

January 5, 2026

**PUBLIC DOCUMENT**

Sasha Bergman  
Minnesota Public Utilities Commission  
121 7th Place East, Suite 350  
St. Paul, Minnesota 55101-2147

RE: **PUBLIC** Comments of the Minnesota Department of Commerce  
Docket No. E002/RP-24-67

Dear Ms. Bergman,

Attached are the **PUBLIC** comments of the Minnesota Department of Commerce (Department) in the following matter:

*In the Matter of Northern States Power Company d/b/a Xcel Energy's  
Petition for Approval of Generator Projects for MISO's Expedited Resource  
Addition Study.*

The Petition was filed by Northern States Power Company, doing business as Xcel Energy on December 3, 2025.

The Department recommends **approval** and is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ Dr. SYDNIE LIEB  
Assistant Commissioner of Regulatory Analysis

SR/ar  
Attachment

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## Acronyms and Abbreviations

<b>BESS</b>	Battery Energy Storage System
<b>CAF</b>	Capacity Availability Factor
<b>CFEC</b>	Cannon Falls Energy Center
<b>CFS</b>	Carbon-free Standard
<b>COD</b>	Commercial Operation Date
<b>CONE</b>	Cost of New Entry
<b>Commission</b>	Minnesota Public Utilities Commission
<b>CPD</b>	Critical Path Development
<b>CT</b>	Combustion Turbine
<b>EFA</b>	Extraordinary Federal Action
<b>ERAS</b>	Expedited Resource Addition Study
<b>FCR</b>	Fuel Clause Rider
<b>GIA</b>	Generator Interconnection Agreement
<b>IRP</b>	Integrated Resource Plan
<b>ITC</b>	Investment Tax Credit
<b>kW</b>	kilowatt
<b>MEC</b>	Mankato Energy Center Combined Cycle
<b>MISO</b>	Midcontinent Independent System Operator, Inc.
<b>MNEC</b>	Minnesota Energy Connection
<b>MW</b>	Megawatt
<b>MWh</b>	Megawatt-hour
<b>POD</b>	Point of Delivery
<b>PPA</b>	Power Purchase Agreement
<b>PRM</b>	Planning Reserve Margin
<b>PTC</b>	Production Tax Credit
<b>PVRR</b>	Present Value of Revenue Requirements
<b>PVSC</b>	Present Value of Societal Costs
<b>RTE</b>	Round-trip Efficiency
<b>SCTL</b>	Specified Change in Tax Law
<b>Sherco</b>	Sherburne County Generating Station
<b>SOFR</b>	Secured Overnight Financing Rate
<b>Xcel or Company</b>	Northern States Power Company, doing business as Xcel Energy

## Definitions

<b>800 MW Petition</b>	The Company's September 26, 2025 Petition in Docket Nos. E002/CN-23-212 and E002/RP-24-67.
<b>800 MW Supplement</b>	The Company's December 5, 2025 Supplemental Filing in Docket Nos. E002/CN-23-212 and E002/RP-24-67.
<b>2024 IRP Order</b>	The Commission's April 21, 2025 <i>Order Approving Settlement Agreement with Modifications</i> ; see Docket No. E002/RP-24-67.
<b>2024 RFP Petition</b>	The Company's October 31, 2025 Petition in Docket No. E002/M-24-230.
<b>End Effects Period</b>	A period of varying length after the planning period in a resource plan modeling run.
<b>Notice</b>	The Commission's December 5, 2025 Notice of Comment Period in Docket No. E002/RP-24-67.
<b>Petition</b>	The Company's December 3, 2025 Petition in Docket No. E002/RP-24-67.
<b>Planning Period</b>	The first fifteen years of a resource plan modeling run.
<b>Study Period</b>	The planning period plus the end effects period in a resource plan modeling run.
<b>Wind Development Transfer</b>	The Company's Process for acquiring projects to use the MNEC, see Docket No. E002/M-23-342. The Petition has not been filed at this time.

**Before the Minnesota Public Utilities Commission**  
**PUBLIC Comments of the Minnesota Department of Commerce**

Docket No. E002/RP-24-67

**I. INTRODUCTION**

Xcel submitted a petition for approval of three projects for which third-party developers have submitted an ERAS application to the Midcontinent Independent System Operator, Inc. (MISO). The projects are:

- 200 MW Sandhill BESS;
- 300 MW Benton II BESS; and
- 45-70 MW of incremental capacity that would result from planned upgrades at the CFEC (collectively, ERAS Portfolio 1).<sup>1, 2</sup>

The CFEC expansion is in MISO’s ERAS Study Cycle 2.<sup>3</sup> A brief description of the projects in the Petition is shown in Table 1.

**Table 1: Overview of Xcel’s Proposed ERAS Portfolio 1**

Project Name	Location	Seller	Type	Installed Capacity	COD	Capacity Payment \$/kW-month
<b>CFEC Expansion</b>	Goodhue County	Invenergy Renewables, LLC	Combustion Turbine	45-70 MW	6/1/2028	<b>[TRADE SECRET DATA HAS BEEN EXCISED]</b>
<b>Sandhill</b>	Olmsted County	Tenaska	BESS	200 MW	12/31/2028	
<b>Benton II</b>	Benton County	NextEra	BESS	300 MW	5/31/2029	

<sup>1</sup> In the Matter of Northern States Power Company d/b/a Xcel Energy’s Petition for Approval of Generator Projects for MISO’s Expedited Resource Addition Study (ERAS), Xcel Energy, Petition, December 3, 2025, Docket No. E002/RP-24-67, (eDockets) [202512-225511-02](#), (hereinafter “Petition”).

<sup>2</sup> Note that Benton II originally included 100 MW of solar but Xcel elected to proceed only with the Benton II BESS as the solar component was determined to be cost-prohibitive; Petition at 12.

<sup>3</sup> See [MISO ERAS Interconnection Requests](#). The webpage was downloaded on December 24, 2025

A summary of Xcel’s recent filings showing total installed capacity by resource type is shown in Table 2.

**Table 2: Summary of Recent Resource Acquisitions (MW)**

Docket No.	Proceeding	Combined Cycle	Combustion Turbine	BESS	Solar
CN-23-212 <sup>4</sup>	800 MW Petition	375	777	412	-
CN-23-212 <sup>5</sup>	800 MW Supplement	-	-	80	-
M-24-230 <sup>6</sup>	2024 RFP Petition	-	-	856	768
RP-24-67 <sup>7</sup>	ERAS Portfolio 1	-	45	500	-
Sum		375	822	1,848	768

The additions in Table 2 include the projects in this proceeding and other proceedings that are currently on-going. In addition to the on-going acquisitions shown in Table 2 at an earlier date Xcel requested Commission verification for the MISO ERAS process for an additional 950 MW of BESS.<sup>8</sup> Also, Xcel is also in the process of acquiring 1,500 MW of wind and expects to file for approval in the first quarter of 2026.<sup>9</sup>

Xcel requests that the Commission take the following actions:

- Find that the Company’s proposed ERAS Portfolio 1 is in the public interest;
- Approve the three PPAs;
- Authorize the Company to recover, through the Fuel Clause Rider (FCR), pursuant to Minn. Stat. § 216B.16 subd. 7(3), the Minnesota jurisdictional portion of the costs incurred under the PPAs from Minnesota retail customers; and
- Establish a procedural schedule such that the Commission may complete deliberations by mid-February 2026, ahead of a substantial non-refundable payment required upon execution of the GIA.<sup>10</sup>

<sup>4</sup> For the PPA projects see: *In the Matter of Xcel Energy’s Competitive Resource Acquisition Process for up to 800 Megawatts of Firm Dispatchable Generation*, Xcel Energy, Petition, September 26, 2025, Docket No. E002/M-23-212, (eDockets) [20259-223366-02](#) at 4-5. For Xcel’s self-build projects see: *In the Matter of Xcel Energy’s Competitive Resource Acquisition Process for up to 800 Megawatts of Firm Dispatchable Generation, Order Approving Settlement Agreement With Modifications*, April 21, 2025, Docket Nos. E002/RP-24-67 and E002/CN-23-212, (eDockets) [20254-217941-01](#) at 6-7.

<sup>5</sup> *In the Matter of Xcel Energy’s Competitive Resource Acquisition Process for up to 800 Megawatts of Firm Dispatchable Generation*, Xcel Energy, Supplement, December 5, 2025, Docket No. E002/CN-23-212 and E002/RP-24-67, (eDockets) [202512-225594-02](#), at 2.

<sup>6</sup> *In the Matter of Xcel Energy’s 2024 Wind, Solar, and Storage Request for Proposals*, Xcel Energy, Petition, October 31, 2025, Docket No. E002/M-24-230, (eDockets) [202510-224560-01](#), [202510-224560-03](#), [202510-224560-04](#), [202510-224560-05](#), [202510-224560-06](#), [202510-224560-07](#), [202510-224560-08](#), at 3.

<sup>7</sup> Petition at 3. Note that for the combustion turbine Xcel provides a range of 45-70 MW.

<sup>8</sup> *In the Matter of Xcel’s Proposed Generator Projects For Expedited Resource Addition Study*, Xcel, Petition Supplement, August 1, 2025, Docket No. E002/RP-24-67 (eDockets) [20258-221673-01](#).

<sup>9</sup> *In the Matter of Xcel Energy’s Petition for Approval of a Development Transfer Resource Acquisition Process*, Xcel Energy, Update, July 15, 2025, Docket No. E002/M-23-342, (eDockets) [20257-220987-01](#). Note that a subsequent (October 15) update omitted the capacity estimate.

<sup>10</sup> Petition at 1-2.

## II. PROCEDURAL BACKGROUND

December 3, 2025 Xcel filed a petition for approval of three PPAs for projects currently in MISO's ERAS process.

December 5, 2025 The Commission issued a notice of comment period for the petition.<sup>11</sup>

According to the Commission's Notice the following topics are open for comment:

- Should the Commission approve the PPAs?
- Should the Commission authorize the Company to recover, through the FCR, pursuant to Minn. Stat. § 216B.16 subd. 7(3), the Minnesota jurisdictional portion of the costs incurred under the PPAs from Minnesota retail customers?
- Are there any other topics related to this matter?

## III. DEPARTMENT ANALYSIS

### A. COMPLETENESS

The Commission's Rules define the Petition as a "miscellaneous filing" under Minn. R. 7829.0100, subp. 11 since no determination of Xcel's overall revenue requirement is necessary.<sup>12</sup> Minn. R. 7829.1300 subp. 3 contains the completeness requirements for miscellaneous filings.<sup>13</sup>

The Department reviewed the Petition for compliance with completeness requirements. The Department concludes that the Petition is complete.

### B. GOVERNING STATUTES AND RULES

The Petition was filed pursuant to Minn. Stat. § 216B.16 subd. 7 which authorizes recovery of the Minnesota jurisdictional share of PPA costs.<sup>14</sup> Specifically, Minn. Stat. § 216B.16 subd. 7 states:

Notwithstanding any other provision of this chapter, the [C]ommission may permit a public utility to file rate schedules containing provisions for the automatic adjustment of charges for public utility service in direct relation to changes in:

...

(3) costs for fuel used in generation of electricity or the manufacture of gas.

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<sup>11</sup> *In the Matter of Northern States Power Company d/b/a Xcel Energy's Petition for Approval of Generator Projects for MISO's Expedited Resource Addition Study (ERAS), Notice of Comment Period*, December 5, 2025, Docket No. E002/RP-24-67, (eDockets) [202512-225567-01](#), (hereinafter "Notice").

<sup>12</sup> [Minn. R. 7829.0100, subp. 11.](#)

<sup>13</sup> [Minn. R. 7829.1300, subp. 3.](#)

<sup>14</sup> [Minn. Stat. § 216B.16, subd. 7](#) (2025).

C. *NEED ANALYSIS*

C.1. *Background*

The Commission's order in Xcel's most recent IRP set peaking capacity acquisition targets as follows:

- 600 MW of standalone BESS to be installed by a target date of end-of-year 2030;
  - to the extent feasible, 120 MW must use the MNEC; and
- aside from the resources selected in the firm dispatchable docket (Docket No. E002/CN-23-212), the five-year action plan does not include any size/type/timing decisions for new generic resources that could include combustion turbine gas plants, nor does it include any additional new gas generation with unconstrained carbon emissions.<sup>15</sup>

The 600 MW of standalone BESS target was addressed by Xcel's petition in Docket No. E002/M-24-230 which proposed the acquisition of 856 MW/3,422 MWh of BESS capacity.<sup>16</sup>

The IRP process seeks to select a plan that balances the needs for maintaining reliability, minimizing rates, reducing adverse environmental and socioeconomic burdens, enhancing the utility's ability to respond to changes, and limiting the impact of risks by analyzing various options under a variety of assumptions and considering stakeholder input.<sup>17</sup> The projects in question here were not selected in the IRP process. However, the resource size, type, and timing targets for Xcel's additions were determined in the IRP.

Overall, a well-developed IRP provides the analytical basis for determinations in subsequent proceedings. When a utility's proposed resource acquisition is consistent with the IRP analysis and Commission decision, no further resource-planning type analysis is needed.<sup>18</sup> When facts regarding the specific resources proposed by the utility fall outside of the analysis and Commission decision in the most recent IRP, further resource-planning type analysis using the updated facts is warranted. In essence, resource acquisition typically conforms with the Commission's most recent IRP order unless facts in the resource acquisition proceeding dictate that the action plan should change.<sup>19</sup> This approach is consistent with the Commission's order in a past resource acquisition proceeding:

[...] while a resource plan is intended to plot a utility's course for the next 15 years, it is based on facts known as of a specific point in time. As more

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<sup>15</sup> *In the Matter of Xcel Energy's 2024–2040 Upper Midwest Integrated Resource Plan*, Order Approving Settlement Agreement with Modifications, April 21, 2025, Docket Nos. E002/RP-24-67 and E002/CN-23-212 (eDockets) [20254-217941-01](#) at Order Points 2, 3, 4, and 7.

<sup>16</sup> 2024 RFP Petition at 1.

<sup>17</sup> [Minn. R. 7843.0500](#).

<sup>18</sup> Examples include Docket Nos. IP6838/CN-10-80 and E002/M-11-713 (Prairie Rose Wind); Docket No. E015/M-13-907 (Bison 4); and Docket Nos. E017/M-09-883 and E017/M-09-1484.

<sup>19</sup> An example is Xcel's acquisition of 750 MW of wind generation in Dockets E002/M-13-603 and E002/M-13-716. In that case Xcel's 2010 IRP called for the addition of 200 MW of wind. However, Xcel subsequently found the cost of wind generation was below the cost evaluated in the IRP. Additional analysis with updated costs was performed by Xcel and the DOC found that, using updated pricing additional wind was cost effective.

facts become known, circumstances change and utilities must adapt – even in the absence of a new resource plan order.<sup>20</sup>

Given the significant change in numerous inputs such as the demand and energy forecast and new unit pricing adaptation is clearly warranted. In this case Xcel performed a mini-IRP as described below.

## C.2. Xcel's EnCompass Update

### C.2.1. Model Updates and Process

Xcel started the Company's EnCompass analysis by building an updated base case. The updated base case starts with the EnCompass modeling submitted in the 2024 RFP Petition with changes to modeling inputs and assumptions. Documentation of the updated demand and energy forecasts and generic resource costs was included as Attachment O to the 2024 RFP Petition.

The Petition specifies the following additional changes in EnCompass to develop an updated Base Case. These changes apply to the EnCompass run that creates the expansion plan and not necessarily the subsequent production cost runs that are reported in the Petition.

- Resource Updates:
  - EnCompass includes the projects in the 800 MW Petition—Lyon County CT, CFEC PPA extension, MEC 1 PPA extension with BESS, North Star BESS, and Sherco West BESS;
  - EnCompass includes the projects in the 2024 RFP Petition—Sherco Solar 4, Fillmore Solar, Gopher Solar, Grant Solar, Lemon Hill Solar, Blue Lake BESS, Sherco South BESS, Crane BESS, Crowned Ridge BESS, and Mayhew Lake BESS;
  - EnCompass includes the projects from Xcel's Wind Development Transfer process, modeled as generic units without transmission costs (six wind projects with total capacity of 1,506 MW);
  - EnCompass includes 400 MW of generic solar at the A.S. King plant in 2030;
  - no additional generic CT additions were available before 2030; and
  - the Plum Creek Wind and Lake Wilson Solar and Storage projects were not included.<sup>21</sup>
- Spot Market Status Between 2027 and 2029:
  - EnCompass allows purchases of spot market capacity at MISO's CONE; and
  - EnCompass allows purchases of spot market energy at forecasted prices.<sup>22</sup>
- Spot Market Status Beginning 2030:
  - EnCompass no longer allows spot market purchases of capacity or energy. All requirements must be met through owned or contracted resources.<sup>23</sup> It is not clear

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<sup>20</sup> *In the Matter of the Petition of Xcel Energy for Approval of the Acquisition of 600 MW of Wind Generation, Order Approving Acquisitions with Conditions*, December 13, 2013, Docket No. E002/M-13-603, (eDockets) [201312-94604-02](#), at 9.

<sup>21</sup> Petition at 21-22.

<sup>22</sup> Petition at 22.

<sup>23</sup> Xcel states that the Spot Market assumptions were necessary to develop the baseline capacity expansion plan. Petition at 22.

what Xcel means by this statement since Xcel's modeling and the Department's modeling both show substantial spot market energy purchases.

- Load Forecast:
  - EnCompass uses the latest (2025v2) load forecast.
- PTC Assumptions:
  - PTCs are assumed for generic resources through 2030 and no PTCs beyond 2030.

Changes to the base case for the ERAS Portfolio Case include Xcel forcing into the model the portfolio of ERAS projects and turning off spot market purchase of capacity and energy. Again, it is not clear what Xcel means by this statement since Xcel's modeling and the Department's modeling both show substantial spot market energy purchases.<sup>24</sup> Both the Base Case and the ERAS Portfolio Case were run as an expansion plan, the resulting expansion units locked-in, and then re-run as production cost runs (for both PVRR and PVSC) covering all 8,760 hours in a year. The PVRR and PVSC results are then reported in the Petition.

### *C.2.2. Xcel's Results for ERAS Portfolio 1*

For the Planning Period (2024-2040) Xcel's results show the ERAS Portfolio Case increases PVRR by \$68 million and decreases PVSC by \$19 million. For the Study Period (2024-2050) Xcel's results show the ERAS Portfolio Case increases PVRR by \$30 million and decreases PVSC by \$122 million.<sup>25</sup>

Other results are:

- reductions in cumulative CO<sub>2</sub> for the ERAS Portfolio Case emissions range from 0.54 million tons (PVSC run) to 0.78 million tons (PVRR run), both for the Planning Period;
- compliance with the CFS under Minn. Stat. § 216B.1691, subd. 2g throughout the Study Period.<sup>26</sup>

### *C.3. Analysis of EnCompass Results*

#### *C.3.1. Matching Xcel's EnCompass Results*

In Department Information Request No. 1, the Department received the inputs, outputs, and post-processing files generated by Xcel in the Company's modeling. This data is verified in a process referred to as "matching," and ensures the modeling runs can be replicated and that the inputs and outputs match. The primary purpose of this step is to ensure that the Department is using the same input data as Xcel. To determine if the Department could match Xcel's results the Department used the same process as in Xcel's most recent IRP.<sup>27</sup>

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<sup>24</sup> It could be the case that these changes apply only to the preliminary, expansion plan run.

<sup>25</sup> Petition at 23.

<sup>26</sup> *Ibid.*

<sup>27</sup> *In the Matter of Xcel Energy's 2024-2040 Integrated Resource Plan*, Department, Comment, August 9, 2024, Docket No. E002/RP-24-67 (eDockets) [20248-209394-02](#).

Second, the Department currently has multiple dockets in process with utilities using different EnCompass versions. To avoid potential errors due to different EnCompass versions on various machines, the Department opted to run EnCompass without changing the version currently installed. That choice meant using a different EnCompass version than Xcel. Using a different EnCompass version means that the Department can get different results even if it is using the exact same inputs, making the matching process less accurate.

Xcel's EnCompass results in the Petition come from four scenarios—two production cost runs using PVRR inputs (with and without the ERAS Portfolio 1) and two production cost runs using PVSC inputs (again, with and without the ERAS Portfolio 1).<sup>28</sup> The Department was able to match Xcel's results for both runs for the case with ERAS Portfolio 1. For the cases without the ERAS Portfolio 1 the absolute value of the difference was 0.23 percent and 0.28 percent, both of which are greater than the MIP input of .20. Since the Department was using a different EnCompass version and the difference was relatively close to the value necessary to consider a scenario to be matched, the Department did not pursue the reason for the different results.

### *C.3.2. Analysis of EnCompass Results*

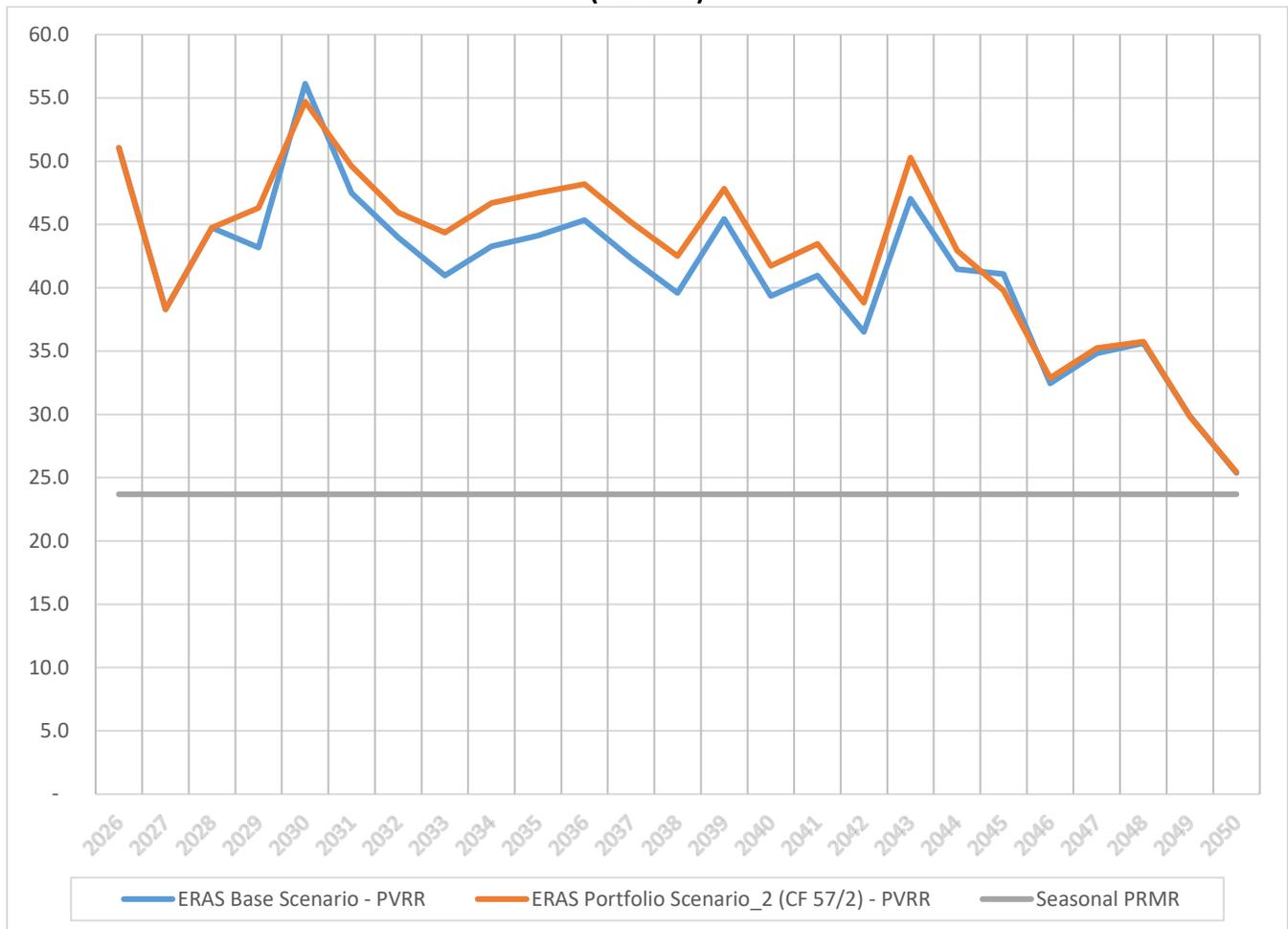
Note that the analysis of the EnCompass modeling results uses the results from the Department's matching runs because this choice enabled the use of certain monthly outputs, which is necessary to investigate any implications for seasonal factors such as MISO's seasonal capacity market.

First, Charts 1 to 4 show the minimum PRM and the PRM resulting from the expansion plan. In both the scenario without the ERAS Portfolio 1 projects (labeled "ERAS Base Scenario – PVRR") and the scenario with the ERAS Portfolio 1 projects (labeled "ERAS Portfolio Scenario\_2 (CF 57/2) – PVRR") Xcel has capacity in excess of the reserve margin.

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<sup>28</sup> The production cost runs are done after a capacity expansion run. But the results of capacity expansion runs generally are not discussed in Xcel's Petition. This is the same general multi-step process as Xcel used in the most recent IRP.

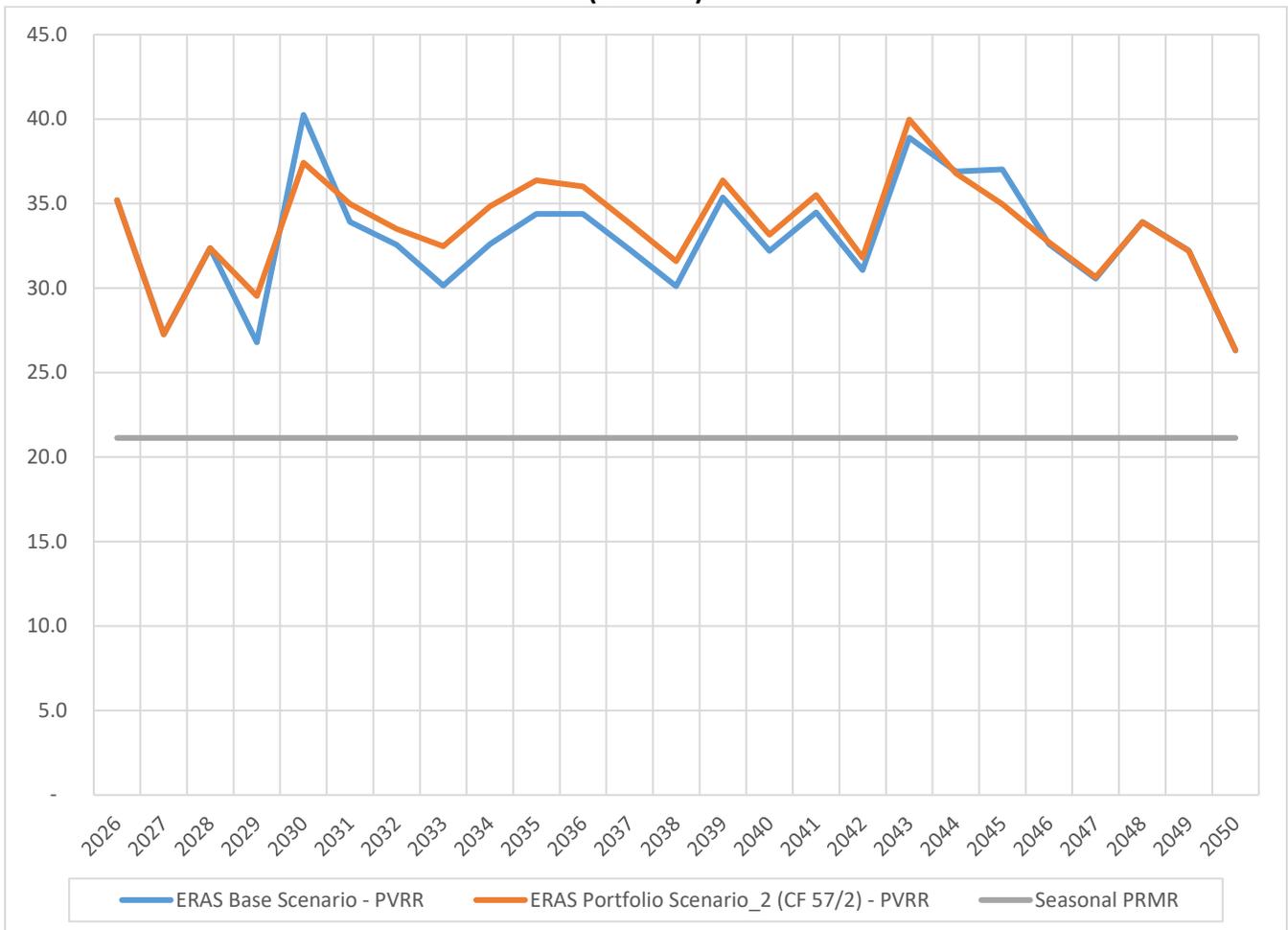
**Chart 1: Winter Minimum and Actual Reserve Margins  
 (Percent)**



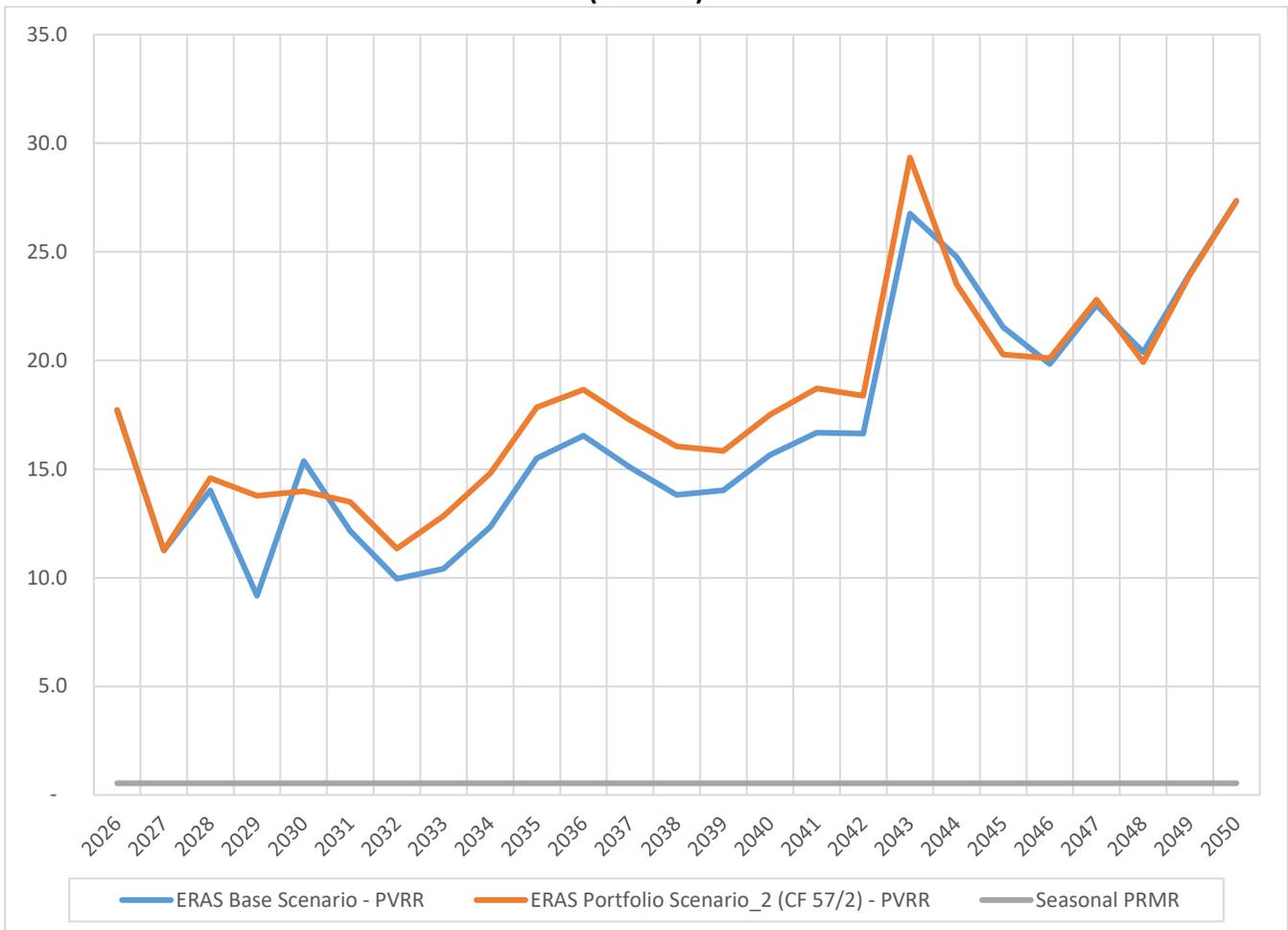
Note that for Charts 1 to 4 the Seasonal PRMR is the MISO value adjusted for Xcel’s coincidence at the time of MISO’s system peak.<sup>29</sup> This is done to be consistent with MISO’s calculation of the quantity of accredited capacity required of Xcel.

<sup>29</sup> In the Matter of Xcel Energy’s 2024-2040 Integrated Resource Plan, Xcel, Petition, February 1, 2024, Docket No. E002/RP-24-67 (eDockets) [0242-203027-01](#), at Chapter 3 at 7-11.

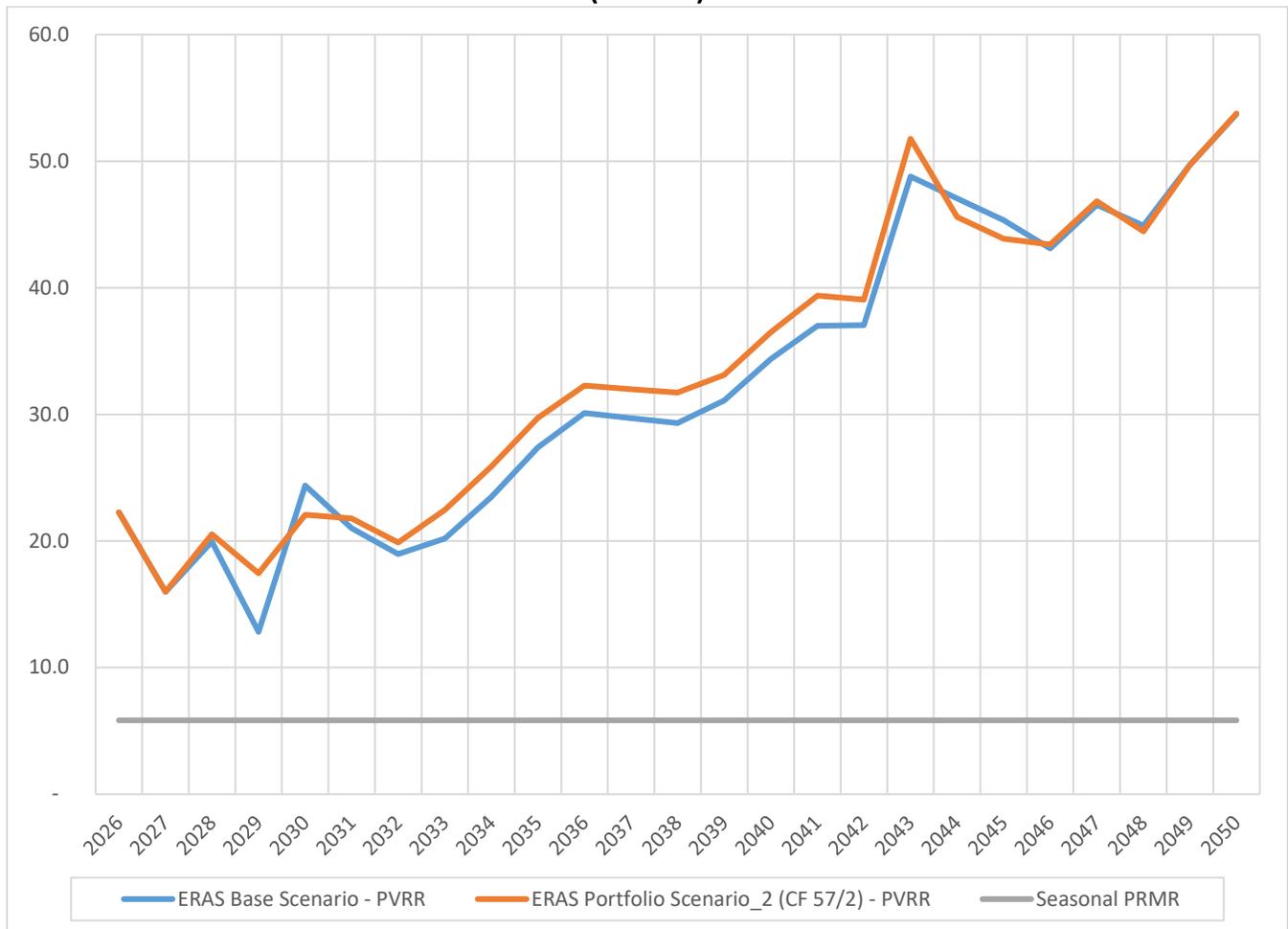
**Chart 2: Spring Minimum and Actual Reserve Margins  
(Percent)**



**Chart 3: Summer Minimum and Actual Reserve Margins (Percent)**

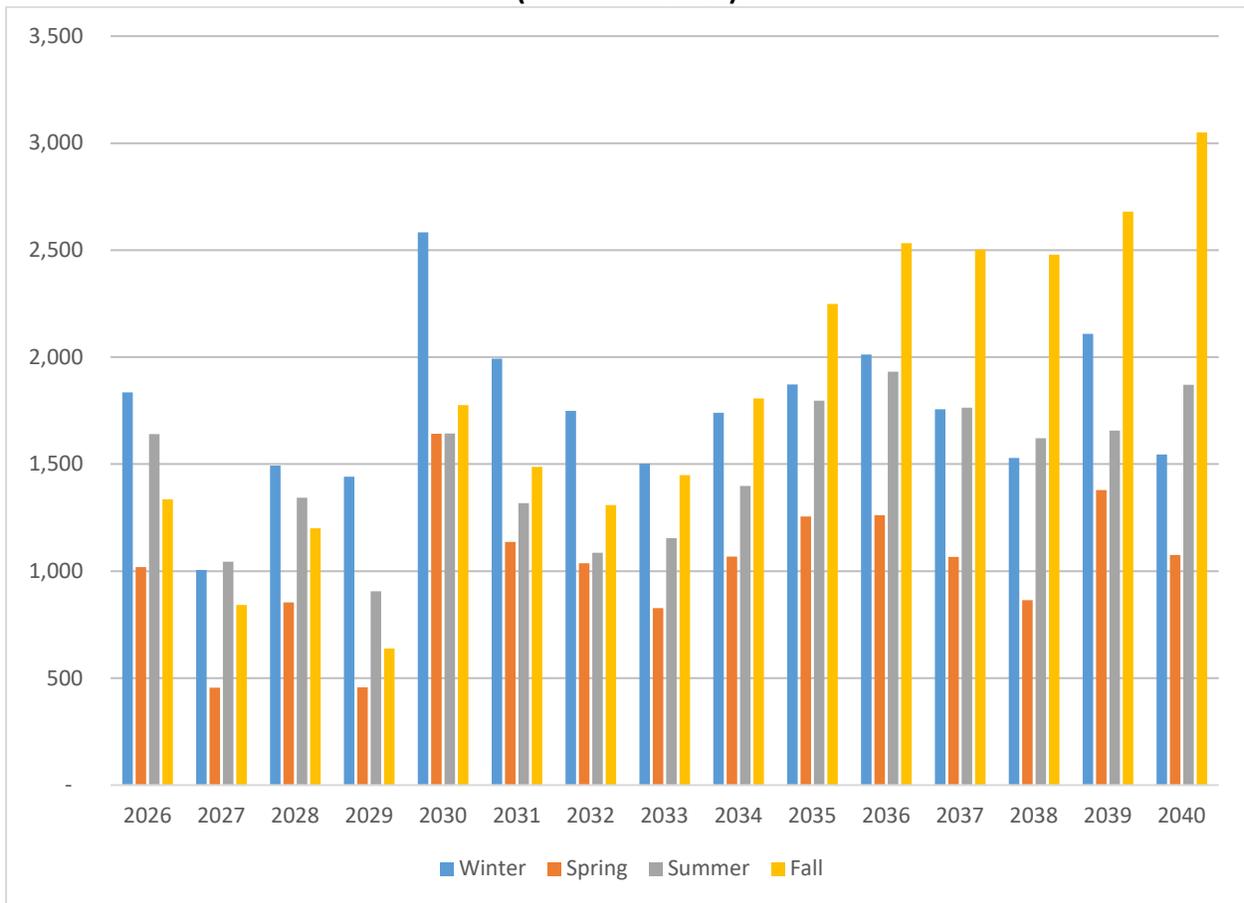


**Chart 4: Fall Minimum and Actual Reserve Margins (Percent)**



Second, the Department calculated the quantity of excess capacity on Xcel’s system. The results are shown in Chart 5 (for the base case—without the ERAS Portfolio 1 projects) and Chart 6 (with the ERAS Portfolio 1 projects). This calculation was done to determine if the surplus reserves were excessive or were a reasonable response to the uncertainty inherent in MISO’s reliability processes. This process also enabled a determination of how much value EnCompass was deriving from an overbuilt system. The focus was on the quantity of reserves shortly before and after the ERAS Portfolio 1 projects come on-line (2028-’29). Excess reserves further in the future can be adjusted through adjustments to other, subsequent, resource acquisition filings.

**Chart 5: Base Case Surplus Capacity  
(accredited MW)**



**Chart 6: ERAS Portfolio Case Surplus Capacity  
 (accredited MW)**

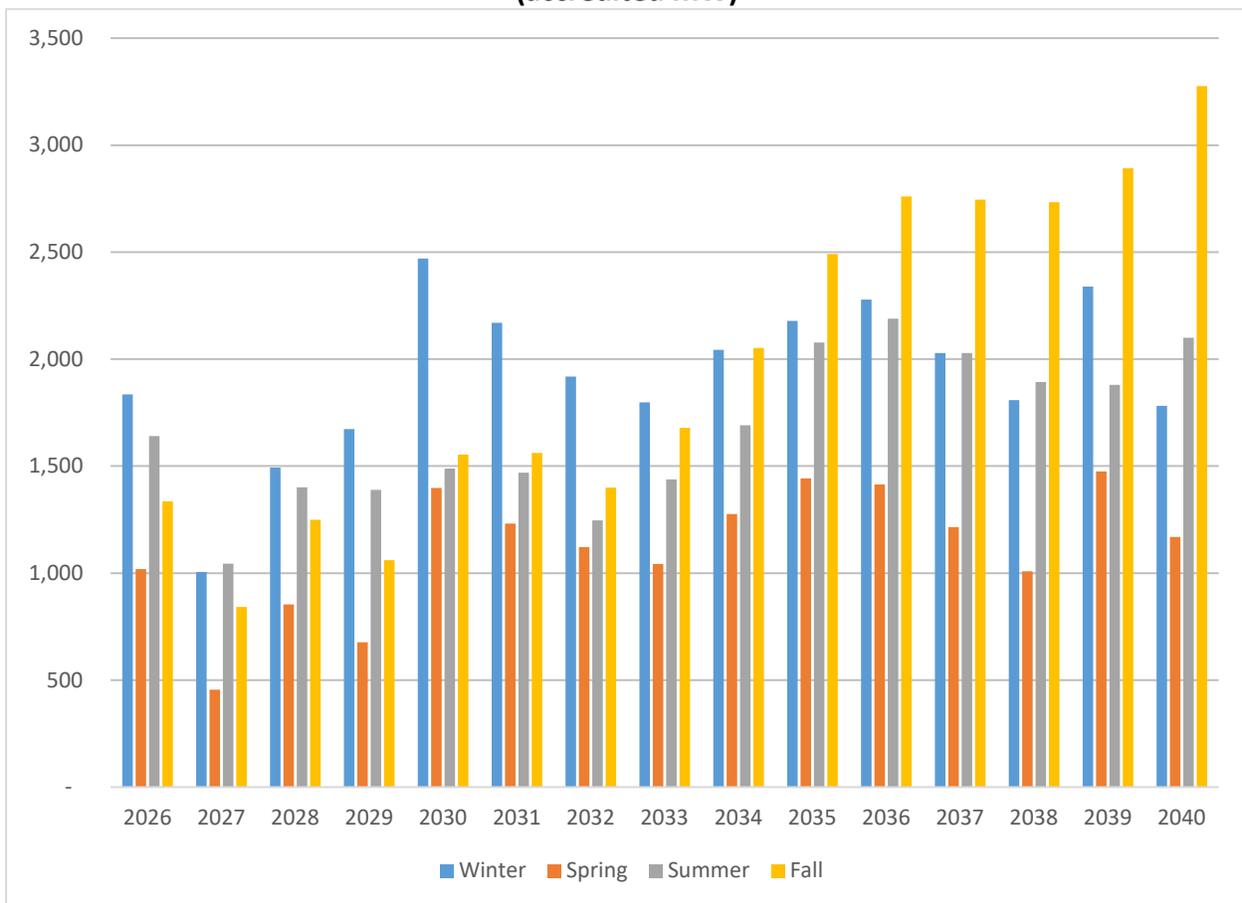


Chart 5 shows that the lowest amount of excess capacity is in the spring of 2027 and 2029. The amount of excess is slightly less than 500 MW in those years. Chart 6 shows that the addition of the ERAS Portfolio 1 projects raises the surplus to about 675 MW in 2029. Overall, EnCompass will derive little to no value from the ERAS Portfolio 1 projects’ excess capacity because Xcel limits payments from the capacity market construct to 500 MW and the model runs were already near or above the 500 MW threshold.<sup>30</sup>

Third, the Department calculated the difference between the two scenarios in total accredited capacity<sup>31</sup> by EnCompass resource type. The result was that only two resource types showed a substantial difference.<sup>32</sup> The firm capacity for BESS showed an overall increase and the accredited

<sup>30</sup> *In the Matter of Xcel Energy’s 2024-2040 Integrated Resource Plan*, Xcel Energy, Petition, February 1, 2024, Docket No. E002/RP-24-67 (eDockets) [20242-203057-01](#), at Appendix F at 19.

<sup>31</sup> This is the capacity that counts towards the PRM.

<sup>32</sup> The only other resource types showing a difference in the expansion plan were wind and solar. The difference in wind was very small (less than 2 MW) and only after 2044. The difference in solar was also small, less than 2 MW in all but 4 years. In both scenarios the sum of the annual capacity differences was negative meaning the ERAS Portfolio 1 case had slightly less wind and solar capacity available than the Base Case, on average.

capacity for Natural Gas CT showed an overall decrease. This is shown in Table 3 below for the years with significant differences.

**Table 3: ERAS Portfolio 1 minus Base Case Expansion Plan<sup>33</sup>  
 (Accredited MW)**

	Natural Gas CT	BESS
2029	56	426
2030	(572)	418
2031	(258)	410
2032	(258)	419
2033	(144)	428
2034	(144)	437
2035	(144)	446
2036	(144)	400
2037	(144)	408
2038	(144)	416
2039	(144)	366
2040	(144)	373
2041	(144)	380
2042	(144)	380
2043	(214)	555
2044	(214)	55
2045	(214)	55

EnCompass will show some benefits from the avoided CT capacity but the amount avoided capacity shown in Table 3, on its own, will not justify the addition of the ERAS Portfolio 1 projects.<sup>34</sup>

Fourth, the Department calculated the difference between the two scenarios in energy output by EnCompass resource type. The results from the PVSC production cost run are summarized in Chart 7 below. Chart 7 shows both sources (resource types generating more energy in the ERAS Portfolio 1 case) and sinks (resource types generating less energy in the ERAS Portfolio 1 case).<sup>35</sup> Only resource types with a difference of at least ± 500 GWh over the study period are shown in Chart 7.

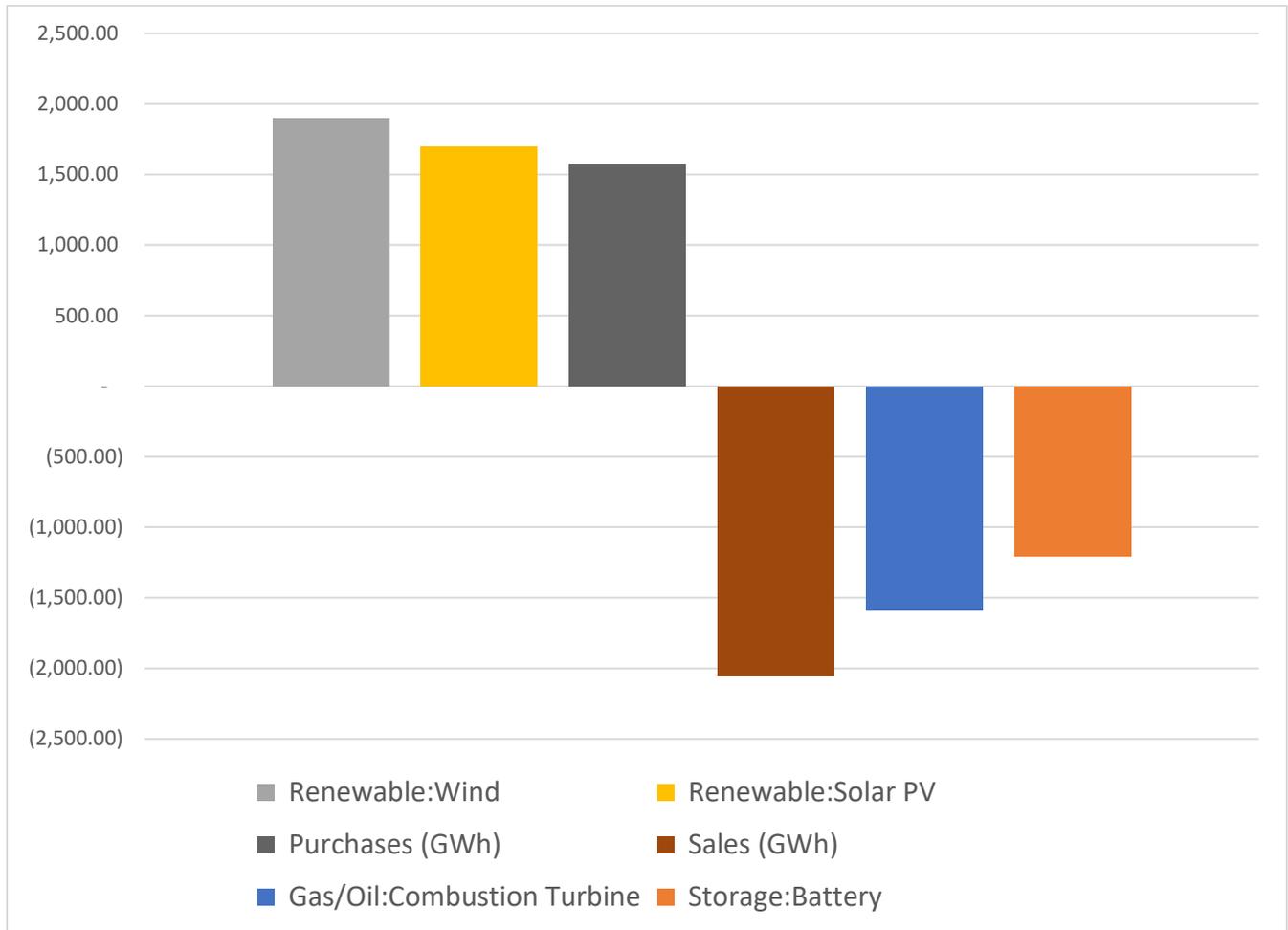
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<sup>33</sup> These results are derived from EnCompass’ annual outputs and will reflect summer, the season with the highest need for accredited capacity.

<sup>34</sup> In fact, all of the changes in internal costs will not justify the addition of the ERAS Portfolio 1 projects since the ERAS Portfolio 1 projects fail a PVR test.

<sup>35</sup> Note that storage does not generate electricity but does consume electricity due to losses in storage and thus shows up as a sink in the chart because more energy is run through the BESS charge/discharge process.

**Chart 7: Energy by Resource Type  
(ERAS Portfolio 1 minus Base Case Total GWh 2024-'55)**



What is notable in Chart 7 is that the ERAS Portfolio 1 case is showing:

- from increased energy from Xcel’s wind and solar units;
- decreased energy from Xcel’s CT units;
- a reduction in Xcel’s spot energy market sales; and
- an increase in Xcel’s spot energy market purchases.

The increased energy from wind and solar, despite virtually no change in capacity, means that EnCompass is using the extra BESS capacity to reduce wind and solar curtailments. However, it is important to understand limitations in how EnCompass determines curtailment.

EnCompass, as structured by Xcel and other utilities, generally does not have system topology—a complex system of transmission to connect various generators and loads. Instead, nearly all of the generating units and load on Xcel’s system are connected to each other with an assumed loss factor to

move energy from generators to load.<sup>36</sup> There are no “locational” differences. This simplification speeds up the resource plan analysis with, in most instances, little cost in terms of missing information in the model. However, when specific units are being analyzed instead of generic units, the simplification can present problems.

The simplification in model inputs (lack of topology) means that curtailment in EnCompass does not occur due to local circumstances, as is the case for some generators on the Buffalo Ridge, for example. Instead, curtailment occurs when, in any one hour, total load plus the size of the connection to the energy spot market is less than the must run generation. For example, if total load is 100 MW and the size of the connection to the energy spot market is 50 MW but must run generation is 200 MW, then EnCompass will report 50 MW of curtailment that hour (200 MW less 150 MW). Due to this difference in system topology (generic EnCompass inputs from an IRP analyzing ERAS Portfolio 1 projects with a specific location) it cannot be known if the reduction in curtailment calculated by EnCompass for ERAS Portfolio 1 will actually be realized.

Also, in EnCompass Xcel is a net seller into the energy spot market by a significant margin (typically 2,000 to 5,000 GWh annually). By increasing purchases and reducing sales, the ERAS Portfolio 1 case is reducing Xcel’s overall sell-side energy market risk.

Fifth, the Department reviewed the expansion plan. Even with the ERAS Portfolio 1 projects EnCompass adds about 1.3 GW of additional peaking capacity—BESS and CT—by 2031. Other expansion units added in 2030-’31 include 2.3 GW of solar and 1.8 GW of wind. These additions amount to about 2.3 GW of accredited capacity by 2031.

This large quantity of resource additions that the modeling shows are necessary by 2031 adds substantial risk to Xcel’s position in that such large quantities of capacity may not be available at a reasonable price.<sup>37</sup> Chart 6, which includes the 2.3 GW by 2031 of accredited capacity additions, shows that Xcel would be short of the PRM without the ERAS Portfolio 1 projects and further additions of accredited capacity by 2030. The projects proposed in this ERAS Portfolio can mitigate this risk. Overall, this data indicates the question at hand is not whether the ERAS Portfolio 1 projects are needed. The question is whether better projects could be found in a timely manner in a future RFP. When weighing the risk of future RFP project availability, the Commissions should consider uncertainty in supply chain disruptions and continued federal actions that can hamper development of energy projects.

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<sup>36</sup> There are a handful of exceptions where a group of generating units are modeled as a separate ‘system’ with a single transmission connection to Xcel’s main system. This is done to reflect unique circumstances, such as multiple generators using the same interconnection capacity.

<sup>37</sup> For example, see *In the Matter of Xcel Energy’s Distributed Solar Energy Standards Status Update*, Xcel Energy, Status Report, December 30, 2025, Docket No. E002/M-25-441 (eDockets) [202512-226328-01](#).

### C.3.3. Conclusion

The Department draws the following conclusions from the EnCompass analysis:

- Xcel’s results—a net cost in PVRR terms and a net benefit in PVSC terms—reflect the information input to EnCompass which has two important factors to consider;
  - there is a risk that the modeled curtailment benefits are limited in their accuracy given the non-locational nature of Encompass modeling, these benefits are an important part of the model’s PVRR/PVSC results;<sup>38</sup>
  - Xcel’s EnCompass inputs omit potentially important costs; see the discussion of imputed debt below; and
- Xcel’s EnCompass results are showing a large need for accredited capacity in the near future that could be mitigated by approval of these projects.

#### D. XCEL’S ACQUISITION PROCESS

The CFEC expansion is an addition to a project that was selected through Xcel’s Commission-approved bidding process. However, neither the CFEC expansion nor the Sandhill BESS and Benton II BESS projects were selected via Xcel’s Commission-approved bidding process. The Commission’s most recent order regarding competitive bidding only required Xcel to use a formal bidding process for resources in the approved in the Five-Year Action Plan.<sup>39</sup> Instead of using the formal process Xcel compared the pricing of the BESS projects in recent formal RFPs. The Department concludes that the 2024 IRP Order does not require a separate RFP for the projects in question because they provide capacity in excess of the requirements in the Five-Year Action Plan. The Department also concludes that reference to projects in on-going RFPs<sup>40</sup> as evidence of current market pricing is reasonable in this instance.

#### E. ECONOMIC DEVELOPMENT

Minn. Stat. § 216B.1691, subd. 9 (a) describes reasonable actions the Commission must take to maximizes net benefits to all Minnesota citizens.<sup>41</sup>

- (1) the creation of high-quality jobs in Minnesota paying wages that support families;
- (2) recognition of the rights of workers to organize and unionize;
- (3) ensuring that workers have the necessary tools, opportunities, and economic assistance to adapt successfully during the energy transition, particularly in environmental justice areas;
- (4) ensuring that all Minnesotans share (i) the benefits of clean and renewable energy, and (ii) the opportunity to participate fully in the clean energy economy;

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<sup>38</sup> There is substantial curtailment in Minnesota, the only question is if the location of the Benton II and Sandhill BESS projects will enable those projects to relieve that congestion.

<sup>39</sup> 2024 IRP Order at Order Point 9.

<sup>40</sup> See Xcel’s 800 MW Firm Dispatchable process in Docket No. E002/CN-23-212 and 2024 Solar, Wind, and BESS RFP in Docket No. E002/M-24-230.

<sup>41</sup> [Minn. Stat. § 216B.1691, subd. 9 \(a\)](#).

- (5) ensuring that statewide air emissions are reduced, particularly in environmental justice areas; and
- (6) the provision of affordable electric service to Minnesotans, particularly to low-income consumers.

In the 2024 IRP Order, the Commission required Xcel to “work with parties representing organized labor to maximize socioeconomic benefits to customers and host communities by prioritizing creation of high-quality jobs and apprenticeship pathways for local workers in the implementation of projects and programs included in the resource plan.”<sup>42</sup> In addition, the Commission required Xcel to “work with the Environmental Justice Advisory Board to better understand how to prioritize and incentivize investments and economic benefits for underserved communities.”<sup>43</sup>

In the PPAs the Company required bidders to utilize union labor for the construction of the facilities.<sup>44</sup> In addition, the projects, as a package, will reduce CO<sub>2</sub> emissions.<sup>45</sup> Thus, the proposed projects meet the first, second, and fifth criteria listed above.

Overall, the Department concludes that the Project meets the requirements or for economic development as described in Minn. Stat. § 216B.1691, subd. 9 (a) and the 2024 IRP Order.

#### F. IMPUTED DEBT

The Petition discusses the concept of imputed debt due to PPAs.<sup>46</sup> In short, some PPAs create financial obligations that are similar enough to interest and principal payments on corporate debt that credit ratings agencies impute a debt principal balance for the PPA and include that imputed debt along with other debt in calculating a utility’s credit metrics (e.g. a cash flow to debt ratio). In this way, PPAs can cause a utility’s credit metrics to deteriorate, and may in turn put negative pressure on its credit ratings. Absent other changes to offset the impacts of the PPAs, the utility will likely have to pay higher interest rates on new debt than it otherwise would have. Alternatively, the utility could try to maintain its credit ratings and metrics by offsetting some or all of the increase in imputed debt by altering its capital structure to include more equity and less debt. Either way, imputed debt puts upwards pressure on a utility’s overall cost of capital, which would, in turn, put upward pressure on rates.

The Petition at Table 5 estimates the imputed debt due to the BESS PPAs in question here to be about \$625 million. Xcel stated “[d]ue to the material negative credit quality implications expected as a result of these contracts, the Company intends to propose mitigation through an increase in its equity ratio in its next electric rate case filing.”<sup>47</sup>

The Department acknowledges that an increase in the equity ratio to address imputed debt, if ultimately approved by the Commission, would represent an additional cost associated with the PPAs.

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<sup>42</sup> 2024 IRP Order at Order Point 26.

<sup>43</sup> *Id.*, at Order Point 27.

<sup>44</sup> Petition at 16.

<sup>45</sup> *Id.*, at 23.

<sup>46</sup> *Id.*, at 17-19.

<sup>47</sup> *Id.*, at 19.

Xcel did not reflect any imputed debt costs for the PPA projects in the new Encompass modeling. In That means the modeling could be biased in favor of the resource portfolio being modeled because the resources potentially will incur imputed debt costs, depending upon a future Commission determination regarding imputed debt.

To provide some information the Department calculated that Xcel’s imputed debt estimate of \$625 million would equate to roughly \$20 million per year in incremental financing costs. The Department also calculated that, over the 15-year life of ERAS Portfolio 1 PPAs, an annual cost of \$16.5 million would eliminate the \$122 million in PVSC savings<sup>47</sup> shown by Xcel’s EnCompass modeling. Therefore, the imputed debt of the Sandhill BESS and Benton BESS PPAs could turn the PVSC savings into a net cost for the ERAS Portfolio 1.<sup>48</sup>

The Department notes that in addition to the imputed debt associated with the two BESS PPAs at issue in this Docket, Xcel has several other proposed PPAs before the Commission in other dockets that it estimates could cause it to incur over \$2 billion in additional imputed debt. A summary of Xcel’s recent estimates regarding imputed debt is provided in Table 4 below.

**Table 4: Summary of Imputed Debt in Recent Resource Acquisitions**

PPA	Docket No.	Description	Imputed Debt (\$ millions)	Calculation Year
Cannon Falls CT	CN-23-212	Original Group <sup>48</sup>	\$519	2028
Mankato CC	CN-23-212	Original Group	\$598	2028
Mankato BESS	CN-23-212	Original Group	\$74	2028
North Star BESS	CN-23-212	Original Group	\$138	2028
Cottage Grove BESS	CN-23-212	Replacement <sup>49</sup>	\$105	2028
Crowned Ridge BESS	M-24-230	2024 RFP <sup>50</sup>	\$127	2028
Crane BESS	M-24-230	2024 RFP	\$257	2028
Mayhew Lake BESS	M-24-230	2024 RFP	\$130	2028
<b>Subtotal</b>			<b>\$1,948</b>	
Sandhill BESS	RP-24-067	ERAS Group 1 <sup>51</sup>	\$247	2029
Benton II BESS	RP-24-067	ERAS Group 1	\$378	2029
<b>Subtotal</b>			<b>\$625</b>	

IRPs determine the size, type, and timing of resource needs and deal with generic expansion units. Therefore, imputed debt generally does not need to be addressed in IRPs because there is no need to assume any one generic unit will be a PPA. Imputed debt can matter in a resource acquisition process when the utility is choosing between self-build and PPA options.

<sup>48</sup> 800 MW Petition at 17.

<sup>49</sup> 800 MW Supplement at 5.

<sup>50</sup> 2024 RFP Petition at 44.

<sup>51</sup> Petition at 18.

In this proceeding Xcel is proposing to acquire BESS resources in excess of the need determined in the prior IRP and is relying on new Encompass modeling to justify the additional resources. Xcel did not reflect imputed debt costs for the PPA projects in the new Encompass modeling. That means the modeling could be biased in favor of the resource portfolio being modeled because the resources potentially will incur imputed debt, depending upon a future Commission determination regarding imputed debt. Alternative projects (from a future RFP) that are PPAs also would incur imputed debt but alternative projects that are self-builds would not incur imputed debt.

To provide some information the Department calculated that Xcel's imputed debt estimate of \$625 million would equate to roughly \$20 million per year in incremental financing costs. The Department also calculated that, over the 15-year life of ERAS Portfolio 1 PPAs, an annual cost of \$16.5 million would eliminate the \$122 million in PVSC savings<sup>52</sup> shown by Xcel's EnCompass modeling. Therefore, the imputed debt of the Sandhill BESS and Benton BESS PPAs would turn the PVSC savings into a net cost for the ERAS Portfolio 1.<sup>53</sup>

These calculations assume the appropriate comparison is the ERAS Portfolio 1 to Xcel's base case (which does not include the projects) as modeled in EnCompass. If the actual comparison is to other PPAs to fill the need, then the calculated imputed debt cost would appear in both scenarios (with the ERAS Portfolio 1 and with a set of alternative PPAs) and would not impact the modeling results.

The Department recommends that, in future resource acquisition filings, Xcel consider applying an estimated cost to PPA projects to provide a more accurate price comparison to self-build projects. For this case, the potential for an imputed debt cost reduces the value of the ERAS Portfolio 1 to the point where it is not showing clear PVSC benefits when compared to the alternative base case (a no build).

## G. PPA REVIEW

### G.1. Overview of Risks

The Department generally divides the analysis of PPAs into two risk categories, financial risks and operational risks. For PPAs, there are two main financial risks that may have negative impacts on Xcel's ratepayers. They are:

- a Seller default and termination of the PPA before the expiration of the contract period; and
- entitlement by a lender or other party, as a result of the Seller's failure to pay debt, to take over the project and terminate the PPA.

Under these events, Xcel may be forced to find more costly replacement power when the PPA is terminated. Further, under both events, the projects may be terminated and jeopardize Xcel's compliance with various statutory requirements and Commission orders.

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<sup>52</sup> Petition at 23.

<sup>53</sup> An imputed debt of \$20 million annually over the 15-year life of ERAS Portfolio 1 PPAs would result in a net PVSC cost of about \$26 million for the ERAS Portfolio 1 rather than a net benefit.

The operational risks are the risks that the project in question will not be built and operated as expected. These risks include a complete shutdown or a partial shutdown of the Project due to technical problems. In the case of a partial shutdown, ratepayers must be assured that their payments for capacity and energy are reduced accordingly. In the case of a complete shutdown, once again Xcel may face the risk of non-compliance with the various legislative or Commission requirements and may need to find what could be more expensive replacement power.

*G.2. CFEC PPA*

The Petition's Attachment A contains an amendment to the PPA between Xcel and Invenergy Cannon Falls LLC. Xcel provided an amended base PPA as part of the 800 MW Petition.

*G.2.1. Ratepayer Protections—Financial Risk*

The CFEC PPA Amendment [**TRADE SECRET DATA HAS BEEN EXCISED**]

*G.2.2. Ratepayer Protections—Operational Risk*

The CFEC PPA Amendment [**TRADE SECRET DATA HAS BEEN EXCISED**]

*G.2.3. Curtailment Provisions*

The CFEC PPA Amendment [**TRADE SECRET DATA HAS BEEN EXCISED**]

*G.2.4. Conclusion Regarding PPA*

The Department concludes that the CFEC PPA Amendment has minimal impact and sufficiently protects ratepayers from financial and operational risks.

### G.3. Sandhill BESS PPA

#### G.3.1. Ratepayer Protections—Financial Risk

Events that could cause the Sandhill BESS PPA to be terminated before the expiration of the contract period include:

- a Seller default due to **[TRADE SECRET DATA HAS BEEN EXCISED]**
- an EFA such as denial of a permit;
- a SCTL such as loss of investment tax credit benefits;
- **[TRADE SECRET DATA HAS BEEN EXCISED]**

These events that create an increase in risk are discussed in more detail below.

First, Article 12.1 describes events that constitute Seller's default which include Seller's: **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 12.2 details another possible Seller default event arising from failure to achieve CPD milestones or the COD by their respective target dates. **[TRADE SECRET DATA HAS BEEN EXCISED]** If Seller fails to meet COD deadlines altogether, Xcel has the right to terminate the PPA and collect damages.<sup>54</sup>

Second, Article 14 includes provisions related to **[TRADE SECRET DATA HAS BEEN EXCISED]**

Third, a similar provision allows either party to terminate the PPA if an EFA preventing the Seller from achieving **[TRADE SECRET DATA HAS BEEN EXCISED]** or COD target continues for over 365 days.<sup>55</sup> An EFA can include the denial or withholding of necessary permits due to a presidential executive order or other federal action.

Fourth, the PPA includes a provision allowing the Seller to terminate the PPA if an SCTL occurs before COD.<sup>56</sup> An SCTL is a decrease in ITCs and/or PTCs resulting in the Seller losing at least **[TRADE SECRET DATA HAS BEEN EXCISED]**

Fifth, Article 5 includes provisions **[TRADE SECRET DATA HAS BEEN EXCISED]**

**[TRADE SECRET DATA HAS BEEN EXCISED]**

In a separate proceeding Xcel provided additional information regarding **[TRADE SECRET DATA HAS BEEN EXCISED]** That additional information is equally applicable to this proceeding and clarifies the risks regarding the contractual terms in question.

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<sup>54</sup> Petition at 15.

<sup>55</sup> Petition at 17.

<sup>56</sup> *Ibid.*

The Sandhill BESS PPA includes various provisions protecting ratepayers from financial risk, detailed below. First, Article 11.1 describes the Security Fund required to be established by the Seller to account for damages caused by the Seller. [TRADE SECRET DATA HAS BEEN EXCISED] Xcel can draw from the Security Fund amounts necessary to cover any [TRADE SECRET DATA HAS BEEN EXCISED]

Second, Article 16 and Exhibit E describe [TRADE SECRET DATA HAS BEEN EXCISED]

Third, Article 17 contains the [TRADE SECRET DATA HAS BEEN EXCISED]

Fourth, Article 19 includes restrictions on [TRADE SECRET DATA HAS BEEN EXCISED]

Finally, Article 20.2 describes the treatment of [TRADE SECRET DATA HAS BEEN EXCISED]

### *G.3.2. Ratepayer Protections—Operational Risk*

Article 4.5 lists [TRADE SECRET DATA HAS BEEN EXCISED]

Article 5.5 requires [TRADE SECRET DATA HAS BEEN EXCISED] This requirement ensures that Xcel's payments are for energy actually received. The PPA also requires [TRADE SECRET DATA HAS BEEN EXCISED]

The PPA includes provisions that address operational risk related to variation in storage capacity availability and efficiency by adjusting capacity payments. First, the PPA has a CAF which adjusts payments such that Xcel only pays for the storage capacity that is actually available for dispatch in a given period.<sup>57</sup> This feature establishes that:

If the facility is unavailable due to forced outages or underperformance, the Seller's payment will be reduced accordingly. This mechanism incentivizes the Seller to maximize system availability and reliability throughout the contract term.<sup>58</sup>

Second, the PPA has a RTE adjustment which adjusts payments such that Xcel does not pay for a system with excessive losses in storage. This feature establishes that:

The contract requires the battery storage system to meet its committed round-trip efficiency (RTE) levels each year. RTE is the ratio of energy discharged compared to energy charged reflecting the efficiency of the project's charging capabilities. If the actual RTE falls below guaranteed levels, the monthly payment is reduced. This ensures that the Seller is financially motivated to maintain the battery's efficiency over time.<sup>59</sup>

Details on the calculation of this adjustment [TRADE SECRET DATA HAS BEEN EXCISED]

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<sup>57</sup> *Id.*, at 28.

<sup>58</sup> Petition at 14.

<sup>59</sup> *Id.*, 14.

Article 8.3 ensures that the Seller is responsible for penalties for failure to respond to dispatch. In this case if the Seller:

fails to accurately or timely respond to a dispatch notice, and the market operator imposes a penalty or charge on the Company as a result, the Company may pass through those charges to the Seller by reducing the next monthly payment.<sup>60</sup>

Article 8.4 contains an Excess Throughput provision.<sup>61</sup> In this case the Seller:

entitled to an additional payment for each megawatt-hour (MWh) of excess energy delivered ... These payments provide an incentive for the Seller to make the system available even beyond its planned throughput, while also protecting the facility from overuse that could degrade the asset.<sup>62</sup>

Specifically, Article 8.4 **[TRADE SECRET DATA HAS BEEN EXCISED]** Additionally, Article 8.4 **[TRADE SECRET DATA HAS BEEN EXCISED]** These measures allow for flexibility in how the Company uses the BESS system while providing protections for the long-term life of the facility.

Finally, Article 10.3 includes a provision to address the risks of **[TRADE SECRET DATA HAS BEEN EXCISED]**

### *G.3.3. Curtailment Provisions*

Article 7 states that the Seller **[TRADE SECRET DATA HAS BEEN EXCISED]** This article is the only article related to the curtailment of the facility. As a battery storage unit, the Sandhill BESS is not subject to curtailment in the same way renewable facilities are as the Sandhill BESS is a dispatchable resource that stores energy. If there is congestion on the grid preventing the use of the facility at any time, that power will not be lost; it will be usable at some later time. As such the Department concludes that Xcel ratepayers would be reasonably protected from curtailment risks.

### *G.3.4. Conclusion Regarding PPA*

The Department concludes that the Sandhill BESS PPA sufficiently protects ratepayers from financial and operational risks.

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<sup>60</sup> Petition at 15.

<sup>61</sup> Petition at Attachment B at 31.

<sup>62</sup> Petition at 14-15.

*G.4. Benton II BESS PPA*

*G.4.1. Ratepayer Protections—Financial Risk*

Events that could cause the Benton II BESS PPA to be terminated before the expiration of the contract period include:

- a Seller default due to **[TRADE SECRET DATA HAS BEEN EXCISED]**
- an EFA;
- a SCTL;
- **[TRADE SECRET DATA HAS BEEN EXCISED]**

These events that create an increase in risk are discussed in more detail below.

First, Article 12.1 describes events that constitute Seller’s default which include Seller’s: **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 12.2 details another possible Seller default event arising from failure to achieve critical path development (CPD) milestones or the COD by their respective target dates. **[TRADE SECRET DATA HAS BEEN EXCISED]** If Seller fails to meet COD deadlines altogether, Xcel has the right to terminate the PPA and collect damages.<sup>63</sup>

Second, Article 14 includes provisions related to **[TRADE SECRET DATA HAS BEEN EXCISED]**

Third, a similar provision allows either party to terminate the PPA if an EFA preventing the Seller from achieving **[TRADE SECRET DATA HAS BEEN EXCISED]** or COD target continues for over 365 days.<sup>64</sup> An EFA can include the denial or withholding of necessary permits due to a presidential executive order or other federal action.

Fourth, the PPA includes a provision allowing the Seller to terminate the PPA if an SCTL occurs before COD.<sup>65</sup> An SCTL is a decrease in ITCs and/or PTCs resulting in the Seller losing at least **[TRADE SECRET DATA HAS BEEN EXCISED]**

Fifth, Article 5 includes provisions **[TRADE SECRET DATA HAS BEEN EXCISED]**

In a separate proceeding Xcel provided additional information regarding **[TRADE SECRET DATA HAS BEEN EXCISED]** That additional information is equally applicable to this proceeding and clarifies the risks regarding the contractual term in question.

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<sup>63</sup> Petition at 15.

<sup>64</sup> Petition at 17.

<sup>65</sup> *Ibid.*

The Benton II BESS PPA includes various provisions protecting ratepayers from financial risk, detailed below.

First, Article 11.1 describes the Security Fund required to be established by the Seller to account for damages caused by the Seller. **[TRADE SECRET DATA HAS BEEN EXCISED]** Xcel can draw from the Security Fund amounts necessary to cover any **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Second, Article 16 and Exhibit E describe **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Third, Article 17 contains the **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Fourth, Article 19 includes restrictions on **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Finally, Article 20.2 describes the treatment of **[TRADE SECRET DATA HAS BEEN EXCISED]**.

#### *G.4.2. Ratepayer Protections—Operational Risk*

Article 4.5 lists **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Article 5.5 requires **[TRADE SECRET DATA HAS BEEN EXCISED]** This requirement ensures that Xcel's payments are for energy actually received. The PPA also requires **[TRADE SECRET DATA HAS BEEN EXCISED]**.

The PPA includes provisions that address operational risk related to variation in storage capacity availability and efficiency by adjusting capacity payments. First, the PPA has a CAF which adjusts payments such that Xcel only pays for the storage capacity that is actually available for dispatch in a given period.<sup>66</sup> This feature establishes that:

If the facility is unavailable due to forced outages or underperformance, the Seller's payment will be reduced accordingly. This mechanism incentivizes the Seller to maximize system availability and reliability throughout the contract term.<sup>67</sup>

Second, the PPA has a RTE adjustment which adjusts payments such that Xcel does not pay for a system with excessive losses in storage. This feature establishes that:

The contract requires the battery storage system to meet its committed round-trip efficiency (RTE) levels each year. RTE is the ratio of energy discharged compared to energy charged reflecting the efficiency of the project's charging capabilities. If the actual RTE falls below guaranteed

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<sup>66</sup> *Id.*, at 27.

<sup>67</sup> Petition at 14.

levels, the monthly payment is reduced. This ensures that the Seller is financially motivated to maintain the battery's efficiency over time.<sup>68</sup>

Details on the calculation of this adjustment **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Article 8.3 ensures that the Seller is responsible for penalties for failure to respond to dispatch. In this case if the Seller:

fails to accurately or timely respond to a dispatch notice, and the market operator imposes a penalty or charge on the Company as a result, the Company may pass through those charges to the Seller by reducing the next monthly payment.<sup>69</sup>

Article 8.4 contains an Excess Throughput provision.<sup>70</sup> In this case the Seller:

entitled to an additional payment for each megawatt-hour (MWh) of excess energy delivered ... These payments provide an incentive for the Seller to make the system available even beyond its planned throughput, while also protecting the facility from overuse that could degrade the asset.<sup>71</sup>

Specifically, Article 8.4 **[TRADE SECRET DATA HAS BEEN EXCISED]** Additionally, Article 8.4 **[TRADE SECRET DATA HAS BEEN EXCISED]**. These measures allow for flexibility in how the Company uses the BESS system while providing protections for the long-term life of the facility.

Finally, Article 10.3 includes a provision to address the risks of **[TRADE SECRET DATA HAS BEEN EXCISED]**.

#### *G.4.3. Curtailment Provisions*

Article 7 states that the Seller**[TRADE SECRET DATA HAS BEEN EXCISED]**. This article is the only article related to the curtailment of the facility. As a battery storage unit, the Benton II BESS is not subject to curtailment in the same way renewable facilities are as the Benton II BESS is a dispatchable resource that stores energy. If there is congestion on the grid preventing the use of the facility at any time, that power will not be lost; it will be usable at some later time. As such the Department concludes that Xcel ratepayers would be reasonably protected from curtailment risks.

#### *G.4.4. Conclusion Regarding PPA*

The Department concludes that the Benton II BESS PPA sufficiently protects ratepayers from financial and operational risks.

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<sup>68</sup> *Ibid.*

<sup>69</sup> Petition at 15.

<sup>70</sup> Petition at Attachment C at 31.

<sup>71</sup> Petition at 14-15.

#### *H. FCR RECOVERY*

The Petition requests the Commission authorize the Company to recover, through the FCR, pursuant to Minn. Stat. § 216B.16, subd. 7(3),<sup>72</sup> the Minnesota jurisdictional portion of the costs incurred under the PPAs from Minnesota retail customers. Specifically, Xcel states:

Under the terms of our currently effective Fuel Clause Rider in our tariff, “[t]he energy cost of purchases from a qualifying facility” are “qualifying costs” that comprise the Cost of Energy. Because the projects satisfy the conditions of a qualifying facility (QF), the Company plans to recover the costs of these PPAs through our Fuel Clause Rider.<sup>73</sup>

The Department notes that *energy* costs incurred by PPAs are recovered via Xcel’s FCR. *Capacity* costs due to PPAs are included in base rates and are also addressed in a capacity tracker for a true-up of base rate recovery to actuals. It is unclear whether the monthly capacity payments in the PPAs are included in the costs that Xcel plans to recover through the FCR. Since these payments are capacity costs, the Department’s understanding is that they are addressed in base rates and the capacity tracker, and not eligible for FCR recovery. The energy costs recoverable via Xcel’s FCR could include the cost of energy that Xcel buys to charge the BESS, less the revenue from the discharging energy that Xcel sells.

The Department requests that Xcel clarify in reply comments whether it is petitioning to recover capacity payments through the FCR. If it is requesting to recover capacity payments through the FCR, the Department recommends that Xcel provide a justification for the eligibility of these costs for FCR recovery.

#### *I. COMMISSION NOTICE*

##### *I.1. Approve the PPAs?*

The first issue listed in the Notice is: “should the Commission approve the PPAs?”

The Department concludes that the PPAs all adequately protect ratepayers from financial, operational, and curtailment risks. Considering the risks related to curtailment benefits, imputed debt costs, and Xcel’s overall position in MISO’s capacity and energy markets, the Department concludes that the improvement in Xcel’s position in MISO’s capacity and energy markets outweighs the risks associated with curtailment and imputed debt. Therefore, the Department recommends the Commission approve the PPAs.

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<sup>72</sup> [Minn. Stat. § 216B.16, subd. 7.](#)

<sup>73</sup> Petition at 24.

*1.2. Authorize FCR Recovery?*

The second issue listed in the Notice is: “should the Commission the Company to recover, through the FCR, pursuant to Minn. Stat. § 216B.16 subd. 7(3), the Minnesota jurisdictional portion of the costs incurred under the PPAs from Minnesota retail customers?”

As noted above, the Department recommends the Commission approve FCR recovery for the Minnesota jurisdictional portion of the energy costs. The Department also recommends that Xcel clarify in reply comments whether it is requesting to recover capacity payments through the FCR. If it is requesting to recover capacity payments through the FCR, the Department recommends that Xcel provide a justification for the eligibility of these costs for FCR recovery.

*1.3. Other Issues?*

The third issue listed in the Notice is: are there any other topics related to this matter?

The Department has no other issues at this time.

**IV. DEPARTMENT RECOMMENDATIONS**

Based on analysis of the information in the record the Department has prepared recommendations which are provided below. The recommendations correspond to the subheadings of Section III above.

*F. IMPUTED DEBT*

- The Department recommends that, in future resource acquisition filings, Xcel consider applying an estimated cost to PPA projects to provide a more accurate price comparison to self-build projects.

*G. FCR RECOVERY*

- The Department recommends that Xcel clarify in reply comments whether it is requesting to recover capacity payments through the FCR. If it is requesting to recover capacity payments through the FCR, the Department recommends that Xcel provide a justification for the eligibility of these costs for FCR recovery.

*I. COMMISSION NOTICE*

- I.1. The Department recommends the Commission approve the PPAs.
- I.2. the Department recommends the Commission approve FCR recovery for the Minnesota jurisdictional portion of the energy costs. The Department also recommends that Xcel clarify in reply comments whether it is requesting to recover capacity payments through the FCR. If it is requesting to recover capacity payments through the FCR, the Department recommends that Xcel provide a justification for the eligibility of these costs for FCR recovery.

Appendix

Appendix

## Attachments

## **CERTIFICATE OF SERVICE**

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

**Minnesota Department of Commerce  
Public Comments**

**Docket No. E002/RP-24-67**

Dated this 5<sup>th</sup> day of **January 2026**

**/s/Sharon Ferguson**

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12	Sasha	Bergman	sasha.bergman@state.mn.us		Public Utilities Commission	121 7th P I E Ste 350 St. Paul MN, 55101 United States	Electronic Service		Yes	24-67
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18	Jon	Brekke	jbrekke@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369-4718 United States	Electronic Service		No	24-67
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84	Arthur	LaRose	arthur.larose@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-67
85	Robert L	Larsen	robert.larsen@lowersioux.com	Lower Sioux Indian Community		PO Box 308 39527 Reservation Highway 1 Morton MN, 56270 United States	Electronic Service		No	24-67
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104	David	Morrison, Sr.	david.morrison@boisforte-nsn.gov	Bois Forte Band of Chippewa		Bois Forte Tribal Government 5344 Lakeshore Drive Nett Lake MN, 55772 United States	Electronic Service		No	24-67
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111	Duane	Ninneman	duane@cureriver.org	Clean Up the River Environment		117 South 1st St Montevideo MN, 56265 United States	Electronic Service		No	24-67
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121	Joe	Plumer	joe.plumer@redlakenation.org	Red Lake Nation		15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	24-67
122	Kevin	Pranis	kpranis@liunagroc.com	Laborers' District Council of MN and ND		81 E Little Canada Road St. Paul MN, 55117 United States	Electronic Service		No	24-67
123	Robert	Prescott	bob.prescott@lowersioux.com	Lower Sioux Indian Community		39527 Highway 1 Morton MN, 56270 United States	Electronic Service		No	24-67
124	Jody	Puddu	jody.puddu@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	24-67
125	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	24-67
126	Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy		26 E Exchange St, Ste 206 St. Paul MN, 55101-1667 United States	Electronic Service		No	24-67
127	Stephan	Roos	stephan.roos@state.mn.us		Minnesota Department of Agriculture	625 Robert St N Saint Paul MN, 55155-2538 United States	Electronic Service		No	24-67
128	Alan	Roy	alan.roy@whiteearth-nsn.gov	White Earth Nation		White Earth Tribal Headquarters 35500 Eagle View Road Ogema MN, 56569 United States	Electronic Service		No	24-67
129	Bill	Rudnicki	bill.rudnicki@shakopeedakota.org	Shakopee Mdewakanton Sioux Community		Shakopee Mdewakanton Sioux Community 2330 Sioux Trail NW Prior Lake MN, 55372 United States	Electronic Service		No	24-67
130	Nathaniel	Runke	nrunke@local49.org			611 28th St. NW Rochester MN, 55901 United States	Electronic Service		No	24-67
131	Zachary	Ruzycki	zruzycki@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove	Electronic Service		No	24-67

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						MN, 55369 United States				
132	Miranda	Sam	miranda.sam@lowersioux.com	Lower Sioux Indian Community		39527 Reservation Highway 1 PO Box 308 Morton MN, 56270 United States	Electronic Service		No	24-67
133	Adam	Savariego	adams@uppersiouxcommunity-nsn.gov	Upper Sioux Community		5722 Travers Lane PO Box 147 Granite Falls MN, 56241 United States	Electronic Service		No	24-67
134	Ronald J.	Schwartau	rschwartau@noblesce.com	Nobles Electric Cooperative		22636 U.S. Hwy. 59 Worthington MN, 56187 United States	Electronic Service		No	24-67
135	Jessie	Seim	jessie.seim@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	24-67
136	Darrell	Seki, Sr.	dseki@redlakenation.org			15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	24-67
137	Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates		7400 Lyndale Ave S Ste 190 Richfield MN, 55423 United States	Electronic Service		Yes	24-67
138	Joel	Smith	jsmith@mnchippewatribe.org	Minnesota Chippewa Tribe		PO Box 217 Cass Lake MN, 56633 United States	Electronic Service		No	24-67
139	Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.		76 W Kellogg Blvd St. Paul MN, 55102 United States	Electronic Service		No	24-67
140	Nizhoni	Smith	nizhoni.smith@lowersioux.com	Lower Sioux Indian Community		PO Box 308 39527 Reservation Highway 1 Morton MN, 56270 United States	Electronic Service		No	24-67
141	Roger	Smith, Sr.	rogermsmithsr@fdlrez.com			1720 Big Lake Road Cloquet MN, 55720 United States	Electronic Service		No	24-67
142	Beth	Soholt	bsoholt@cleangridalliance.org	Clean Grid Alliance		570 Asbury Street Suite 201 St. Paul MN, 55104 United States	Electronic Service		No	24-67
143	Marie	Spry	mariespry@grandportage.com			PO Box 428 Grand Portage MN, 55605 United States	Electronic Service		No	24-67
144	Michael	Stalberger	michael.stalberger@blueearthcountymn.gov	Blue Earth County		410 S 5th Street Mankato MN, 56001 United States	Electronic Service		No	24-67

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
145	LeRoy	Staples Fairbanks III	leroy.fairbanks@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-67
146	Byron E.	Starns	byron.starns@stinson.com	STINSON LLP		50 S 6th St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	24-67
147	Mark	Strohfus	mstrohfus@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-67
148	Samuel	Strong	sam.strong@redlakenation.org	Red Lake Nation		15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	24-67
149	Timothy	Sullivan	tsullivan@whe.org	Wright Hennepin Coop. Electric Assn.		6800 Electric Drive PO Box 330 Rockford MN, 55373 United States	Electronic Service		No	24-67
150	David	Sunderman	daves@benco.org	BENCO (DUPLICATE)		PO Box 8 Mankato MN, 56002-0008 United States	Electronic Service		No	24-67
151	Camille	Tanhoff	kamip@uppersiouxcommunity-nsn.gov	Upper Sioux Community		5722 Travers Lane PO BOX 147 Granite Falls MN, 56241 United States	Electronic Service		No	24-67
152	Tim	Thompson	tthompson@lrec.coop	Lake Region Electric Cooperative		PO Box 643 1401 South Broadway Pelican Rapids MN, 56572 United States	Electronic Service		No	24-67
153	Geoffrey	Tolley	geoff.tolley@gmail.com			855 Stanley Road Two Harbors MN, 55616-1176 United States	Electronic Service		No	24-67
154	Caralyn	Trutna	carrie@uppersiouxcommunity-nsn.gov	Upper Sioux Community		Upper Sioux Community P.O. Box 147 Granite Falls MN, 55372 United States	Electronic Service		No	24-67
155	Jackie	Van Norman	jvannorman@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-67
156	Sam	Villella	sdvillella@gmail.com			10534 Alamo Street NE Blaine MN, 55449 United States	Electronic Service		No	24-67
157	Carla	Vita	carla.vita@state.mn.us	MN DEED		Great Northern Building 12th Floor 180 East Fifth Street St. Paul MN, 55101 United States	Electronic Service		No	24-67

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
158	Amelia	Vohs	avohs@mncenter.org	Minnesota Center for Environmental Advocacy		1919 University Avenue West Suite 515 St. Paul MN, 55104 United States	Electronic Service		No	24-67
159	Trent	Waite	twaite@grenergy.com			null null, null United States	Electronic Service		No	24-67
160	Heather	Westra	heather.westra@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	24-67
161	Steve	White	steve.white@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-67
162	Cody	Whitebear	cody.whitebear@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Road Welch MN, 55089 United States	Electronic Service		No	24-67
163	John	Williams	jwilliams@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-67
164	Virgil	Wind	virgil.wind@millelacsband.com	Mille Lacs Band of Ojibwe		43408 Oodena Drive Onamia MN, 56359 United States	Electronic Service		No	24-67
165	Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine		225 South Sixth Street, Suite 3500 Minneapolis MN, 55402 United States	Electronic Service		No	24-67
166	Laurie	York	laurie.york@whiteearth-nsn.gov	White Earth Reservation Business Committee		PO Box 418 White Earth MN, 56591 United States	Electronic Service		No	24-67
167	Curtis	Zaun	czaun@mNSEIA.org	MnSEIA		PO Box 8141 Saint Paul MN, 55108 United States	Electronic Service		No	24-67
168	Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW		2909 Anthony Ln St Anthony Village MN, 55418-3238 United States	Electronic Service		No	24-67
169	Patrick	Zomer	pat.zomer@lawmoss.com	Moss & Barnett PA		150 S 5th St #1200 Minneapolis MN, 55402 United States	Electronic Service		No	24-67