

**STATE OF MINNESOTA  
PUBLIC UTILITIES COMMISSION**

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April 1, 2020

**In the Matter of the Petition of Northern States  
Power Company for Approval of a Plan to Offer  
Generating Resources into the MISO Market on a  
Seasonal Basis.**

**Docket No. E-002/M-19-809**

**COMMENTS OF CLEAN ENERGY ORGANIZATIONS**

Fresh Energy, Sierra Club, and Union of Concerned Scientists (together, the “Clean Energy Organizations” or “CEOs”) submit these initial comments in response to the Commission’s January 10, 2020 *Notice of Comment Period* regarding Xcel Energy’s (“Xcel’s”) proposal to offer two coal generating units into the MISO market on a seasonal basis.

**1. Background**

The CEOs appreciate Xcel’s work to evaluate operational changes at their coal-fired generating plants and strongly support Xcel’s proposed unit commitment plan. Coal plant operations have come under greater scrutiny nationally as wholesale power prices have dropped and coal becomes a comparatively more expensive power source. In particular, the practice of self-committing coal units has raised concerns for utilities, regulators, advocates, and market operators across the country. Xcel’s proposal is a very positive response to these dynamics and will reduce both customer costs and CO<sub>2</sub> and other emissions.

Self-commitment, or using “must run” commitment status, enables a generator participating in the Midcontinent Independent System Operator (MISO) wholesale power market to request that MISO commit a unit regardless of market price. These units run at their economic minimum level, unless market needs call for a higher dispatch level or the utility specifies one (via self-scheduling). When a utility elects to self-commit a generator (i.e. must-run at economic minimum), the unit is a price taker and may operate at a loss relative to energy market prices.

Historically, Xcel and other Minnesota utilities have self-committed their coal units throughout the year. In 2019 the Commission requested additional information from the three investor-owned utilities on the cost of self-commitment and self-scheduling to Minnesota customers. Fresh Energy found that coal units were operating at a loss 30-60% of the time and recommended that utilities examine the potential for moving units to economic commitment and/or seasonal operations. These results largely correspond with results from other analysis from Bloomberg New Energy Finance,<sup>1</sup> Sierra Club,<sup>2</sup> and UCS.<sup>3</sup> Analysis by MISO found that at least 8% of MISO's coal generation designated as must run is operated at economic minimum at an economic loss.<sup>4</sup>

## **2. Xcel's seasonal economic commitment plan will generate significant customer savings**

On December 20, 2019 Xcel filed a *Plan to Offer Generating Resources into the MISO Market on a Seasonal Basis*,<sup>5</sup> which proposes to idle two coal units, Allen S King and Sherco 2, during non-peak seasons beginning in 2020. This change is expected to generate significant savings for customers and substantially reduce emissions from Xcel's Minnesota generation fleet. CEOs support the proposal and recommend implementation by Xcel as soon as feasible.

In 2019, Xcel began using economic commitment at King and Sherco 2 within reliability and operational bounds.<sup>6</sup> Xcel's modeling demonstrates that the shift from self-commitment (must-run) year round to an economic commitment paradigm produces significant savings for customers of \$40-\$80 million through the fuel clause adjustment (FCA) by 2023. Importantly, by further electing to idle the units during low market price shoulder seasons, Xcel expects to save on capital investments at King and operations and maintenance savings at both units. Xcel's modeling estimates net savings of \$5.7-\$11 million in 2020 and \$90-\$131 million from

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<sup>1</sup> Nelson, William, and Sophia Liu, *Half of U.S. Coal Fleet on Shaky Economic Footing*. Bloomberg New Energy Finance, March 26, 2018 ([link](#)).

<sup>2</sup> Fisher, Jeremy, Al Armendariz, Matthew Miller, Brendan Pierpont, Casey Roberts, Josh Smith, and Greg Wannier, *Playing with Other People's Money: How Non-Economic Coal Operations Distort Energy Markets*. Sierra Club, 2019 ([link](#)).

<sup>3</sup> Daniel, Joseph, *Out-Of-Merit Generation of Regulated Coal Plants in Organized Energy Markets*. Paper presented USAEE Annual Conference: Evolving Energy Realities, September 24, 2018 ([link](#)).

<sup>4</sup> Midcontinent Independent System Operator (MISO), *Exploration of Forward Market Mechanisms (FMM) (IR085)*, 2020 ([link](#)).

<sup>5</sup> Xcel, *Plan to Offer Generating Resources into the MISO Market on a Seasonal Basis*, filed December 20, 2019 in Docket No. 19-809 ([link](#)).

<sup>6</sup> *Id.*, p 8 footnote 6: "We continue to commit these units with a commit status of "must run" in certain limited circumstances, including for required environmental and performance testing, for fuel and emissions management, to meet unit minimum run time parameters, during periods of elevated reliability risk, and in response to operating directives from MISO and Transmission Operations."

2020 to 2028.<sup>7</sup>

| <b>Xcel Estimated Cost Savings: 2020-2028 (\$000s)</b> |                 |                  |                   |
|--|-----------------|------------------|-------------------|
|  | <b>Low</b>      | <b>High</b>      | <b>Annual Avg</b> |
| Net Fuel Savings                                       | \$36,119        | \$79,118         | \$6,402           |
| Sherco O&M savings                                     | \$5,950         | \$5,950          | \$661             |
| King O&M savings                                       | \$18,400        | \$18,400         | \$2,044           |
| King capital savings                                   | \$27,149        | \$27,149         | \$3,017           |
| <b>Total</b>   | <b>\$87,618</b> | <b>\$130,617</b> | <b>\$12,124</b>   |

Xcel's modeling indicated that a seasonal economic commitment plan could result in somewhat higher net fuel and wholesale energy purchase costs (\$0.7-\$2.8 million through 2023) compared to year-round economic dispatch, in part due to the potential for some foregone revenue in the non-peak seasons.<sup>8</sup> However, O&M and capital savings from moving to a seasonal construct are projected to more than offset potentially elevated FCA charges, as shown in the table below. The CEOs also note that with recent market changes due to coronavirus response, low gas prices, and a higher probability of low load in the coming year, customers may see greater fuel savings than initially modeled. Because these O&M and capital savings will show up in base rates rather than the FCA true-up, we encourage Xcel to identify the savings resulting from the Unit Commitment Plan in their next general rate case.

| <b>Net Savings: Seasonal Economic vs. Year-Round Economic (\$000s)</b> |             |             |             |             |              |                   |
|--|-------------|-------------|-------------|-------------|--------------|-------------------|
|  | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>Total</b> | <b>Annual Avg</b> |
| Base LMP   | \$2,647     | \$5,344     | \$5,697     | \$6,604     | \$20,292     | \$5,073           |
| High LMP   | \$3,117     | \$5,233     | \$3,804     | \$3,874     | \$16,028     | \$4,007           |

### **3. Xcel's seasonal economic commitment plan will reduce carbon emissions and environmental externalities**

In addition to customer savings, the operational changes proposed by Xcel would also generate significant emissions reductions. Xcel's modeling found that shifting King, Sherco 2 (and to a lesser extent Sherco 1) to a seasonal economic commitment strategy would reduce the net carbon dioxide (CO<sub>2</sub>) emissions of Xcel's Minnesota fleet by 3.7-6.5 million tons per year from 2020-2023. This is a 25%-32% reduction in system-wide CO<sub>2</sub> emissions compared to the must run year-round scenario and represents \$6.3-\$29.7 million in reduced environmental

<sup>7</sup> Id, tables 2, 3, 4, 5, and 6

<sup>8</sup> Id, p 10

costs.<sup>9</sup> CO<sub>2</sub> emissions from the King and Sherco 2 units are expected to be reduced by 79%-89% and 58%-71%, respectively, over the next four years depending on LMP.<sup>10</sup>

#### **4. Recommendations on Xcel's evaluation and reporting plan**

CEOs appreciate Xcel's proposal to provide regular updates on the implementation of this seasonal commitment plan and recommend the company provide an initial report within 6 months of the Commission Order (if approved), filed in both this docket and the Commission Investigation into Self Commitment (19-704).

CEOs recommend the following reporting elements in addition to the analysis of hours King or Sherco 2 would have been committed if offered into the MISO day-ahead market:

- A comparison of actual fuel charge impacts, O&M savings, capital expenditure savings, and emissions to the modeling results presented in this filing.
- Reporting on the operations of each unit in each quarter of the reporting period including offline days for reserve shutdown or outage, starts by type (MISO economic, MISO reliability dispatch, Company must run), and the duration of each start by type.
- Actual workforce impacts at each unit.

#### **5. Summary of Recommendations**

The CEOs appreciate the opportunity to provide comments on this important topic. We recommend the Commission:

1. Approve Xcel's petition and Unit Commitment Plan.
2. Require Xcel to provide an initial report within 6 months of the Commission Order in this docket, cross-filed with the Commission Investigation into Self Commitment (docket 19-704), and thereafter to provide annual updates on the Unit Commitment Plan in docket 19-704.
3. Require Xcel to include in future reports in docket 19-704:
  - A comparison of actual fuel charge impacts, O&M savings, capital expenditure savings, and emissions versus the modeling results presented in this filing.
  - Reporting on the operations of each unit in each quarter of the reporting period including offline days for reserve shutdown or outage, starts by type (MISO economic, MISO reliability dispatch, Company must run), and the duration of each start by type.

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<sup>9</sup> Id, p 13: includes environmental value of CO<sub>2</sub> reductions only

<sup>10</sup> Xcel Response to Fresh Energy IR 1, Attachment A

- An analysis of the hours King or Sherco 2 would have been committed during non-peak seasons if offered into the MISO day-ahead market.
- Actual workforce impacts at each unit.

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