

Xcel's Approved 2020-2034 Integrated Resource Plan

December 2022

Overview

Xcel Energy's most recent Integrated Resource Plan was approved by the Minnesota Public Utilities Commission in April 2022, prescribing the size, type, and timing of generation resources the company is to acquire or construct over the next 15 years in order to satisfy its customers' demand for electricity. Among the plan's approved activities are the closure of Xcel's last remaining coal plants serving Minnesota by 2030 and the pursuit of a ten-year extension of the company's federal operating license for its nuclear generating plant at Monticello, which is scheduled to expire in 2030.

This publication briefly describes Xcel's integrated resource plan and the Minnesota Public Utility Commission's order modifying and approving the plan.

Last Xcel Coal Plant to Close in 2030

On April 15, 2022, the Minnesota Public Utilities Commission (PUC) issued a written order approving Xcel Energy's 2020-2034 Integrated Resource Plan (IRP),¹ which maps out the resources the company will construct or acquire in order to meet the electricity demand of its Minnesota customers over the next 15 years. Xcel is the state's largest electric utility, providing power to about half the state's residents. It serves over 500 communities located south of St. Cloud and along the North Dakota border near Moorhead.

The plan Xcel submitted to the commission proposed to retire all the company's remaining coal-fired facilities by 2030. As recently as 20 years ago, coal facilities constituted approximately two-thirds of Xcel's total generating capacity.

Under the plan, about 2,400 megawatts (MW) of coal-based generation is to be retired, accounting for about one-quarter of the company's current electric generating capacity. These facilities include the Allen S. King plant in Bayport (511 MW), scheduled for closure in 2028, and Sherburne County (Sherco) Unit 3 in Becker (517 MW) slated to close in 2030.² As the

¹ Minnesota Public Utilities Commission, *In the Matter of the 2020-2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy, Order Approving Plan With Modifications and Establishing Requirements For Future Filings*, Docket No. E-002/RP-19-368, April 15, 2022, <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={202C2F80-0000-C11A-BA52-EC8AB5636CD4}&documentTitle=20224-184828-01>. Hereafter referred to as "Order."

² Under Xcel's previous IRP, the company's Sherburne County Units 1 and 2 (each 680 MW) were approved for retirement in 2026 and 2023, respectively.

commission noted, “[M]ultiple resource plan scenarios demonstrated that retiring the units would be a cost-effective option.”³ The commission projected that implementing the plan would make 81 percent of Xcel’s generation resources carbon-free by 2032 and reduce Xcel’s greenhouse gas emissions by 86 percent relative to 2005 levels.

The IRP Process

[Minnesota Statutes, section 216B.2422](#), requires utilities serving more than 10,000 electric customers and having a capacity greater than 100 megawatts to submit IRPs to the PUC approximately every two years for review and approval. A utility submits its “preferred plan” based on output from mathematical models that forecast future electricity demand in the utility’s service area and the cost and other impacts of various supply scenarios to meet it. The Minnesota Department of Commerce and the Office of the Attorney General formally intervene in the commission’s review process, commenting on the utility’s plan and presenting their own analysis and recommendations, as do environmental and energy advocacy organizations, cities and counties, utility customers, labor organizations, members of the public, and others. More than 70 organizations participated in Xcel’s recent IRP. All written submittals to the docket (over 2,300 documents) are subject to review and comment by other parties.

In addition, five public hearings on Xcel’s proposed plan were held in four different cities, drawing 323 attendees, 104 of whom delivered oral testimony; 47 written comments were filed at these meetings.⁴

All information gathered during the process is reviewed by the commission, which, under its rules, is required to consider the following factors in making its decisions.

“Resource options and resource plans must be evaluated on their ability to:

- A. maintain or improve the adequacy and reliability of utility service;
- B. keep the customers' bills and the utility's rates as low as practicable, given regulatory and other constraints;
- C. minimize adverse socioeconomic effects and adverse effects upon the environment;
- D. enhance the utility's ability to respond to changes in the financial, social, and technological factors affecting its operations; and
- E. limit the risk of adverse effects on the utility and its customers from financial, social, and technological factors that the utility cannot control.”⁵

³ *Order*, p. 13.

⁴ State of Minnesota, Office of Administrative Hearings, *In the Matter of the 2020-2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy, Report Summarizing Public Meetings*, OAH-2500-36249, MPUC E-002/RP19-368, December 18, 2019, <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={80891E6F-0000-C919-95DF-497764814957}&documentTitle=201912-158455-01>.

⁵ [Minnesota Rules, chapter 7843.0500](#), subpart 3.

Xcel submitted its initial plan to the commission on July 1, 2019. A supplement plan using a different computer model was filed a year later, and a revised alternate plan was submitted on June 25, 2021, incorporating into the analysis approximately 1,150 MW of generating capacity the company added to its portfolio after filing the supplement plan. The subsequent plans were modified to address issues raised by other parties to the proceeding.

The Commission's Order

While elements of the commission's order scheduled for implementation towards the end of the plan's timeline are subject to revision in future IRPs, those slated to occur within five years of the order are deemed to be part of the utility's current "action plan."

Listed below are highlights of the commission's order:⁶

- Xcel will retire the King plant in 2028 and Sherco Unit 3 in 2030.
- Each year through 2034, Xcel will save at least 780 gigawatt-hours of electricity through energy efficiency, compared with 444 gigawatt-hours under the commission's previous IRP order. (One gigawatt-hour is equal to 1,000 megawatt-hours)
- Xcel may continue to pursue a ten-year extension of the operating license for its nuclear generating plant at Monticello, which expires in 2030, at the federal Nuclear Regulatory Commission.
- By 2026, Xcel will acquire:
 - at least 720 MW of company-owned solar generation that can utilize the interconnection capacity made available by the retirement of Sherco Unit 2 in 2023 (this may include the 460 MW solar plant to be located at the Sherco site that was approved by the commission in September 2022); and
 - an additional 600 MW of solar resources at any location.
- Xcel will seek a Certificate of Need from the commission to build two high voltage transmission lines from the retiring King and Sherco facilities to connect to the regional grid operated by the Midcontinent Independent System Operator. Xcel may own these lines and any renewable resources connected to them, up to the company's current interconnection capacity (600 MW at the King plant and 2,000 MW at Sherco). Any additional capacity added that exceeds these levels must be open to non-Xcel resources.
- Between 2027 and 2029, "it is more likely than not" that Xcel will need an additional 800 MW of firm dispatchable resources at a location to be determined.
- Xcel has demonstrated a need between 2027 and 2032 for an additional 2,150 MW from a combination of solar, wind, and energy storage.

⁶ *Order*, pp. 30-36.

- Xcel has demonstrated a need between 2027 and 2032 for an additional 600 MW of company-owned solar and/or storage capacity to fully utilize the capacity of the current King interconnection and future King transmission line.
- Xcel's next resource plan, due February 1, 2024, shall:
 - improve forecasts of the adoption rate of electric vehicles, electric space and water heating, and other electrification end uses;
 - include a deeper analysis of energy storage options; and
 - include an analysis of rate and bill impacts for residential, commercial, and industrial classes.



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