

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Valerie Means	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

In the Matter of Xcel Energy’s 2023 Hosting
Capacity Report Under Minn. Stat.
§ 216B.2425, Subd. 8

ISSUE DATE: September 23, 2024

DOCKET NO. E-002/M-23-466

ORDER ACCEPTING REPORT AND
ESTABLISHING ADDITIONAL
REQUIREMENTS

PROCEDURAL HISTORY

By November 1, 2023, Northern States Power Company d/b/a Xcel Energy (Xcel) filed its 2023 Hosting Capacity Program Report (the Report) and related attachments.

On December 22, 2023, Xcel filed a cost-benefit analysis for the Fast Track Supplemental Review Screen (FTSRS).

On March 6, 2024, the Joint Solar Commenters filed comments regarding the Report.¹

On March 20, 2024, the Minnesota Department of Commerce, Division of Energy Resources (Department) and Xcel filed reply comments.

On March 28, 2024, Xcel filed a response to the Department’s reply comments.

On August 22, 2024, the Commission met to consider the matter.

FINDINGS AND CONCLUSIONS

I. Background

Hosting capacity is generally defined as the amount of load or generation that can be accommodated on the existing system without adversely affecting power quality or reliability

¹ In this matter, the Joint Solar Commenters includes the Institute for Local Self Reliance (ILSR), Minnesota Solar Energy Industries Association (MnSEIA), and Cooperative Energy Futures.

under existing control configurations and without requiring infrastructure upgrades. A hosting capacity analysis (HCA) evaluates a utility’s distribution system to find locations where new load or generation facilities may interconnect, as well as mitigation measures that might enhance the distribution system’s capacity to accommodate interconnection.

Pursuant to Minn. Stat. § 216B.2425, subd. 8, Xcel files an annual Hosting Capacity Analysis Report with the Commission.² In addition to the statutory requirements, Xcel’s Report is subject to requirements from prior Commission orders accepting Xcel’s 2019 HCA report,³ Xcel’s 2020 HCA report,⁴ and Xcel’s 2022 HCA report.⁵

Xcel’s current Report analyzes generation hosting capacity (Gen-HCA), including the siting of new generation-based distributed energy resources (DERs)⁶ such as photovoltaic, wind, or batteries (discharging only). The current Report also analyzes load hosting capacity (Load-HCA), including the siting of new or additional load such as new or expanding customer load, batteries (charging only), or EV fast charging stations.

II. Xcel’s 2023 Hosting Capacity Analysis Report Compliance

By the time the Commission met to consider the matter, there was no dispute that Xcel’s Report satisfied the relevant filing requirements, including the requirement that Xcel provide all actual historical and all future estimated costs related to the hosting capacity analysis broken down by cost type.⁷ The Commission agrees and, accordingly, the Commission will accept Xcel’s Report.

² Although the statute requires biennial reports, Xcel has agreed to file the report annually.

³ *In the Matter of Xcel’s 2019 Hosting Capacity Analysis Report*, Docket No. E-002/M-19-685, Order Accepting Report and Setting Further Requirements (July 31, 2020).

⁴ *In the Matter of the Xcel Energy 2020 Hosting Capacity Report Under Minn. Stat. §216B.2425, Subd. 8*, Docket No. E-002/M-20-812, Order Accepting Report, Requiring Stakeholder Workshops, and Setting Additional Requirements (November 9, 2021).

⁵ *In the Matter of Xcel Energy’s 2022 Hosting Capacity Report Under Minn. Stat. § 216B.2425, Subd. 8*, Docket No. E-002/M-22-574, Order Accepting Hosting Capacity Report and Establish Additional Requirements (September 15, 2023). The order accepting Xcel’s 2021 report did not set additional requirements.

⁶ “Distributed Energy Resources” (DER) is emerging terminology used to capture both traditional “distributed generation” and storage technologies; however, this term is not currently defined in Minnesota statute or rules, and at times the Commission applies it to a broader category that includes demand-side management (controlling load like air conditioners or water heaters) and, in some cases, even energy efficiency and electric vehicles. Xcel defines DER as “sources and groups of sources of electric power that are not directly connected to a bulk electric system. DER includes both generators and energy storage technologies capable of exporting active power to an electric power system (EPS). An interconnection system or a supplemental DER device that is necessary for compliance with this standard is part of a DER.”

⁷ An exhaustive list of filing requirements is contained on pages two through five of the Department’s comments and Attachment E to Xcel’s Report.

III. Load Hosting Capacity Analysis

A. Future Filings

In the current Report, Xcel noted that it would not include the Load-HCA in future annual filings absent a Commission order requiring the Load-HCA. Xcel argued that it was not prudent to continue producing the Load-HCA because 1) Xcel did not have an internal need for the analysis and, as such, Xcel was not producing an internal Load-HCA; and, 2) the time and cost required to produce the Load-HCA was greater than any benefit the Load-HCA could provide. Indeed, Xcel asserted that the Load-HCA was not particularly beneficial to developers and customers due to the extent of non-public information Xcel withheld from the Load-HCA. Instead, Xcel suggested that other resources would be more beneficial for interconnecting load customers.

The Joint Solar Commenters and the Department argued that Xcel should continue conducting the Load-HCA because Xcel had previously suggested load was increasing from data centers and electric vehicles.

The Commission will require Xcel to continue conducting an annual Load-HCA. This is only the second Load-HCA Xcel has performed and the Commission is not persuaded that the Load-HCA is so impractical or burdensome that Xcel should cease providing the analysis at this time. Indeed, Xcel acknowledged that system improvements and updates could make performing the Load-HCA easier and less expensive. Under these circumstances, it is reasonable for Xcel to continue conducting an annual Load-HCA.

B. Loading Methodology

For the Load-HCA, Xcel has utilized a native loading methodology. Xcel argued that the Commission authorized the use of native load—instead of net load—because Xcel has used native load in its forecasting and risk analysis.⁸ Xcel expressed a preference for using native load because it allows Xcel to determine whether a new load will lead to any thermal violations if DERs are unable to provide load relief, *i.e.*, in a worst-case scenario where DERs are tripped offline. Despite this preference, Xcel noted that it would be open to changing to the planned net loading methodology discussed in Xcel’s 2023 Integrated Distribution Plan, Docket No. E-002/M-23-452.

The Joint Solar Commenters and the Department contended that Xcel is only authorized to use a native loading methodology if the methodology is consistent with Xcel’s other planning processes for the Load-HCA. The Joint Solar Commenters and the Department argued that Xcel should be required to clarify which parameter Xcel uses in each planning process. Relatedly, the Joint Solar Commenters suggested that Xcel should include existing distributed generation in the Load-HCA.

The Commission appreciates Xcel’s suggestion to employ the planned net loading methodology discussed in the 2023 Integrated Distribution Plan, and the Commission will require Xcel to use

⁸ Native load is the actual demand on a system when all DER generation impacts are excluded. Net load is the actual demand when all DER impacts are included.

the same methodology—including any future iterations of the methodology—in the Load-HCA. The Commission has required Xcel to use the planned net loading methodology in the 2023 Integrated Distribution Plan and finds it is both reasonable and prudent for Xcel to use the same methodology here. The Commission recognizes that it may take time for Xcel to implement the new methodology. As such, Xcel need not use the planned net loading methodology for the Load-HCA until Xcel’s November 1, 2025 filing. No party objected to the reasonableness of these requirements.

ORDER

1. The Commission accepts Xcel’s 2023 Gen-HCA and Load-HCA Report.
2. Xcel must continue conducting the annual Load-HCA and file the analysis in conjunction with the Gen-HCA.
3. Xcel must employ, in future HCA annual reports beginning with its November 1, 2025 filing, the planned net loading methodology as ordered in the 2023 Integrated Distribution Plan in Docket No. E-002/M-23-452, and its future iterations, consistent with the planning processes for its Load-HCA.
4. This order shall become effective immediately.

BY ORDER OF THE COMMISSION



Will Seuffert
Executive Secretary



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CERTIFICATE OF SERVICE

I, Robin Benson, hereby certify that I have this day, served a true and correct copy of the following document to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, courier, interoffice mail or by depositing the same enveloped with postage paid in the United States mail at St. Paul, Minnesota.

Minnesota Public Utilities Commission
ORDER ACCEPTING REPORT AND ESTABLISHING ADDITIONAL
REQUIREMENTS

Docket Numbers: **E-002/M-23-466**

Dated this **23rd** day of **September, 2024**

/s/ Robin Benson

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