

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

In the Matter of Minnkota Power
Cooperative, Inc. and Northern Municipal
Power Agency's 2019 Resource Plan

ISSUE DATE: May 20, 2020

DOCKET NO. ET-6, ET-6132/RP-19-416

ORDER ACCEPTING RESOURCE
PLAN AND MODIFYING FUTURE
FILING REQUIREMENTS

PROCEDURAL HISTORY

On June 28, 2019, Minnkota Power Cooperative, Inc. (Minnkota) and Northern Municipal Power Agency (NMPA) (collectively, the Joint System) filed a 2019 integrated resource plan (IRP).

On July 18, 2019, the Commission issued a Notice of Comment Period requesting comment on the IRP.

On November 7, 2019, the Department of Commerce, Division of Energy Resources (the Department) filed comments recommending that the Commission accept the Joint System IRP once the Joint System submits an evaluation of progress towards meeting Minnesota's greenhouse-gas-emission-reduction goal.¹

On January 8, 2020, the Joint System submitted reply comments containing additional information about its projected greenhouse gas reductions.

On January 28, 2020, the Department submitted response comments concluding that the Joint System's information was adequate but recommended additional analysis in its next resource plan.

On February 27, 2020, the Commission met to consider the Joint System IRP.

¹ The Commission received no public comments on the Joint System IRP.

FINDINGS AND CONCLUSIONS

I. Introduction

A. Resource Planning

Minnesota law requires all utilities—defined as an entity capable of generating at least 100 megawatts (MW) of power and serving 10,000 retail customers in Minnesota—to file resource plans with the Commission.² For cooperatives and municipal utilities, the Commission’s role in resource planning is advisory.³

Generally, the resource planning statute and rules direct utilities to file biennial reports addressing (1) the projected need for electricity in its service area over the next 15 years; (2) its plans for meeting this projected need; (3) the analytical process used to develop its plans; and (4) the reasons for adopting the proposed resource mix. These requirements induce utilities to consider important public policy considerations when making resource decisions, such as the environmental and socioeconomic effect of different energy-generation resources. The process is designed to encourage participation from the public, other regulatory agencies, and the Commission.

B. The Joint System Background

Minnkota is a wholesale electric generation and transmission cooperative that generates and acquires electricity for 11 member cooperatives in northwestern Minnesota and eastern North Dakota.⁴ Minnkota’s member cooperatives have wholesale power contracts through 2055 and may supply up to five percent of their energy and capacity requirements from sources other than Minnkota. NMPA supplies wholesale electricity to 12 municipal utilities in northwestern Minnesota and eastern North Dakota.⁵

Minnkota and NMPA operate as a joint system through a joint operating agreement and joint ownership of the transmission system, and they jointly participate in the wholesale energy markets operated by the Midcontinent Independent System Operator (MISO). The Joint System serves approximately 152,000 retail customers in a 34,500-square-mile area.

II. The Joint System 2019 IRP

The Joint System explained the purpose of its IRP:

The primary function of an IRP is to demonstrate how a utility plans to meet the electrical needs of its end-use consumers over the next 15 years. The resource plan includes the resource and demand side options that best fit the utility’s forecasted energy requirements.

² Minn. Stat. § 216B.2422, subs. 1–2.

³ *Id.* at subd. 2.

⁴ Eight of the member cooperatives are located in Minnesota and three in North Dakota.

⁵ Ten of the municipal utilities are located in Minnesota and two in North Dakota.

Resource plans must consider how to maintain or improve electric service to customers, maintain low electric rates, minimize environmental impacts and minimize the risk of adverse effects from financial and technological impacts.⁶

In order to determine its resource needs over the planning period, the Joint System developed forecasts of its energy and demand (also called capacity) requirements⁷ using Minnkota's load forecast study, forecasts for each of the 12 NMPA municipal utilities, transmission losses, and historical trends. To forecast energy sales for residential and small commercial customers, Minnkota relied on econometric techniques like regression analysis, which is a statistical tool used for identifying trends in a collection of data. For other classes of customers, Minnkota analysts relied on their professional judgment and trend analysis to forecast sales. The Joint System analyzed potential impacts to load growth from variables such as weather, the economy, and alternate fuel prices. The Joint System forecasted that its energy requirements would increase 1% per year and its summer- and winter-peak demand requirements would increase 0.8% and 1% per year respectively.

Next, the Joint System determined whether it would have adequate resources to reliably serve customer demand and comply with MISO Resource Adequacy requirements throughout the planning period. The Joint System acquires electricity from the following sources:

- Milton R. Young Station Unit 1, a coal-fueled generator in North Dakota operated by Minnkota with a capacity of up to 250 MW;
- Milton R. Young Station Unit 2, a coal-fueled generator in North Dakota operated by Minnkota with 355 MW dedicated to the Joint System;
- Coyote Plant, a coal-fired generator in North Dakota operated by Otter Tail Power Company with 128 MW dedicated to the Joint System;
- Langdon, Ashtabula, Oliver Wind III, and Infinity Wind Projects in North Dakota with a total of approximately 455 MW dedicated to the Joint System through power purchase agreements (PPAs);
- Diesel generators with approximately 35 MW dedicated to the Joint System through PPAs;
- Hydroelectric plants operated by the U.S. Department of Energy's Western Area Power Administration (WAPA), with a total of approximately 112 MW dedicated to the Joint System; and

⁶ Joint System IRP, at 10.

⁷ Energy describes the total amount of kilowatts consumed in a given period. Demand or capacity describes the rate at which energy is consumed, measured in kilowatt-hours.

- Landfill gas facility in Fargo, North Dakota.⁸
- The Joint System also has approximately 400 MW of interruptible load (or demand response) available in winter and 100 MW in summer and projects an increase to 465 MW winter and 125 MW summer during the planning period.

When the Joint System’s generators are down for maintenance and the wind facilities are not generating electricity, the Joint System purchases energy from the MISO energy market to fulfill its energy requirements. The IRP acknowledges the risk of relying too much on the MISO energy market if the market becomes volatile and prices increase. The Joint System concluded that its generation resources, PPAs, and extensive demand response program would meet customer demand with minimal dependence on the MISO energy market, and there is no need for additional generation in the next 15 years.

The Joint System then discussed its compliance with Minnesota’s renewable energy standard to have at least 20% of its electric sales generated by renewable energy by 2020 and 25% by 2025. The Joint System showed that its significant wind resources will exceed its renewable-energy-standard requirements more than twice over.

In the section covering the Joint System’s energy efficiency and conservation program, the IRP explained that Minnesota’s member cooperatives and NMPA’s municipal utilities collaborate to develop ideas and implement consistent energy saving programs under the “PowerSavers” name and logo. These programs include incentives to install high-efficiency equipment in homes and businesses, the Residential Low Income program involving direct installation services to reduce energy use in low income housing, the Residential Existing Homes program involving energy audits and recommendations for improving residential energy efficiency, and the Residential Energy Behavior Use Change program designed to help customers monitor their own energy use behavior through online programs.

The IRP summarized the Joint System’s compliance with the following environmental regulations: Coal Combustion Residuals, Waters of the United States, Steam Electric Effluent Limitation Guidelines, Regional Haze Rule, Mercury and Air Toxics Standards, and CO₂ regulations. The IRP describes Project Tundra, a carbon capture, utilization, and storage project planned for Milton R. Young Station Unit 2 that could capture up to 95% of its CO₂ emissions and sequester those emissions in permanent geological storage or utilize them for enhanced oil recovery.

For its two-year action plan in 2019–2020, the Joint System will take the following actions regarding integrated resource planning:

- Complete a load forecast study;
- Continue meeting with member systems to strategize ways to reduce energy costs;
- Study possible modifications or additions in the Wholesale Power Rate Schedule; and

⁸ Joint System IRP, at 15–17.

- Analyze the cost effectiveness of demand-side management programs and renewable energy resources.

For its five-year action plan in 2021–2023, the Joint System will take the following actions regarding integrated resource planning:

- Complete a load forecast study;
- Continue to analyze the best methods of promoting and enhancing demand response activities;
- Continue analyzing the cost effectiveness of demand-side management programs and renewable energy resources; and
- Complete future IRPs as required.

Lastly, the Joint System described contingency plans for the following events: (1) sudden addition of large load, (2) sudden loss of large load, and (3) resource options available in the event of forced shutdown of coal facilities.

III. Department Comments

The Department reviewed the Joint System’s IRP for accuracy and compliance with relevant statutes and rules. The Department recommended that the Commission should accept the IRP contingent upon the Joint System providing additional information in reply comments.

The Department analyzed the Joint System’s energy and demand forecast and noted that “since 2007, the Joint System’s actual load has been significantly less than its forecasted demand and energy.”⁹ The Department stated that it did not conduct a detailed analysis of the Joint System’s forecast because the forecast has remained stable over time and the Joint System does not anticipate a need for additional resources during the planning period. The Department concluded that the forecast was reasonable for planning purposes.

In its analysis of the Joint System’s resource adequacy, the Department requested additional information to determine the Joint System’s resource needs using the MISO capacity accreditation for wind facilities rather than the actual capacity factor that the Joint System used.¹⁰ The Department showed that using the MISO wind capacity accreditation gives a more accurate picture of resource adequacy, because the Joint System has 1,311 MW of installed capacity but only 878 MW of resources that count towards resource adequacy. The Department concluded that even with the adjusted assumptions regarding available capacity from wind, the Joint System will have no additional resource needs over the planning period.

⁹ Department comments, at 5.

¹⁰ The capacity factor for a wind resource is “the total amount of energy the wind plant produced during a period of time divided by the amount of energy the plant would have produced at full capacity.” Department comments, at 7.

However, the Department noted that the future of the Coyote Plant is uncertain because the operator of the plant, Otter Tail Power Company, has indicated that it may close the plant early due to high costs of compliance with the federal Regional Haze Rule. The Department therefore recommended that the Joint System discuss the future of Coyote and its impact on the Joint System's reliability in its next IRP.

The Department concluded that the Joint System's commitment to energy conservation was reasonable: "Even though the Joint System has an abundance of supply-side resources, it surpassed Minnesota's 1.5% energy savings goal each year from 2014 through 2018 and projects 1.5% energy savings throughout the planning period."¹¹

Next, the Department reviewed whether the Joint System adequately addressed how the IRP helps the utility achieve Minnesota's greenhouse-gas-reduction goals, renewable energy standard, and solar energy standard, as required by statute and Commission guidance. The Department stated that the Joint System expects to surpass the renewable energy standard every year, and that the solar energy standard does not apply to the Joint System.

However, the Department found that the Joint System did not address how the IRP helps it achieve the greenhouse-gas-reduction goals and recommended that the Joint System submit its required evaluation in reply comments. In reply comments, the Joint System submitted calculations of its projected CO₂ emissions reductions, predicting a decline of 55% from its 2005 emissions levels by 2036, assuming implementation of Project Tundra. The Department concluded that "although Minnkota should have included additional scenario analyses that did not assume approval and success of carbon sequestration, the Cooperative's analysis is adequate until the Cooperative submits its next resource plan."¹²

Finally, the Department concluded that the Joint System is adequately monitoring environmental regulations that may affect its operations.

IV. Commission Action

A. Acceptance of IRP

The Commission finds that the Joint System's resource plan meets the requirements and purpose of the resource planning statute and rules by addressing how it will meet its customer needs throughout the planning period and adequately explaining its analysis. The Commission will therefore accept the Joint System's 2019 resource plan.

B. Deadline Extension

At the Commission meeting, the Department noted that the Commission recently extended Otter Tail Power Company's filing deadline for its next resource plan to September 1, 2021, in order to allow that Company to model the impact of the emission controls required by the Regional Haze

¹¹ Department comments, at 11.

¹² Department reply comments, at 1.

Rule. The Department explained, and the Joint System agreed, that the Joint System's next resource plan will be more useful and meaningful if it contains the additional information from Otter Tail Power's resource plan. The Department recommended that the Commission extend the deadline for the Joint System's next resource plan to July 1, 2022.

Commission rules require utilities to file a resource plan every two years, which means the deadline for the Joint System's next resource plan is July 1, 2021.¹³ The Commission can vary this rule upon finding that (1) enforcement of the rule would impose an excessive burden upon the applicant or others affected by the rule; (2) granting the variance would not adversely affect the public interest; and (3) granting the variance would not conflict with standards imposed by law.¹⁴

The Commission finds that requiring the Joint System to file its next resource plan in 2021 would impose an excessive burden on the Joint System and other stakeholders because it would require them to produce and review a resource plan without having complete information about the future operation of the Coyote Plant. The Commission also finds that extending the deadline for the Joint System's next resource plan to 2022 serves the public interest by ensuring that the resource plan will contain updated information about a key generation resource. And the Commission finds that extending the deadline would not conflict with any legal standards. The Commission will therefore extend the deadline for the Joint System's next resource plan to July 1, 2022.

C. Additional Information in Next Resource Plan

The Commission has extended the deadline for the Joint System's next resource plan so that it will include current information from Otter Tail Power's resource plan about how the Regional Haze Rule may affect operations at the Coyote Plant. The Commission will therefore require the Joint System to include an update in its next resource plan on the impact of the Regional Haze Rule on the Coyote Plant's operations and accordingly on the Joint System's resource needs.

The Commission agrees with the Department that utilities must address how their resource plan helps the utility achieve Minnesota's greenhouse-gas-reduction goals, as stated in the Commission's *Notice of Information in Future Resource Plan Filings* dated August 5, 2013. The Commission will therefore require the Joint System to comply with the Commission's August 5, 2013 letter regarding resource plan requirements and submit an evaluation of the Joint System's progress towards meeting Minnesota's greenhouse gas emissions reduction goal, including comparing its actual 2015 CO₂ emissions and projected 2025 emissions to the Joint System's actual 2005 CO₂ emissions. The Joint System should include scenarios that do not assume approval and success of carbon sequestration in order to account for other possible outcomes of Project Tundra.

Finally, Minnkota's member cooperatives are allowed to acquire up to five percent of their energy and capacity requirements from sources other than Minnkota. The Commission considers it relevant to resource planning whether and how member cooperatives are taking advantage of this option. The Commission will therefore require Minnkota to provide in its next resource plan

¹³ Minn. R. 7843.0300, subp. 2.

¹⁴ Minn. R. 7829.3200.

information about the extent to which any Minnesota member cooperatives are supplying up to five percent of their energy and capacity requirements from other sources.

ORDER

1. The Commission accepts the Minnkota Power Cooperative, Inc. and Northern Municipal Power Agency (the Joint System) 2019 Integrated Resource Plan. The Commission accepts the Joint System's forecast for planning purposes.
2. The Commission varies Minn. R. 7843.0300 and directs the Joint System to file its next resource plan no later than July 1, 2022.
3. In its next resource plan, the Joint System shall update the Commission on the impact of the Regional Haze Rule on the Coyote Plant's operations and accordingly on the Joint System's resource needs.
4. In its next resource plan, the Joint System shall comply with the Commission's August 5, 2013 letter regarding resource plan requirements and submit an evaluation of the Joint System's progress towards meeting Minnesota's greenhouse gas emissions reduction goal, including comparing its actual 2015 CO₂ emissions and projected 2025 emissions to the Joint System's actual 2005 CO₂ emissions. The Joint System should include scenarios that do not assume approval and success of carbon sequestration.
5. In its next resource plan, Minnkota shall provide information about the extent to which any Minnesota member cooperatives are supplying up to five percent of their energy and capacity requirements from other sources.
6. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Will Seuffert
Executive Secretary



This document can be made available in alternative formats (e.g., large print or audio) by calling 651.296.0406 (voice). Persons with hearing or speech impairment may call using their preferred Telecommunications Relay Service or email consumer.puc@state.mn.us for assistance.