Senior Environmental Scientist/Project Manager**
Stantec

- Served as Project Manager for multiple air permitting projects in various industries throughout numerous states throughout the US.

4/2011-6/2014 **Air Quality Scientist**
Stantec

- Prepared air permit applications for clients in various industries located in several states throughout the U.S.

9/2007-4/2011 **Environmental Scientist**
North Dakota Department of Health; Division of Air Quality

- Reviewed construction permit applications for completeness and accuracy and wrote Permits to Construct, ensuring compliance with all federal and state rules and regulations, including New Source Performance Standards and Prevention of Significant Deterioration.
- Conducted reviews of modeling to ensure accuracy and compliance with National Ambient Air Quality Standards.

EDUCATIONAL BACKGROUND

St Cloud State University; Bachelor of Science; Environmental Studies 2005