

December 5, 2025

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/M-24-230

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's, d/b/a Xcel Energy,
Petition for Approval of a Solar and Storage Portfolio.*

The Petition was filed by Northern States Power Company, doing business as Xcel Energy on October 31, 2025.

The Department recommends **approval with modifications** 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

Contents

- ACRONYMS AND ABBREVIATIONS V
- DEFINITIONS VI
- I. INTRODUCTION..... 1
- II. PROCEDURAL BACKGROUND..... 4
- III. DEPARTMENT ANALYSIS 4
 - A. COMPLETENESS..... 4
 - B. GOVERNING STATUTES AND RULES..... 5
 - C. SOLAR AND BESS CAPACITY TARGETS 5
 - C.1. Background5
 - C.2. Xcel’s EnCompass Update6
 - C.3. Xcel’s EnCompass Results.....7
 - D. EETS, SES, AND CFS OBLIGATIONS 9
 - D.1. EETS Obligation9
 - D.2. SES Obligation10
 - D.3. CFS Obligation11
 - E. XCEL’S BIDDING PROCESS 11
 - E.1. RFP Overview11
 - E.2. Summary of Bids Received14
 - E.3. Completeness Review and Threshold Review.....14
 - E.4. Proposal Scoring and Shortlisting.....15
 - E.5. Changes to Proposals17
 - E.6. Summary18
 - F. ECONOMIC DEVELOPMENT 18
 - G. TAX MATTERS..... 19
 - H. OTHER MATTERS..... 19
 - H.1. Imputed Debt20
 - H.2. Sherco Solar 4 Land Rights Approval.....20
 - H.3. Variance Request21
 - I. XCEL’S SELF-BUILD PROJECTS..... 21
 - I.1. Overview21
 - I.2. Acquisition Process for RES Rider Recovery22
 - I.3. Ratepayer Protections.....24
 - I.4. Jurisdictional Allocation26

J.	PPA REVIEW	27
J.1.	Overview of Risks	27
J.2.	Fillmore Solar PPA	27
J.3.	Grant Solar PPA	29
J.4.	Gopher Solar PPA	31
J.5.	Lemon Hill Solar PPA	33
J.6.	Crowned Ridge BESS PPA	35
J.7.	Crane BESS PPA	38
J.8.	Mayhew Lake BESS PPA	41
J.9.	Sherco Solar 4 Asset Purchase Agreement.....	45
K.	COMMISSION NOTICE.....	45
K.1.	Xcel’s Requested Actions	45
K.1.	Other Issues.....	47
IV.	DEPARTMENT RECOMMENDATIONS.....	47
G.	TAX MATTERS.....	47
H.	OTHER MATTERS.....	47
I.	Xcel’s Self-Build projects.....	47
J.	PPA REVIEW	48
	ATTACHMENTS.....	50

List of Tables

[Table 1: Overview of Xcel's Proposed Solar Projects](#)

[Table 2: Overview of Xcel's Proposed BESS Projects](#)

[Table 3: Generic Capacity Additions in 2030](#)

[Table 4: RFP Requirements](#)

[Table 5: Forecast Changes](#)

[Table 6: Impact of PPA Re-pricing](#)

Acronyms, Abbreviations and Definitions

Acronyms and Abbreviations

ac	Alternating Current
AFUDC	Allowance for Funds Used During Construction
APA	Asset Purchase Agreement
BESS	Battery Energy Storage System
BT	Build Transfer
CAF	Capacity Availability Factor
CPD	Critical Path Development
CFS	Carbon-free Standard
COD	Commercial Operation Date
Commission	Minnesota Public Utilities Commission
CONE	Cost of New Entry
CPD	Critical Path Development
CT	Combustion Turbine
Department	Minnesota Department of Commerce
DPP	Definitive Planning Phase
EETS	Eligible Energy Technology Standard
EFA	Extraordinary Federal Action
FCA	Fuel Clause Adjustment
GIA	Generation Interconnection Agreement
IRA	Inflation Reduction Act
IRP	Integrated Resource Plan
ITC	Investment Tax Credit
kW	kilowatt
kWh	kilowatt-hour
LCOC	Levelized Cost of Capacity
LCOE	Levelized Cost of Energy
LMP	Locational Marginal Price
MISO	Midcontinent Independent System Operator, Inc.
MNEC	Minnesota Energy Connection
MW	Megawatt
MWh	Megawatt-hour
NSPM	Northern States Power Company—Minnesota
NSPW	Northern States Power Company—Wisconsin
OBBA	One Big Beautiful Bill Act
POD	Point of Delivery
PPA	Power Purchase Agreement
PTC	Production Tax Credit
PVRR	Present Value of Revenue Requirements
PVSC	Present Value of Societal Costs
RES	Renewable Energy Standard
RFP	Xcel Energy’s 2024 Request for Proposals
RTE	Round-trip Efficiency
SCTL	Specified Change in Tax Law
SES	Solar Energy Standard
Xcel or Company	Northern States Power Company d/b/a Xcel Energy

Definitions

2019 IRP Order	The Commission's April 15, 2022 <i>Order Approving Plan with Modifications and Establishing Requirements for Future Filings</i> ; see Docket No. E002/RP-19-368.
2024 IRP Order	The Commission's April 21, 2025 <i>Order Approving Settlement Agreement with Modifications</i> ; see Docket No. E002/RP-24-67.
Department RES Report	<i>Minnesota Renewable Energy Standard: Utility Compliance, (2025)</i> .
End Effects Period	A period of varying length after the planning period in a resource plan modeling run.
Planning Period	The first fifteen years of a resource plan modeling run.
Study Period	The planning period plus the end effects period.

Before the Minnesota Public Utilities Commission

PUBLIC Comments of the Minnesota Department of Commerce

Docket No. E002/M-24-230

I. INTRODUCTION

In April 2022 the Commission issued an order in Xcel’s 2019 IRP determining that Xcel “demonstrated that, between 2027 and 2032, it will need approximately 600 MW more solar-powered generation and 2,150 MW more wind-powered generation, or an equivalent amount of energy and capacity from a combination of wind, solar and/or storage.”¹ In response, in June and July 2024, Xcel released two RFPs—one under Xcel’s NSPM² subsidiary and one under Xcel’s NSPW subsidiary.³ Collectively the RFPs sought 1,600 MW of solar, wind, storage, or hybrid capacity that would have a COD of no later than December 31, 2029.⁴

In April 2025 the Commission issued an order in a new IRP setting the following resource acquisition targets:

- 3,200 MW of wind to be installed by a target date of end-of-year 2030;
 - to the extent feasible, 2,800 MW of this wind must use the MNEC⁵ transmission line;
- 400 MW of solar to be installed by a target date of end-of-year 2030;
 - to the extent feasible, all 400 MW must use the King Interconnection;⁶
- 600 MW of standalone storage to be installed by a target date of end-of-year 2030; and
 - to the extent feasible, 120 MW must use the MNEC.⁷

¹ *In the Matter of the 2020–2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy, Order Approving Plan with Modifications and Establishing Requirements for Future Filings*, April 15, 2022, Docket No. E002/RP-19-368, (eDockets) [20224-184828-01](#), at Order Point 2 A 8 (hereinafter “2019 IRP Order”).

² *In the Matter of Xcel Energy’s 2024 Wind, Solar, and Storage Request for Proposals*, Xcel, Informational Letter, June 21, 2024, Docket No. E002/M-24-230, (eDockets) [20246-207869-01](#), at Attachment A (hereinafter “RFP”).

³ *In the Matter of Xcel Energy’s 2024 Wind, Solar, and Storage Request for Proposals*, Xcel, 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 Attachment D (hereinafter “Petition”).

⁴ *In the Matter of Xcel Energy’s 2024 Wind, Solar, and Storage Request for Proposals*, Xcel, Informational Letter, June 21, 2024, Docket No. E002/M-24-230, (eDockets) [20246-207869-01](#), at Attachment A (hereinafter “RFP”).

⁵ The MNEC is a 345-kV double-circuit transmission line between Sherburne and Lyon counties; see Docket Nos. E002/CN-22-131 and E002/TL-22-132 for details.

⁶ The King Interconnection (now known as the Ten Mile Creek Gen-tie Line) is a 230 kV transmission line between the existing Allen S. King generating station and the new Ten Mile Creek Solar and Storage generating station. See Wisconsin Public Service Commission Docket No. 4220-CE-190 for details regarding both the generation and transmission.

⁷ *In the Matter of Xcel Energy’s 2024–2040 Upper Midwest Integrated Resource Plan, Order Approving Settlement Agreement with Modifications*, April 21, 2025, Docket No. E002/RP-24-67, (eDockets) [20254-217941-01](#), at Order Points 2, 3, and 4 (hereinafter “2024 IRP Order”).

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

In the Petition Xcel is seeking approval of a portfolio of resources including 768 MW of solar generation capacity and 856 MW/3,422 MWh BESS capacity.⁸ A short description of the projects in the Petition is shown in Tables 1 and 2.

Table 1: Overview of Xcel’s Proposed Solar Projects⁹

Project Name	Location	Bidder	Interconnection	Installed Capacity	In-Service Date	LCOE \$/MWh
Fillmore Solar	Fillmore County	Geronimo Power ¹⁰	Transmission	15 MW	1/1/2026	[TRADE SECRET DATA HAS BEEN EXCISED]
Gopher State Solar	Renville County	Ranger Power	Transmission	200 MW	12/31/2029	
Grant Solar	McCook County, South Dakota	Geronimo Power	Transmission	99 MW	11/30/2027	
Lemon Hill Solar	Olmsted County	Ranger Power	Transmission	180 MW	12/31/2028	
Portfolio 1¹¹	Clark County, Wisconsin	One Energy	Distribution	41 MW	2Q2028	
Portfolio 2	Barron, Pepin, and Jackson Counties, Wisconsin	One Energy	Distribution	33 MW	12/31/2027	
Sherco Solar 4	Sherburne County	Xcel	MNEC	200 MW	10/2029	

⁸ Petition at 3.

⁹ *Id.*, at 42, 45-52, 64-66.

¹⁰ Geronimo Power was formerly known as National Grid Renewables; both names are used at various points in the Petition.

¹¹ One Energy’s Portfolio 1 and Portfolio 2 projects are located in Wisconsin, are negotiating contracts with Xcel under the NSPW subsidiary, and fall under the jurisdiction of the Wisconsin Public Service Commission. Costs will flow through to Minnesota ratepayers via the NSPM—NSPW interchange agreement.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Table 2: Overview of Xcel’s Proposed BESS Projects¹²

Project Name	Location	Bidder	Interconnection	Installed Capacity	In-Service Date	LCOC \$/kW-mo.
Blue Lake BESS	Scott County	Xcel	Blue Lake Reuse	136 MW	2Q2027	[TRADE SECRET DATA HAS BEEN EXCISED]
Crane BESS	Olmsted County	Tenaska	Transmission	200 MW	12/31/2028	
Crowned Ridge BESS	Codington County, South Dakota	NextEra	Transmission	120 MW	12/15/2027	
Mayhew Lake BESS	Benton County	NextEra	Transmission	100 MW	5/1/2028	
Sherco South BESS	Sherburne County	Xcel	Sherco Surplus or MISO ERAS	300 MW	4Q2027	

In the Petition Xcel specifically requests that the Commission take the following actions:

- Find that the Company’s proposed solar and standalone storage portfolio is in the public interest;
- Approve the PPAs provided with this filing;
- Approve the acquisition and construction of the Company’s self-build projects—Blue Lake BESS, Sherco South BESS, Sherco Solar 4—and the Company’s proposed approach of recovery for these project costs for the Minnesota jurisdiction through the RES Rider;
- Approve the Company’s acquisition of land rights for the Sherco Solar 4 project;
- Approve the Company’s request for a variance of the requirements of Minn. R. 7825.1800, subp. B;
- Authorize the Company to propose any changes to our jurisdictional allocation approach in a future RES Rider filing for resources that we are not able to obtain approval of in another jurisdiction;
- Authorize the Company to recover, through the Fuel Clause Rider, 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. Earlier approval increases the likelihood that projects will qualify for the expiring tax incentives and reduces the risk of construction delays or project failures.¹³

¹² Petition at 43, 53-58.

¹³ *Id.*, at 2.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

II. PROCEDURAL BACKGROUND

April 15, 2022	The Commission issued the 2019 IRP Order, establishing the need for substantial quantities of new solar, wind and storage resources.
June 21, 2024	Xcel issued the RFP, seeking new solar, wind and storage resources.
April 21, 2025	The Commission issued the 2024 IRP Order, confirming the need for substantial quantities of new solar, wind and storage resources.
October 31, 2025	Xcel filed the Petition.
November 7, 2025	The Commission issued its <i>Notice of Comment Period</i> . ¹⁴

According to the Notice the following topics are open for comment:

- Should the Commission take the following actions:
 - Approve the proposed PPAs and the acquisition and construction of the Company’s self-build projects;
 - Approve the Company's acquisition of land rights for the Sherco Solar 4 project;
 - Approve the Company's request for a variance of the requirements of Minn. R. 7825.1800, subp. B;
 - Approve the Company’s proposed approach of recovery for these project costs for the Minnesota jurisdiction through the RES Rider; and
 - Authorize the Company to recover the Minnesota jurisdictional portion of the costs incurred under the PPAs from Minnesota retail customers through the Fuel Clause Rider.
- Are there other issues or concerns related to this matter?

Below are the comments of the Department regarding the Petition.

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.¹⁵ Minn. R. 7829.1300 subp. 3 contains the completeness requirements for miscellaneous filings.¹⁶ The Petition was also filed pursuant to Minn. Stat. § 216B.1645, which also contains completeness requirements.

¹⁴ *In the Matter of Xcel Energy’s 2024 Wind, Solar, and Storage Request for Proposals, Notice of Comment Period*, November 7, 2025, Docket No. E002/M-24-230, (eDockets) [202511-224766-01](#), (hereinafter “Notice”).

¹⁵ [Minn. R. 7829.0100, subp. 11.](#)

¹⁶ [Minn. R. 7829.1300, subp. 3.](#)

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

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 the following sections of Minnesota Statutes:

- § 216B.16 subd. 7(3) Fuel Clause Adjustment (FCA)—authorize recovery of Minnesota jurisdictional share of PPA costs;¹⁷
- § 216B.1645 subd. 2a Renewable Cost Recovery—authorize recovery of self-build project costs through the RES Rider;¹⁸
- § 216B.1691 subd. 2a Eligible Energy Technology Standard (EETS)—determine that the projects are needed to meet the EETS;¹⁹
- § 216B.1691 subd. 2f Solar Energy Standard (SES)—determine that the projects are needed to meet the SES;²⁰
- § 216B.1691 subd. 2g Carbon-free Standard (CFS)—determine that the projects are needed to meet the CFS;²¹ and
- § 216B.50 Property Transfer—determine that acquisition of Sherco Solar 4 land rights is in the public interest.²²

In addition, the Company is requesting Commission action regarding Minn. R. 7825.1800, subp. B—a variance request regarding filing requirements for property acquisition petitions.²³

C. SOLAR AND BESS CAPACITY TARGETS

C.1. Background

The Commission's order in Xcel's most recent IRP set acquisition targets of:

- 3,200 MW of wind to be installed by a target date of end-of-year 2030;
 - to the extent feasible, 2,800 MW would use the MNEC;
- 400 MW of solar to be installed by a target date of end-of-year 2030;
 - to the extent feasible, all 400 MW must use the King Interconnection;²⁴
- 600 MW of standalone BESS to be installed by a target date of end-of-year 2030; and
 - to the extent feasible, 120 MW must use the MNEC.²⁵

¹⁷ [Minn. Stat. § 216B.16, subd. 7](#) (2025).

¹⁸ [Minn. Stat. § 216B.1645 subd. 2a](#) (2025).

¹⁹ [Minn. Stat. § 216B.1691 subd. 2a](#) (2025).

²⁰ [Minn. Stat. § 216B.1691, subd. 2f](#) (2025).

²¹ [Minn. Stat. § 216B.1691, subd. 2g](#) (2025).

²² [Minn. Stat. § 216B.50](#) (2025).

²³ [Minn. R. 7825.1800](#).

²⁴ The King Interconnection (now known as the Ten Mile Creek Gen-tie Line) is a 230 kV transmission line between the existing Allen S. King generating station and the new Ten Mile Creek Solar and BESS generating station. See Wisconsin Public Service Commission Docket No. 4220-CE-190 and [Xcel's website](#) for details regarding the generation and transmission.

²⁵ 2024 IRP Order at Order Points 2, 3, and 4.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

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.²⁶ 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.²⁷ 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.²⁸ 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 facts become known, circumstances change and utilities must adapt – even in the absence of a new resource plan order.²⁹

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*

For this docket Xcel started by updating the EnCompass database (as used in the Lyon County CN proceeding³⁰) for the following changes:

- **Firm Dispatchable Resource Updates:** The Lyon County CT, Cannon Falls PPA extension, Mankato Energy Center 1 PPA extension, North Star BESS, and Sherco West BESS are all included. No additional generic CT additions were available before 2030. The Plum Creek wind and Lake Wilson solar plus BESS projects were removed.
- **Updated Load Forecast:** The Company's most recent (Fall 2025) load forecast is used.

²⁶ [Minn. R. 7843.0500](#).

²⁷ 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.

²⁸ 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.

²⁹ *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.

³⁰ See Docket No. E002/CN-25-145.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

- **Updated Generic Resource Pricing:** Updated cost assumptions for new generic wind, solar, CT, and BESS resources incorporating the latest market data and consultant estimates, along with changes to tax credits stemming from the OBBBA starting in 2025.
- **Constraint applied to comply with the 100x40 CFS:** The model includes a constraint to ensure compliance with Minnesota's 100 percent by 2040 CFS.
- **Market capacity purchases at Cost of New Entry (CONE) and energy purchases before 2030:** Prior to 2030, the model allows for MISO market capacity purchases at CONE and from the MISO energy market at forecasted prices.
- **The expansion plan is optimized with generic resources starting in 2030:** Beginning in 2030, EnCompass shifts to optimizing the resource expansion plan using generic resources rather than relying on market purchases.
- **Market capacity and energy purchases are closed beginning in 2030:** After 2030, the model no longer allows MISO market purchases of capacity or energy to meet system needs. All requirements must be met through owned or contracted resources.
- **Complete the base case:** Xcel removed 1,600 MW of generic resources in 2025 through 2030 to create a capacity void, locked-in the remaining 1,860 MW of generic resources prior to 2030, and locked-in 400 MW of solar as Allen S. King replacement in 2030 (consistent with the approved targets in the last IRP).³¹

This process established a baseline plan.³² Under the baseline plan, rather than pursuing the resources in question, Xcel would rely upon the MISO spot markets instead. It is important to note that Xcel considers relying upon MISO markets to be an unreasonable action plan due to the risks inherent in excessive reliance on spot markets.

To create a second case Xcel then forced into EnCompass the proposed portfolio of projects. Then Xcel ran both cases and compared the baseline case (relying upon MISO markets) to the portfolio case (approving the proposed projects). A comparison of the portfolio case to the baseline case shows the impacts of the proposed portfolio relative to a no build (rely upon the market) case.

C.3. Xcel's EnCompass Results

C.3.1. Cost Results

The results of Xcel's analysis show that, depending on the availability of PTCs in 2025-'30, level of externalities, and forecasted fuel costs the present value of societal costs (PVSC) of the portfolio case is

³¹ Petition at 77-78, 82. Xcel states that the 1,860 MW locked-in generics are intended to represent a minimal proxy of resources to be acquired through the Development Transfer RFP and potential MISO ERAS projects.

³² The baseline plan was established using both 2023 and 2025 forecasts and with and without PTCs in 2025-'30; see Petition at 79.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

higher or lower than the baseline case for the 2024-'40 planning period.^{33,34} For the 2024-'50 study period the portfolio case is consistently more expensive than the baseline case in PVSC terms. In addition, regardless of time frame, the portfolio case is consistently more expensive than the baseline case in PVRR terms.

Given the time available, the Department did not attempt to run EnCompass for this proceeding. To provide perspective, the Department notes that the PVRR or PVSC incremental cost of the portfolio case can be viewed as an insurance premium to avoid reliance on the MISO spot market. Overall, the Company's EnCompass analysis shows that, in the planning period, the proposed portfolio's PVSC impact is highly sensitive to the assumptions used. In the study period the proposed portfolio represents a net cost relative to relying on MISO spot markets.

In IRPs and resource acquisition dockets the Department typically relies upon study period results because the study period covers the full impacts of decisions made today. Clearly the portfolio case is more expensive than the baseline case for the study period. The only question that remains regards whether the cost increase is a reasonable cost in terms of being an insurance premium or hedge against MISO spot markets. The Department discusses an overall conclusion below.

C.3.2. Expansion Plan Results

Xcel's analysis shows that, considering the proposed portfolio in this docket along with forecasted acquisitions in other on-going proceedings,³⁵ the Company will exceed the Commission-established target for BESS and solar by a little over 300 MW each but is still short of the wind acquisition target by about 1,400 MW.³⁶ The net impact is Xcel has a need for 716 MW to meet the overall capacity need established by the Commission.³⁷ Note that the 2024 IRP Order establishes targets by type and does not imply moving the size targets between types. However, Xcel is proposing to adapt using the RFP results and updated EnCompass modeling.

As part of the EnCompass modeling exercise, Xcel allowed the model to select additional resources in 2030. The purpose was to test whether additional resources would be added with the updated assumptions. The Company optimized the expansion plan in EnCompass four times; with and without the portfolio and with either the IRP load forecast or the 2025 load forecast. The 2030 additions are shown below.

³³ In general, for IRPs the planning period is the first 15 years, the end effects period is a varying duration after the planning period (to account for the long-term value of adding resources whose value derives from long-term energy output), and the study period is the planning period plus the end effects period. In this case Xcel's "planning period" includes time that typically would not be included in the IRP as historic data (2024 and 2025), thus in IRP terms the 15-year planning period here is actually 2026-'40.

³⁴ Petition at 81.

³⁵ Namely Xcel's Development Transfer RFP (Docket No. E002/M-23-342) and MISO ERAS (no docket number) processes.

³⁶ Petition at 82.

³⁷ *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Table 3: Generic Capacity Additions in 2030 (MW)³⁸

Case	Forecast	BESS	Solar	Wind	Solar + Wind
Base	2025 Load	300	2,300	1,800	4,100
Base	IRP Load	600	1,700	1,400	3,100
Portfolio	2025 Load	-	1,700	1,800	3,500
Portfolio	IRP Load	60	900	1,400	2,300

In both Portfolio Case optimizations BESS additions are minimal. Essentially the portfolio has filled the BESS needs identified in the Base Case. However, large amounts of both solar and wind are added in all cases. Overall, the 2030 expansion unit results indicate that the portfolio is not oversized in that substantial solar and wind capacity could be added if it were to qualify for tax credits.

C.3.3. *EnCompass Summary*

While the Department has concerns regarding the cost of the proposed projects, the updated EnCompass results demonstrate that substantial additions of wind and/or solar to the proposed portfolio could be justified.

D. *EETS, SES, AND CFS OBLIGATIONS*

Minn. Stat. § 216B.1691 describes Minnesota’s Renewable Energy Objectives and provides EETS, SES, and CFS obligations for Minnesota Electric Utilities.

D.1. *EETS Obligation*

Minn. Stat. § 216B.1691, subd 2(a) states:

Each electric utility shall generate or procure sufficient electricity generated by an eligible energy technology to provide its retail customers in Minnesota, or the retail customers of a distribution utility to which the electric utility provides wholesale electric service, so that the electric utility generates or procures an amount of electricity from an eligible energy technology that is equivalent to at least the following standard percentages of the electric utility's total retail electric sales to retail customers in Minnesota by the end of the year indicated:

- (1) 2012 12 percent
- (2) 2016 17 percent
- (3) 2020 20 percent
- (4) 2025 25 percent
- (5) 2035 55 percent.³⁹

³⁸ Solar capacity on the King Gen-tie Line were modeled as generic but forced into EnCompass by Xcel and thus not included in this table.

³⁹ [Minn. Stat. § 216B.1691, subd 2\(a\)](#) (2025).

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

The term “eligible energy technology” is defined by Minn. Stat. § 216B.1691, subd. 1 (c) as including solar. The Department concludes that the solar projects qualify for application toward Xcel’s EETS obligation since solar is an eligible energy technology. The BESS projects do not qualify for application towards Xcel’s EETS.

The Department reviews historical compliance with the RES statute in a biennial report to the legislature.⁴⁰ The Department RES Report concluded that, for the year 2023 Xcel was in compliance with the EETS.⁴¹ The Department RES Report forecasted that Xcel would be in compliance through 2040.⁴²

The Petition’s analysis of the EETS shows that Xcel will be in compliance through approximately 2035.⁴³ In either analysis Xcel would be short of the necessary renewable energy during the lifetime of the proposed solar projects. The difference in the two dates (2035 vs. 2040) would not impact the overall conclusion and the Department did not pursue an analysis of the difference. Overall, the Department concludes that the solar projects will be used to satisfy the requirements of Minnesota’s EETS.

D.2. SES Obligation

Minn. Stat. § 216B.1691, subd 2f (a) states that “each public utility shall generate or procure sufficient electricity generated by solar energy to serve its retail electricity customers in Minnesota so that by the end of 2020, at least 1.5 percent of the utility’s total retail electric sales to retail customers in Minnesota is generated by solar energy.” Note that for Xcel the same statute requires “at least ten percent of the 1.5 percent goal must be met by solar energy generated by or procured from solar photovoltaic devices with a nameplate capacity of 40 kilowatts or less.” The small solar standard is not at issue in this proceeding.

The Department RES Report states that Xcel met SES compliance for 2023.⁴⁴ In addition, the Department RES Report states that Xcel forecasts the Company will be able to meet a 10 percent by 2030 goal.⁴⁵ In addition Xcel forecasts that the Company will have sufficient solar to satisfy the SES requirements through year 2035 without the use of banked RECs. Xcel’s analysis of the SES shows that the Company will be able to meet the 1.5 percent requirement and 10 percent goal irrespective of Sherco Solar 4.⁴⁶ Overall, the Department concludes that the solar projects are not necessary to satisfy the requirements of Minnesota’s SES.

⁴⁰ Minnesota Department of Commerce. *Minnesota Renewable Energy Standard: Utility Compliance*. (2025). Available at: <https://www.lrl.mn.gov/docs/2025/mandated/250202.pdf>, (hereinafter “Department RES Report”).

⁴¹ *Id.*, at 4-5.

⁴² *Id.*, at 9.

⁴³ Petition at 90.

⁴⁴ Department RES Report at 8.

⁴⁵ The 10 percent by 2030 goal is established by [Minn. Stat. § 216B.1691, subd. 2f](#).

⁴⁶ Petition at 91.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

D.3. CFS Obligation

Minn. Stat. § 216B.1691, subd. 2g states:

In addition to the requirements under subdivisions 2a and 2f, each electric utility must generate or procure sufficient electricity generated from a carbon-free energy technology to provide the electric utility's retail customers in Minnesota, or the retail customers of a distribution utility to which the electric utility provides wholesale electric service, so that the electric utility generates or procures an amount of electricity from carbon-free energy technologies that is equivalent to at least the following standard percentages of the electric utility's total retail electric sales to retail customers in Minnesota by the end of the year indicated:

- | | |
|----------|--------------------------------------------------------------------------|
| (1) 2030 | 80 percent for public utilities; 60 percent for other electric utilities |
| (2) 2035 | 90 percent for all electric utilities |
| (3) 2040 | 100 percent for all electric utilities. ⁴⁷ |

The term "Carbon-free" is defined by Minn. Stat. § 216B.1691, subd. 1 (b) as a technology that generates electricity without emitting carbon dioxide.⁴⁸ As solar generation does not emit carbon dioxide, the Department concludes that the solar projects (Fillmore Solar, Grant Solar, Gopher State Solar, Lemon Hill Solar, and Sherco Solar 4) all qualify for application toward Xcel's CFS obligation.

The Department was unable to understand the Petition's Figure 18 and requested an updated figure; the Company provided an updated Figure 18.⁴⁹ The Updated Figure 18 shows that Xcel will be able to satisfy CFS compliance requirements through 2037 with current and planned resources being utilized, assuming a four-year shelf life of environmental attribute credits. Overall, the Department concludes that the solar projects will be used to satisfy the requirements of Minnesota's CFS.

E. XCEL'S BIDDING PROCESS

E.1. RFP Overview

Xcel issued the RFP in response to Order Point 2 A 8 of the 2019 IRP Order. Regarding resource acquisition, the 2019 IRP Order directed Xcel to use "the No-Bid/Track 1 and Xcel-Bid Auditor/Modified Track 2 bidding processes for the solar, wind, and storage resources approved in Ordering Paragraph 2."⁵⁰ The Xcel-Bid Auditor/Modified Track 2 bidding process is as follows:

- A. The Commission issues a resource plan order identifying the size, type, and timing of the resource needs.

⁴⁷ [Minn. Stat. § 216B.1691, subd. 2g](#) (2025).

⁴⁸ [Minn. Stat. § 216B.1691, subd. 1 \(b\)](#) (2025).

⁴⁹ Attachment 2, Xcel's response to Department Information Request No. 9.

⁵⁰ 2019 IRP Order at Order Point 6 A.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

- B. Xcel issues its request for proposals.
- C. Early in the process (preferably with the filing of the company's self-build proposal, discussed below) Xcel files a contingency plan to address the potential for the bidding process to fail.
- D. The day before Xcel receives responses to that request for proposals, Xcel submits its self-build project petition. This petition contains an estimate of final costs for the project and other project details necessary to evaluate the proposal in accordance with the identified selection factors.
- E. After receiving bids in response to the request for proposals, Xcel evaluates the bids and select projects for contract negotiation that are in the best interest of its customers. Xcel evaluates the bids using a number of factors, such as –
 - 1. Levelized cost,
 - 2. Financial capability,
 - 3. Project schedule,
 - 4. Project design,
 - 5. Project risks,
 - 6. MISO queue position status,
 - 7. Interconnection and network upgrades,
 - 8. Energy production profile,
 - 9. Site control,
 - 10. Project output delivery plan,
 - 11. Expected turbine availability,
 - 12. Pricing options,
 - 13. Project development milestones,
 - 14. Exceptions to standard contract terms and conditions, and
 - 15. Other relevant factors.

Using these criteria, Xcel selects projects that are in the best interest of its customers and negotiates contracts with each of the developers.

- F. Xcel then makes a filing to the Commission that includes the contracts for projects selected from the request for proposals, as well as a comparison between those projects and Xcel's self-build proposal. The company includes a ranking and bid data for all bids received in response to the request for proposals and an analysis of the factors identified above for all projects for which Xcel conducts due diligence. Additionally, the company provides an independent third-party auditor report of its process for requesting proposals, which reviews the company's evaluation of proposals and due diligence, as well as the company's selection of proposals for contract negotiation.⁵¹

⁵¹ *Id.*, at Appendix A.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Xcel used the RFP process outlined above. The requirements of Xcel’s RFP are summarized in Table 3.

Table 4: RFP Requirements⁵²

	Traditional Option	MNEC Contingent Option
Resource Types	Wind, Solar, Storage, Hybrid	Wind, Solar, Storage, Hybrid
Location	Physically located in MN, SD, or ND, plus: <u>Transmission-Interconnected Proposals:</u> located in Midcontinent Independent System Operator, Inc. (MISO) Zone 1 OR <u>Distribution-Interconnected Proposals:</u> Located in NSPM service territory	Physically located in MN with proximity to proposed MN Energy Connection
MW Target	1600 MWac total (inclusive of MNEC Contingent Option Bids)	Up to 800 MWac of 1600 MWac total target
Minimum Size per Project Site	Newly Built: > 5 MWac Existing Resources: > 1 MWac	> 5 MWac
Project Structure	PPA, Build Transfer (BT), Company self-build	BT, Company self-build
COD	Expected COD by December 31, 2029	Expected COD by December 31, 2029
COD Bonus Points	By June 1, 2027: 20 points By June 1, 2028: 10 points	N/A
PPA Term Lengths	PPA Extensions: (5 – 15 years); Newly Constructed Projects: (10 - 30 years)	N/A
New Or Existing	Newly constructed and <u>some</u> existing projects	Newly constructed only
Co-Location	Bidder must own or have an agreement in place with the owner of any existing co-located generating facility. The existing facility must have its output fully committed to the Company.	
Planned Interconnection Strategy	<ul style="list-style-type: none"> • Projects proposing new POIs in MISO: must have generator interconnection application in MISO 2021 DPP Cycle or earlier cycle. • Utilization of Surplus or Generator Interconnection Applications at existing MISO POIs, including MN Energy Connection & Blue Lake • Distribution-interconnected projects: must have signed interconnection agreement with NSPM as of June 28, 2024 	No MISO interconnection applications are required at time of bid submittal

⁵² RFP at 3-4. Note that the RFP issued under the NSPW corporate entity had similar requirements.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

In addition to the requirements above, the RFP specified the following:

- The Company sought projects that utilize labor covered by a collective bargaining agreement for its construction and thus requires bidders to provide pricing that assumes the use of such labor;
- A preference for utilize contractors and/or suppliers that are classified as certified Diverse Suppliers;
- annual reporting of workforce diversification information including for subcontractors and suppliers will be requested of successful bidders;
- require all bidders to provide a pollinator habitat scorecard assessment form; and
- only build-transfer and self-build bids will be considered for Blue Lake and Sherco interconnection reuse.⁵³

E.2. Summary of Bids Received

Self-build proposals were submitted on September 27, 2024. Third-party proposals were submitted on September 28, 2024. The IA's report describes the bids received as follows:

A total of 41 bids were received, for 30 distinct projects totaling approximately 1,475 MW of solar, 410 MW of wind, 1,340 MW of standalone storage, and 1,180 MW of solar plus storage. Of the 30 distinct projects, 20 were physically located in Minnesota, 3 in South Dakota, and 6 in Wisconsin [...]. Of the 38 third-party bids submitted, 21 were PPAs and 17 were BTs.⁵⁴

E.3. Completeness Review and Threshold Review

It is important to note that, during the completeness and threshold reviews, Xcel provided bidders the opportunity to fix any issues that would prevent a bid from being passed on to the evaluation stage.⁵⁵ During the Completeness Review stage bids are reviewed to ensure compliance with all bid submittal requirements. During the Threshold Review stage experts reviewed each bid for compliance with various factors as discussed in the RFP.

Bids were eliminated during the Company's Completeness and Threshold Reviews as follows:

- four bids were withdrawn by bidders;⁵⁶
- 11 bids did not pass the Threshold Review;⁵⁷ and
- three variations of the remaining bids were excluded from the scoring stage as less economically desirable than remaining bids for the same project.⁵⁸

⁵³ *Id.*, at 7-9.

⁵⁴ Petition at Attachment A at 4.

⁵⁵ Petition at 27.

⁵⁶ *Id.*, at 29.

⁵⁷ *Ibid.*

⁵⁸ *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Of the bids that did not pass the Threshold Review, the IA's report states that "the main reasons included not meeting the site control, location, interconnection, and technology threshold criteria."⁵⁹ At this point only solar and stand-alone BESS projects were remaining; no wind or solar plus storage hybrid projects remained after the Threshold Review. The Petition states that, "23 bids reaching the Scoring Stage comprised of 20 distinct projects – 14 solar projects representing 1,628 MW of capacity and six standalone storage projects representing 1,056 MW of capacity."⁶⁰

The Department reviewed the Company's Completeness Review as documented in the response to Department Information Request Nos. 3 and 4 and notes that **[TRADE SECRET DATA HAS BEEN EXCISED]** Overall, the Department has no concerns with the Company's Completeness Review.

The Department reviewed the Company's Threshold Review and notes the following. The Petition discusses 41 bids received.⁶¹ However, the Company's response to Department Information Request No. 5⁶² provided a file with 43 tabs, with each tab containing information on a separate bid—with some bids being variations of the same project. From the Completeness Review file, the Department determined that the Company did not count two MNEC contingent bids as a separate bid, unlike all other variations which were counted as separate bids. This discrepancy caused some confusion during the review but ultimately was not of substance. Overall, the Department has no concerns with the Company's Threshold Review.

E.4. Proposal Scoring and Shortlisting

Xcel performed the Proposal Key Parameter Review and Scoring in five distinct steps:

1. Scoring—Bids were scored based on the price and non-price scoring factors described in the RFP. All bids were ranked separately for solar only bids and standalone storage bids. All scored bids were passed on to the next step.⁶³
2. Quality Risk Screen—Each scored bid needed to exceed the minimum non-price criteria score. No scored bid failed this test and all were passed on to the next step.⁶⁴
3. Quantity Screen—Xcel pre-determined a maximum amount of solar and BESS capacity to model in EnCompass. This maximum amount of capacity (by type) resulted in two lowest scoring solar bids being excluded.⁶⁵ The remaining 21 bids moved to the EnCompass analysis step.
4. EnCompass Analysis—Xcel "started with the updated 2024 IRP base case modeling, removed generic resources it [EnCompass] was selecting between 2027 and 2028, and allowed the model to pick from the remaining project bids to meet the system needs during the acquisition time

⁵⁹ Petition at Attachment A at 15.

⁶⁰ Petition at 29.

⁶¹ For one example see Petition at 22.

⁶² Requesting "the file(s) containing the Threshold review of the bids."

⁶³ Petition at 34.

⁶⁴ *Ibid.*

⁶⁵ *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

window between 2027 and 2029.”⁶⁶ The EnCompass analysis eliminated **[TRADE SECRET DATA HAS BEEN EXCISED]** bids.⁶⁷

5. Cost-effectiveness Screen—A final cost screen was applied to the remaining bids. After review and approval by the IA, this cost screen eliminated **[TRADE SECRET DATA HAS BEEN EXCISED]**

At the end of the process, Xcel announced a short list of “17 distinct projects from eight different bidders, totaling 1,595 MW of solar capacity and 1,056 MW of standalone storage capacity.”⁶⁸

As discussed above the Scoring and Quality Risk Screen stages did not result in any bids being dropped but two bids were dropped during the Quantity Screen stage. The Department verified that the two lowest scoring solar bids were excluded during the Quantity Screen stage.

In the EnCompass analysis Xcel ran two main scenarios, one using the original IRP forecast and one using a higher, more recent 2024v2 forecast. Regarding the EnCompass Analysis stage the Petition states that:

Distinct projects could only be selected once. If a project had been bid in once as a PPA and once as a build-transfer, EnCompass could only choose the lowest cost option.⁶⁹

Using the original IRP forecast EnCompass selected a total of **[TRADE SECRET DATA HAS BEEN EXCISED]** With the updated 2024v2 forecast, EnCompass selected **[TRADE SECRET DATA HAS BEEN EXCISED]** For comparison, in the Petition Xcel is seeking approval of a portfolio of 768 MW of solar and 856 MW of BESS capacity.⁷⁰

The Department’s review of Xcel’s documentation for the EnCompass Analysis stage found that, under the 2024v2 forecast, **[TRADE SECRET DATA HAS BEEN EXCISED]** The difference between the forecast used in the “original IRP” EnCompass runs and the 2024v2 forecast EnCompass runs is shown below.

Table 5: Forecast Changes (2028 to 2040) ⁷¹

	Demand (MW)	Energy (GWh)
Minimum Increase	[TRADE SECRET DATA HAS BEEN EXCISED]	
Average Increase		
Maximum Increase		

⁶⁶ *Id.*, at 35.

⁶⁷ Petition at Attachment A at 17.

⁶⁸ Petition at 35.

⁶⁹ *Ibid.*

⁷⁰ Petition at 3.

⁷¹ *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

[TRADE SECRET DATA HAS BEEN EXCISED].

In the final step, Xcel applied a cost screen that excluded any bids with prices that had **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Overall, the Department has no concerns with the Company’s Key Parameter Review and Scoring analysis of the bids.

E.5. Changes to Proposals

Regarding requiring firm pricing for bids, the Petition states:

Recognizing that rigid pricing commitments were no longer feasible under the new tariff regime, the Company allowed shortlisted bidders to submit limited pricing adjustments. These adjustments were intended to reflect the real-time cost implications of supply chain volatility, including material cost fluctuations and tariff-related surcharges. The goal was to preserve the integrity of the RFP process while maintaining competition, tension, and transparency. By enabling controlled revisions, the Company aimed to reestablish momentum in negotiations and ensure that final contract terms remained both realistic and executable under the revised market conditions.⁷²

The results of the re-pricing for the PPAs are shown below in Table 5.

Table 6: Impact of PPA Re-pricing

Project ⁷³	Energy Payment Rate / MWh		Capacity Payment Rate / kW-month	
	Bid rate	PPA rate	Bid rate	PPA rate
Fillmore Solar	[TRADE SECRET DATA HAS BEEN EXCISED]			
Grant Solar				
Gopher State Solar				
Lemon Hill Solar				
Crowned Ridge BESS				
Crane BESS				
Mayhew Lake BESS				

In Xcel’s analysis of the Sherco Solar 4 Project **[TRADE SECRET DATA HAS BEEN EXCISED]** Xcel’s analysis of the Blue Lake BESS and Sherco South BESS Project **[TRADE SECRET DATA HAS BEEN EXCISED]**. In

⁷² Petition at 23.

⁷³ All PPA rates exclude any potential rate changes that may result from a New Trade Measure Event claim.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

general, re-pricing of bids is a poor practice in RFPs. However, Xcel's most recent solar RFP experienced significant difficulties after the shortlist was announced.⁷⁴ Given the substantial amounts of capacity ordered by the Commission in the last two IRPs, pricing volatility in the economy, and Xcel's recent experience, the Department concludes that a re-pricing opportunity was reasonable.

E.6. Summary

Based upon the analysis above the Department concludes that Xcel conducted the RFP in a reasonable manner.

F. ECONOMIC DEVELOPMENT

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

- (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;
- (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.”⁷⁵ 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.”⁷⁶

In the RFP the Company required bidders to utilize union labor and businesses.⁷⁷ Furthermore, impact on environmental justice areas was a scoring criterion.⁷⁸ In addition, the projects, as a package, will reduce CO₂ emissions. Thus, the proposed projects meet the first, second, and fifth criteria listed

⁷⁴ *In the Matter of the Petition of Northern States Power Company, d/b/a Xcel Energy, for Approval of Sherco Solar 3 and the Apple River Solar Power Purchase Agreement*, Xcel, Petition, May 5, 2023, Docket No. E002/M-22-403, (eDockets) [20235-195606-01](#), at 40-43.

⁷⁵ 2024 IRP Order at Order Point 26.

⁷⁶ *Id.*, at Order Point 27.

⁷⁷ Petition at 62.

⁷⁸ RFP at 27.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

above. The Department also notes that the RFP allowed relatively small projects to bid into the RFP, which allowed more Minnesotans to participate in the clean energy economy as per criterion 4 above.

The Company's EnCompass analysis demonstrates that the projects, as a package, will result in an increase in PVRR over the base case.⁷⁹ However, the Petition estimates that nominal rate of increase in cents per kWh for Xcel's system to be about 2 percent annually over the next 15 years⁸⁰—about the expected rate of inflation.

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.

G. TAX MATTERS

Regarding the self-build projects, Xcel expects the following tax credits:

- Blue Lake BESS—standard 30 percent ITC;
- Sherco South BESS—standard 30 percent ITC value and an additional 10 percent bonus for being located in an energy community; and
- Sherco Solar 4—standard 30 percent ITC value and an additional 10 percent bonus for being located in an energy community.⁸¹

These estimates are dependent upon Xcel's current interpretation of IRS guidance. The Petition discusses the current federal regulatory uncertainty which may impact some of the projects' logistics.⁸² The Company requests an expedited review in order to try to take advantage of the tax credit benefits of the Inflation Reduction Act (IRA) despite the accelerated phase-out under H.R. 1.⁸³

In addition, Xcel used a discount rate of **[TRADE SECRET DATA HAS BEEN EXCISED]** when calculating the estimated benefit of ITCs.⁸⁴ The Department reviewed Xcel's estimate of tax credit benefits of for the self-build projects and concludes that the estimates are reasonable.

The Department notes that Xcel's analysis of the initial Sherco Solar 4 bid assumed **[TRADE SECRET DATA HAS BEEN EXCISED]**. The Department recommends Xcel explain the change in reply comments, including a calculation of the estimated value of both PTCs and ITCs for the Sherco Solar 4 project.

H. OTHER MATTERS

The Department includes a discussion of miscellaneous issues in this section.

⁷⁹ Petition at 81.

⁸⁰ *Id.*, at 85.

⁸¹ *Id.*, at 68-73.

⁸² *Id.*, at 8-18.

⁸³ *Id.*, at 3.

⁸⁴ Xcel's response to Department Information Request No. 7 at Attachment O, tab "Inputs_Reg."

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

H.1. Imputed Debt

The Petition discusses the concept of imputed debt due to PPAs.⁸⁵ The Petition at Table 11 estimates the imputed debt due to the PPAs in question here to be about \$514 million. All of the imputed debt is associated with the BESS PPAs. After discussing imputed debt, the Petition concludes the topic by stating “[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.”⁸⁶

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. At this time there is no specific cost of imputed debt. However, based on the scoring of the shortlisted BESS bids,⁸⁷ it appears unlikely that adding imputed debt as a factor would materially change the ranking of the BESS bids. Finally, Xcel intends to address the issue in a separate proceeding. Therefore, no action regarding imputed debt is necessary in this proceeding.

H.2. Sherco Solar 4 Land Rights Approval

Minn. Stat. § 216B.50 governs the transfer of utility assets exceeding \$1,000,000:

No public utility shall sell, acquire, lease, or rent any plant as an operating unit or system in this state for a total consideration in excess of \$1,000,000 [...] without first being authorized so to do by the commission. [...] If the commission finds that the proposed action is consistent with the public interest, it shall give its consent and approval. [...] In reaching its determination, the commission shall take into consideration the reasonable value of the property, plant, or securities to be acquired or dispatched of, or merged and consolidated.

This section does not apply to the purchase of property to replace or add to the plant of the public utility by construction.⁸⁸

Xcel requests the Commission find the proposed acquisition of the land rights for Sherco Solar 4 is in the public interest.

Based upon the analysis of the results of the RFP and the APA elsewhere in these comments, the Department recommends that the Commission find that the proposed acquisition of the land rights for Sherco Solar 4 is consistent with the public interest.

⁸⁵ Petition at 43-44.

⁸⁶ *Id.*, at 44.

⁸⁷ See Petition at Appendix A at 18.

⁸⁸ [Minn. Stat. § 216B.50, subd. 1](#) (2023).

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

H.3. Variance Request

Acquisitions of property are governed by Minn. R. 7825.1800, subp. B, which states that petitions to acquire property shall contain the information required by Minn. R. 7825.1400, items A to J, the agreed upon purchase price, and the terms for payment and other considerations.⁸⁹ Xcel states that Minn. R. 7825.1400 concerns capital structure filings and is geared toward the issuance of securities, which is not at issue here. Therefore, Xcel requests that the Commission waive application of Minn. R. 7825.1800, subp. B.

Variance requests are governed by Minn. R. 7829.3200 which allows the Commission to vary its rules if it finds:

- A. enforcement of the rule would impose an excessive burden upon the applicant or others affected by the rule;
- B. granting the variance would not adversely affect the public interest; and
- C. granting the variance would not conflict with standards imposed by law.

Xcel states that the criteria for a variance are met as follows:

- A. the proposed transaction does not implicate the information sought by Minn. R. 7825.1400 (A)-(J) and, thus, its provision would impose an excessive burden on the Company;
- B. because the proposed transaction does not involve the issuance of securities, granting a variance does not conflict with the public interest; and
- C. as evidenced by previous Commission precedent waiving these requirements under similar circumstances, a waiver will not violate any standards imposed by law.

The Department agrees with Xcel's analysis and recommends that the Commission approve the requested variance.

I. XCEL'S SELF-BUILD PROJECTS

In this section, the Department discusses the acquisition process, recovery mechanisms, ratepayer protections, relief mechanisms, and jurisdictional allocation for Xcel's self-build projects: Sherco Solar 4, Blue Lake BESS, and Sherco South BESS.

I.1. Overview

The Petition requests Commission approval for investments, expenditures and costs related to the Company's self-build projects— Sherco Solar 4, Blue Lake BESS, and Sherco South BESS—pursuant to Minn. Stat. § 216B.1645, which describes the requirements necessary for recovery under the RES rider.⁹⁰ That statute allows the Commission to approve a schedule that provides for the automatic

⁸⁹ [Minn. R. 7825.1400](#).

⁹⁰ Petition at 89, 92.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

adjustment of charges to recover prudently incurred investments, expenses, or costs associated with facilities constructed, owned, or operated by a utility to satisfy the requirements of Minn. Stat. § 216B.1691.⁹¹ Minn. Stat. § 216B.1691 describes Minnesota’s Renewable Energy Objectives and lays out the RES and CFS for electric utilities.⁹² Xcel claims development of the self-build projects will facilitate compliance under the requirements of Minn. Stat. § 216B.1691.⁹³

The Sherco Solar 4 project generates renewable energy and can directly qualify for those requirements, if Xcel has demonstrated a need for renewable or carbon-free energy. Regarding the Blue Lake BESS and Sherco South BESS projects, the Commission’s authority under Minn. Stat. § 216B.1645 includes “reasonable investments and expenditures made to [...] provide storage facilities for renewable energy generation facilities that contribute to the reliability, efficiency, or cost-effectiveness of the renewable facilities.”⁹⁴ Thus, there are two criteria for storage facilities: they must “provide storage facilities for renewable energy generation facilities” and “contribute to the reliability, efficiency, or cost-effectiveness of the renewable facilities.” The Department discusses the applicability of these criteria in the subsections below.

1.2. Acquisition Process for RES Rider Recovery

Minn. Stat. § 216B. 1645, subd. 2a (a) defines which projects qualify for RES rider recovery:

A utility may petition the commission to approve a rate schedule that provides for the automatic adjustment of charges to recover prudently incurred investments, expenses, or costs associated with facilities constructed, owned, or operated by a utility to satisfy the requirements of section 216B.1691, provided those facilities were previously approved by the commission under section 216B.2422 or 216B.243, or were determined by the commission to be reasonable and prudent under section 216B.243, subdivision 9.⁹⁵

Minn. Stat. § 216B. 1645, subd. 2a (a) provides three paths for a project to address the RES or CFS to qualify for rider recovery:

- acquisition via Minn. Stat. § 216B.243,⁹⁶ which establishes the CN requirements;
- acquisition via Minn. Stat. § 216B.2422,⁹⁷ which allows a utility to select resources through a Commission-approved bidding process; or

⁹¹ [Minn. Stat. § 216B.1645, subd 2a](#) (2023).

⁹² See [Minn. Stat. § 216B.1691](#) (2025).

⁹³ Petition at 89-93.

⁹⁴ [Minn. Stat. § 216B.1645, subd 1 \(2\)](#) (2023).

⁹⁵ [Minn. Stat. § 216B. 1645, subd. 2a \(a\)](#) (2023).

⁹⁶ [Minn. Stat. § 216B.243](#) (2025).

⁹⁷ [Minn. Stat. § 216B.2422](#) (2025).

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

- acquisition via Minn. Stat. § 216B.243, subd. 9 which states that the CN requirements do not apply to a wind or solar generation facility that is intended to be used to meet the requirements of the EETS or the CFS, but projects must instead go through a comment period.

In this case all of the projects were acquired via through a Commission-approved bidding process. Thus, all of the project used one of the allowed acquisition processes.

The Department evaluates the applicability of recovery through the RES rider below.

1.2.1. Sherco Solar 4

In section D above, the Department concludes that Xcel demonstrated a need for additional renewable energy for purposes of meeting the RES and CFS. The Sherco Solar 4 project can help meet those needs and therefore qualifies for recovery under Minn. Stat. § 216B.1645. The Sherco Solar 4 project was also acquired via a Commission-approved competitive bidding process. The Department recommends that the Commission determine the Sherco Solar 4 qualifies for recovery via Xcel's RES Rider.

1.2.2. Blue Lake BESS

Xcel claims that both self-build BESS projects, and perhaps *any* BESS, advances the system as a whole and qualifies for recovery through the renewable energy rider. Xcel states that “[t]he projects [Sherco South BESS and Blue Lake BESS] allow for storage of excess electricity generated by other power producers during periods of low electricity demand, with the ability to send the electricity back to the grid when demand increases.”⁹⁸ Blue Lake BESS has no tie to any particular renewable generator, but instead will replace retiring capacity at the Blue Lake Generating Station.⁹⁹

Xcel asserts that both the Blue Lake BESS and Sherco South BESS projects qualify for recovery under the RES rider for these reasons:

The impact to the grid from the integration of BESSs will advance research and understanding of how storage devices may improve renewable energy projects, including:

- Supports integration of renewable energy: The integration of BESS enables higher and more efficient use of existing and new renewable energy sources.
- Frequency response and regulation: Strong BESS infrastructure provides moment-to-moment stability for the electrical system more efficiently than existing natural gas resources.

⁹⁸ Petition at 93.

⁹⁹ Petition at 67.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

- Reduce energy waste: BESS stores energy when there is an excess supply and discharges that energy back onto the grid when supply is low.
- Grid Resiliency: BESS can support recovery from storms and other grid emergencies by more efficiently using the operating portions of the grid and providing the grid operator and utility additional flexibility while they work to restore the system.

The Department agrees that these aspects of BESS systems broadly support “research and understanding of how storage devices may improve renewable energy projects.” However—unlike Sherco South BESS—there is not a locational nexus between Blue Lake BESS and renewable generation that demonstrates that Blue Lake BESS in particular will “provide storage facilities for renewable energy generation facilities that contribute to the reliability, efficiency, or cost-effectiveness of the renewable facilities,” per Minn. Stat. § 216.1645, subd. 1 (2).¹⁰⁰ The Department requests that Xcel discuss in reply comments how specific, locational aspects of Blue Lake BESS apply to statutory criteria for recovery under the RES rider, or else why these criteria apply to BESS systems broadly, regardless of location.

1.2.3. Sherco South BESS

The Department concludes that Sherco South BESS qualifies for recovery under the RES rider for two reasons. First, from its location (between the Sherco Solar 1 and 2 units) the Department concludes that the proposed Sherco South BESS will “provide storage facilities for renewable energy generation facilities” as required by Minn. Stat. § 216B.1645. Second, from its accredited capacity and related reliability benefits, and **[TRADE SECRET DATA HAS BEEN EXCISED]** the Department concludes that the proposed Project will “contribute to the reliability, efficiency, or cost-effectiveness of the renewable facilities” as required by Minn. Stat. § 216B.1645.

Therefore, the Sherco South BESS project qualifies for rate recovery pursuant to Minn. Stat. § 216B.1645. The Department recommends that the Commission determine the Sherco South BESS qualifies for recovery via Xcel’s RES Rider.

1.3. Ratepayer Protections

1.3.1. Bid Price Cap

Here Xcel’s bids are competing against other bids to meet the identified needs. If the final costs of Xcel’s bids to ratepayers were not considered to be firm or known when the Commission evaluates all bids, ratepayers would be at risk to incur some amount of unknown costs. Further, if one bidder were allowed to pass extra costs onto ratepayers while other bidders were not, the bidding process would not be fair to all bidders. Therefore, the Department recommends the Commission set Xcel’s base cost recovery at the capital cost bid. The base cost recovery amounts are:

[TRADE SECRET DATA HAS BEEN EXCISED]

¹⁰⁰ [Minn. Stat. § 216B.1645, subd 1 \(2\)](#) (2023).

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

The base amount is a symmetrical ‘hard’ cap in that it is the amount recovered in any case—just as is the case for other bidders. If actual costs come in below the base cost recovery amount, then the Company is better off. If actual costs come in above the base cost recovery amount the Company is worse off. In addition, Xcel’s projects should receive the same relief mechanisms for base costs as were built into the PPAs as adjustments to the base cost recovery amounts. The Department discusses these three mechanisms below.

1.3.2. Geopolitical Uncertainty Relief Mechanisms

First, the PPAs were granted relief from tax law changes. Xcel states that, “[i]f a change in tax law (for example, a repeal of a clean energy tax credit) prevents the Seller from realizing investment or production tax credit benefits and the financial impact exceeds a material threshold relative to the size of each project, then Seller has the opportunity to exit the contract, forfeiting a portion of the Security Fund.”¹⁰¹ Therefore, if a tax law change prevents Xcel from realizing investment tax credits (ITC) or production tax credits (PTC), Xcel should be granted relief. The appropriate relief would be to adjust the cost cap for loss of ITCs or PTCs. To obtain the tax change adjustment Xcel would need to make a filing with documentation of the tax change.

Second, the PPAs were granted relief from extraordinary federal actions (EFA):

If the Seller is unable to reach COD due to a federal permit being withheld or denied, the Seller is granted a day-for-day extension. [...] If the delay continues and COD still cannot be achieved within a year, then either party has the opportunity to exit the contract without penalty.¹⁰²

If an EFA, namely a federal permit being withheld or denied, prevents Xcel from realizing the expected COD, Xcel should be granted the same relief; a day-for-day extension of the expected COD. To obtain the day-for-day COD extension Xcel would need to make a filing with documentation of the EFA.

Third, the PPAs were granted relief from new trade measures: “If a new or modified import tariff is imposed on the project’s major components, the Seller may request a rate increase capped at no more than 20 percent to account for the new tariff impact.” Similarly, Xcel’s bids should be allowed a 20 percent increase to account for new trade measures. To obtain the 20 percent increase Xcel would need to make a filing with documentation demonstrating a clear tie between the new or modified import tariff and the cost of Xcel’s project.

¹⁰¹ Petition at 63.

¹⁰² *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

1.3.3. Performance Adjustment Mechanisms for Solar

The Petition discusses three contract provisions that apply to solar projects.¹⁰³ The first provision is a Committed Energy adjustment. Each PPA has an annual “Committed Energy” amount and if the Seller fails to deliver a specified percentage of Committed Energy over defined periods the payment to the Seller is reduced by a set percentage. The second provision involves curtailment. Each PPA establishes compensable curtailments, generally curtailments directed by the Company, and non-compensable curtailments, generally those due to transmission constraints, force majeure, or regulatory actions. The third provision involves availability and operational performance. Sellers are required to maintain a minimum equivalent availability reporting factor. Failure to meet the standard can trigger default and termination.

The Department explored establishing similar performance adjustments for Xcel’s Sherco Solar 4 project but this effort failed, largely due to the complexity of the calculations involved and uncertainty regarding the specific inputs to be used.

1.3.4. Performance Adjustment Mechanisms for BESS

The Petition discusses three contract provisions that apply to BESS projects.¹⁰⁴ The first provision is a Capacity Availability Factor (CAF) adjustment. Basically, the monthly capacity payment varies based on the actual availability of the project each month. The second provision involves a round-trip efficiency (RTE) adjustment. RTE is the ratio of energy discharged to energy charged. RTE is the efficiency of the project’s charging capabilities. If the RTE falls below guaranteed levels, the monthly payment is reduced. The third provision involves total energy discharged. If the battery is discharged above the annual throughput limit, the Seller is entitled to an additional payment.

Again, the Department explored establishing similar performance adjustments for Xcel’s Sherco South BESS and Blue Lake BESS projects but this effort failed due to the complexity of the calculations involved and uncertainty regarding the specific inputs to be used.

1.4. Jurisdictional Allocation

The Petition requests that “the Commission allow the Company to propose any changes to our jurisdictional allocation approach in a future RES Rider filing for resources that we are not able to obtain approval of in another jurisdiction.”¹⁰⁵ To support this request the Company explains that, “in order to comply with Minnesota’s 100x40 CFS law, it was necessary to impose a constraint in the Encompass modeling, meaning that Minnesota law directly impacts the updated expansion plan.”¹⁰⁶

¹⁰³ Petition at 59.

¹⁰⁴ *Id.*, at 60.

¹⁰⁵ *Id.*, at 89.

¹⁰⁶ *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Before seeking an increased allocation to Minnesota, Xcel would seek a recovery determination from North Dakota Public Service Commission and South Dakota Public Utilities Commission.¹⁰⁷

The Department notes that the process proposed by the Company appears to be reasonable. However, the Department recommends the Commission take no action regarding the request to propose changes to the jurisdictional allocation approach in a future RES Rider filing for resources Xcel is not able to obtain approval of in another jurisdiction. The Company already has the ability to propose changes to jurisdictional allocations in RES Rider filings.

J. PPA REVIEW

J.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.

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.

J.2. Fillmore Solar PPA

Note that the Fillmore Solar project is unique among the PPAs. Currently, the 45 MW Fillmore Solar project is operational. Of that capacity, 30 MW is contracted by Xcel; the proposed PPA covers the remaining 15 MW of the project.¹⁰⁸

¹⁰⁷ Xcel justifies this request in part by reference to a jurisdictional-participation-based rate recovery process used by Otter Tail Power Company (OTP). Such an approach works for OTP in part because OTP's most recent IRP (Docket No. E017/RP-21-339) was done on a jurisdictional basis in the last round of analysis.

¹⁰⁸ Petition at 45.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

J.2.1. Changes from Bid Price

For the Fillmore Solar project **[TRADE SECRET DATA HAS BEEN EXCISED]** This price is still competitive with other comparable projects and the Department concludes the change is reasonable in these circumstances.

J.2.2. Ratepayer Protections—Financial Risk

Article 12.1 of the Fillmore PPA describes events that constitute seller’s default which includes seller’s:

[TRADE SECRET DATA HAS BEEN EXCISED]

Article 12.4 A specifies the limitations on damages that can be due to Xcel for:

[TRADE SECRET DATA HAS BEEN EXCISED]

Article 12.4.B specifies situations that are not subject to the limit **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Article 11.1 describes the **[TRADE SECRET DATA HAS BEEN EXCISED]** Xcel can draw from the **[TRADE SECRET DATA HAS BEEN EXCISED]**.

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

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

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

Article 20 describes, among other issues, the treatment of **[TRADE SECRET DATA HAS BEEN EXCISED]**

As the Petition describes, there are special relief mechanisms to deal with the substantial uncertainty at this time. First, if a “change in tax law (for example, a repeal of a clean energy tax credit) prevents the Seller from realizing investment or production tax credit benefits and the financial impact exceeds a material threshold relative to the size of each project, then Seller has the opportunity to exit the contract, forfeiting a portion of the Security Fund.”¹⁰⁹

After reviewing the financial risk allocation features of the Fillmore PPA, the Department concludes that Xcel’s ratepayers would be reasonably protected from financial risks.

¹⁰⁹ Petition at 63.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

J.2.3. Ratepayer Protections—Operational Risk

Note that the Fillmore Solar project has already been constructed.¹¹⁰ Thus, there are no operational risks related to the project not being built as expected.

The Fillmore PPA includes specific features that protect both Xcel and its ratepayers from the operational risks discussed above. These features include the **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Article 3.2 includes terms regarding **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Article 5.3 requires **[TRADE SECRET DATA HAS BEEN EXCISED]** This requirement ensures that Xcel's payments are for energy actually received.

After reviewing the operational risk allocation features of the Fillmore PPA, the Department concludes that Xcel's ratepayers would be reasonably protected from operational risks.

J.2.4. Curtailment Provisions

For the Fillmore PPA specifically, curtailments are covered in Article 8.3 and include:

[TRADE SECRET DATA HAS BEEN EXCISED]

The Fillmore PPA states that **[TRADE SECRET DATA HAS BEEN EXCISED]**

After reviewing the curtailment features of the Fillmore PPA, the Department concludes that Xcel's ratepayers would be reasonably protected.

J.2.5. Conclusion Regarding PPA

After reviewing the Fillmore PPA, the Department concludes that PPA provisions, including those related to curtailment, would reasonably protect Xcel's ratepayers from financial and operational risks. Therefore, the Department recommends that the Commission approve the Fillmore PPA.

J.3. Grant Solar PPA

J.3.1. Changes from Bid Price

For the Grant Solar project **[TRADE SECRET DATA HAS BEEN EXCISED]** This price is still competitive with other comparable projects and the Department concludes the change is reasonable in these circumstances.

¹¹⁰ *Id.*, at 45.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

J.3.2. Ratepayer Protections—Financial Risk, Default

Xcel's Article 12 describes events that constitute default by Grant Solar:

[TRADE SECRET DATA HAS BEEN EXCISED]

The PPA outlines the following remedies in case of default. Xcel may:

[TRADE SECRET DATA HAS BEEN EXCISED]

To assure the collection of monetary relief the PPA requires Grant Solar to maintain a**[TRADE SECRET DATA HAS BEEN EXCISED]**.

The Department reviewed the default provisions to the Grant Solar PPA and has no objections.

J.3.3. Ratepayer Protections—Financial Risk, Counterparties

The Department also examined the PPA language for its coverage of counterparty risk. **[TRADE SECRET DATA HAS BEEN EXCISED]**.

The PPA also takes steps to identify and reduce counterparty risks associated with **[TRADE SECRET DATA HAS BEEN EXCISED]**.

The Department finds that significant protections exist against **[TRADE SECRET DATA HAS BEEN EXCISED]**.

[TRADE SECRET DATA HAS BEEN EXCISED]

J.3.4. Ratepayer Protections—Financial Risk, Changes in Law

As in Xcel's PPAs in Docket No. E002/CN-23-212, Xcel included language that allows for the revision of the price paid by Xcel in the case of changes in tariffs or changes in tax law. **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Xcel's language protects from a change in tax law that would especially result in an increase in **[TRADE SECRET DATA HAS BEEN EXCISED]**, the Department concludes that the risk of an unfair price is lowered by these terms and has no recommendations.

With regard to new trade measures, the Department wonders why the PPA only allows **[TRADE SECRET DATA HAS BEEN EXCISED]**

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

J.3.5. Ratepayer Protections—Operational Risk

The PPA includes specific features that protect both Xcel and its ratepayers from operational risks.

[TRADE SECRET DATA HAS BEEN EXCISED]

The Department has no recommendations in regard to operational risk.

J.3.6. Curtailment Provisions

Xcel's **[TRADE SECRET DATA HAS BEEN EXCISED]**.

The Department has no recommendations regarding curtailment.

J.3.7. Conclusion Regarding PPA

[TRADE SECRET DATA HAS BEEN EXCISED]

J.4. Gopher Solar PPA

J.4.1. Changes from Bid Price

For the Gopher State Solar project **[TRADE SECRET DATA HAS BEEN EXCISED]** This price is still competitive with other comparable projects and the Department concludes the change is reasonable in these circumstances.

J.4.2. Ratepayer Protections—Financial Risk

Article 12.1 of the Gopher State PPA describes events that constitute Seller's default which includes Seller's:

[TRADE SECRET DATA HAS BEEN EXCISED]

Article 12.4 A specifies the limitations on damages that can be due to Xcel for:

[TRADE SECRET DATA HAS BEEN EXCISED]

Article 12.4 B specifies situations that are not subject to the limit **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Article 11.1 describes the **[TRADE SECRET DATA HAS BEEN EXCISED]** Xcel can draw from the **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Article 16 and Exhibit I describe **[TRADE SECRET DATA HAS BEEN EXCISED]**

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

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Article 19 includes **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 20 describes, among other issues, the treatment of **[TRADE SECRET DATA HAS BEEN EXCISED]**

After reviewing the financial risk allocation features of the Gopher State PPA, the Department concludes that Xcel's ratepayers would be reasonably protected from financial risks.

J.4.3. Ratepayer Protections—Operational Risk

The Gopher State PPA includes specific features that protect both Xcel and its ratepayers from the operational risks discussed above, including **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 3.2 contains terms regarding **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 5.3 requires **[TRADE SECRET DATA HAS BEEN EXCISED]**

After reviewing the operational risk allocation features of the Gopher State PPA, the Department concludes that Xcel's ratepayers would be reasonably protected from operational risks.

J.4.4. Curtailment Provisions

The Gopher State PPA classifies curtailment situation into two categories: compensable (where Seller is paid) and non-compensable (where the Seller is not paid). For the Gopher State PPA, compensable curtailments are covered in Article 8.3 and include:

[TRADE SECRET DATA HAS BEEN EXCISED]

Non-compensable curtailments include **[TRADE SECRET DATA HAS BEEN EXCISED]**

The Gopher State PPA include several performance-based adjustment mechanisms that align with the RFP model PPA. These provisions “are designed to ensure that each facility delivers reliable, high-quality service and that Seller compensation is closely tied to actual performance. The mechanisms [...] are structured to incentivize high availability and energy delivery, provide for flexibility in operational realities, and protect both the Company and our customers from extraordinary risks.” These mechanisms are as follows: committed energy delivery adjustment, curtailment and compensation, and availability and operational performance.¹¹¹

J.4.5. Conclusion Regarding PPA

After reviewing the Gopher State PPA, the Department concludes that PPA provisions, including those related to curtailment, would reasonably protect Xcel's ratepayers from financial and operational risks and the PPA curtailment. Therefore, the Department recommends that the Commission approve the Gopher State PPA.

¹¹¹ Petition at 59.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

J.5. Lemon Hill Solar PPA

J.5.1. Changes from Bid Price

For the Lemon Hill Solar project **[TRADE SECRET DATA HAS BEEN EXCISED]**. This price is still competitive with other comparable projects and the Department concludes the change is reasonable in these circumstances.

J.5.2. Ratepayer Protections—Financial Risk

Article 12.1 of the Lemon Hill PPA describes events that constitute Seller’s default which includes Seller’s:

[TRADE SECRET DATA HAS BEEN EXCISED]

Article 12.4.A specifies the limitations on damages that can be due to Xcel for:

[TRADE SECRET DATA HAS BEEN EXCISED]

Article 12.4.B specifies situations that are not subject to the limit

[TRADE SECRET DATA HAS BEEN EXCISED]

Article 11.1 describes the **[TRADE SECRET DATA HAS BEEN EXCISED]** Xcel can draw from the **[TRADE SECRET DATA HAS BEEN EXCISED]**.

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

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

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

Article 20 describes, among other issues, the treatment of **[TRADE SECRET DATA HAS BEEN EXCISED]**

As mentioned in the Petition, there are special relief mechanisms to deal with the substantial uncertainty at this time. First, if a “change in tax law (for example, a repeal of a clean energy tax credit) prevents the Seller from realizing investment or production tax credit benefits and the financial impact exceeds a material threshold relative to the size of each project, then Seller has the opportunity to exit the contract, forfeiting a portion of the Security Fund.”¹¹²

Second, regarding tariffs, if a “new or modified import tariff is imposed on the project’s major components, the Seller may request a rate increase capped at no more than 20 percent to account for

¹¹² Petition at 63.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

the new tariff impact.”¹¹³ Note that there are procedures to deal with the validity of claims regarding new tariffs.

After reviewing the financial risk allocation features of the Lemon Hill PPA, the Department concludes that Xcel’s ratepayers would be reasonably protected from financial risks.

J.5.3. Ratepayer Protections—Operational Risk

The Lemon Hill PPA includes specific features that protect both Xcel and its ratepayers from the operational risks discussed above. These features include the **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 3.2 includes terms regarding **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 5.3 requires **[TRADE SECRET DATA HAS BEEN EXCISED]** This ensures that Xcel’s payments are for energy actually received.

In addition, there are special mechanisms that deal with operational risks due to the uncertainty at this time. First, if the Seller “is unable to reach COD due to a federal permit being withheld or denied, the Seller is granted a day-for-day extension.”¹¹⁴ Examples given include a presidential executive order causing delay or otherwise making construction impossible.

Second, the Lemon Hill PPA has a committed energy delivery adjustment. This feature:

establishes a “Committed Energy” amount for each Commercial Operation Year. If the Seller fails to deliver a specified percentage of Committed Energy over defined periods ... the Monthly Energy Payment is reduced by a set percentage.¹¹⁵

Third, the Lemon Hill PPA has availability and operational performance features. In this case the Seller:

is required to maintain a minimum equivalent availability reporting factor ... over defined periods. Failure to meet this standard can trigger default provisions, cure periods, and, if not remedied, termination rights for the Company.¹¹⁶

After reviewing the operational risk allocation features of the Lemon Hill PPA, the Department concludes that Xcel’s ratepayers would be reasonably protected from operational risks.

¹¹³ *Ibid.*

¹¹⁴ Petition at 63.

¹¹⁵ *Id.*, at 59.

¹¹⁶ *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

J.5.4. Curtailment Provisions

The Lemon Hill PPA specifies two types of curtailment, compensable (where Seller is paid) and non-compensable (where the Seller is not paid). At a high level, “[c]ompensable curtailments generally include curtailments directed by the Company for market or operational reasons, while non-compensable curtailments include those due to transmission constraints, force majeure, or regulatory actions.”¹¹⁷ For the Lemon Hill PPA specifically, compensable curtailments are covered in Article 8.3 and include:

[TRADE SECRET DATA HAS BEEN EXCISED]

Non-compensable curtailments include **[TRADE SECRET DATA HAS BEEN EXCISED]** The amount a Seller is paid for curtailed energy agreed to under the final PPA would equal the energy payment rate and include an amount to make Seller whole for their lost PTC benefits.¹¹⁸

J.5.5. Conclusion Regarding PPA

After reviewing the Lemon Hill PPA, the Department concludes that PPA provisions, as a whole, would reasonably protect Xcel’s ratepayers from financial and operational risks and the PPA curtailment. Therefore, the Department recommends that the Commission approve the Lemon Hill PPA.

J.6. Crowned Ridge BESS PPA

J.6.1. Changes from Bid Price

For the Crowned Ridge BESS project **[TRADE SECRET DATA HAS BEEN EXCISED]** This price is still competitive with other comparable projects and the Department concludes the change is reasonable in these circumstances.

J.6.2. Ratepayer Protections—Financial Risk

Article 12.1 of the Crowned Ridge PPA describes events that constitute Seller’s default which includes Seller’s:

[TRADE SECRET DATA HAS BEEN EXCISED]

Article 12.4.A specifies the limitations on damages that can be due to Xcel for:

[TRADE SECRET DATA HAS BEEN EXCISED]

¹¹⁷ *Ibid.*

¹¹⁸ See Attachment 1, Xcel’s response to Department Information Request No. 8.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Article 12.4.B specifies situations that are not subject to the limit **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 11.1 describes the **[TRADE SECRET DATA HAS BEEN EXCISED]** Xcel can draw from the **[TRADE SECRET DATA HAS BEEN EXCISED]**

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

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

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

Article 20 describes, among other issues, the treatment of **[TRADE SECRET DATA HAS BEEN EXCISED]**

As described in the Petition, there are special relief mechanisms to deal with the substantial uncertainty at this time. First, if a “change in tax law (for example, a repeal of a clean energy tax credit) prevents the Seller from realizing investment or production tax credit benefits and the financial impact exceeds a material threshold relative to the size of each project, then Seller has the opportunity to exit the contract, forfeiting a portion of the Security Fund.”¹¹⁹

Second, regarding tariffs, if a “new or modified import tariff is imposed on the project’s major components, the Seller may request a rate increase capped at no more than 20 percent to account for the new tariff impact.”¹²⁰ The Department notes that there are procedures to deal with the validity of claims regarding new tariffs.

After reviewing the financial risk allocation features of the Crowned Ridge PPA, the Department concludes that Xcel’s ratepayers would be reasonably protected from financial risks.

J.6.3. Ratepayer Protections—Operational Risk

The Crowned Ridge PPA includes specific features that protect both Xcel and its ratepayers from the operational risks discussed above. These features include the **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 3.2 includes terms regarding **[TRADE SECRET DATA HAS BEEN EXCISED]**

Article 5.5 requires **[TRADE SECRET DATA HAS BEEN EXCISED]** This ensures that Xcel’s is able to confirm that the facility meets round-trip requirements.

Article 5.6 and Exhibit M-1 requires **[TRADE SECRET DATA HAS BEEN EXCISED]** This provision ensures that Xcel is receiving the capacity it is paying for.

In addition, there are special mechanisms that deal with operational risks due to the uncertainty at this time. First, if the Seller “is unable to reach COD due to a federal permit being withheld or denied, the

¹¹⁹ Petition at 63.

¹²⁰ *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Seller is granted a day-for-day extension.”¹²¹ Examples given include a presidential executive order causing delay or otherwise making construction impossible.

Second, the Crowned Ridge PPA has a CAF, included in Article 8.1.¹²² 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.¹²³

Third, the Crowned Ridge PPA has a Round-Trip Efficiency Adjustment feature, found in Article 8.3.¹²⁴ In this case the Seller must comply with the following:

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.¹²⁵

Fourth, the Crowned Ridge PPA has penalties for failure to respond to dispatch found in Article 8.3.¹²⁶ 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.¹²⁷

Finally, the Crowned Ridge PPA has an Excess Throughput provision found in Article 8.4.¹²⁸ In this case if the Seller:

is entitled to an additional payment for each megawatt-hour (MWh) of excess energy delivered. This structure provides an incentive for the Seller to make the system available beyond its planned throughput, while also protecting the facility from overuse that could degrade the asset.¹²⁹

¹²¹ Petition at 63.

¹²² Petition at Attachment K at 27-28.

¹²³ Petition at 60.

¹²⁴ Petition at Attachment K at 28-29.

¹²⁵ Petition at 60.

¹²⁶ Petition at Attachment K at 28-29.

¹²⁷ Petition at 61.

¹²⁸ Petition at Attachment K at 28-29.

¹²⁹ Petition at 60.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Specifically, Article 8.4 **[TRADE SECRET DATA HAS BEEN EXCISED]** Additionally, Article 8.5 **[TRADE SECRET DATA HAS BEEN EXCISED]** These measures allow for flexibility in how the Company uses the Crowned Ridge system while providing protections for the long-term life of the facility.

After reviewing the operational risk allocation features of the Crowned Ridge PPA, the Department concludes that Xcel's ratepayers would be reasonably protected from operational risks.

J.6.4. 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 Crowned Ridge BESS is not subject to curtailment in the same way other facilities being examined in this docket are, as Crowned Ridge responds directly to dispatch as a storage peaking resource that does not generate its own electricity. If there is congestion on the grid preventing the use of the facility at any time, that power will not be lost and will be usable at some later time. As such the Department concludes that Xcel ratepayers would be reasonably protected from curtailment risks.

J.6.5. Conclusion Regarding PPA

The Department concludes that the Crowned Ridge PPA has sufficient safeguards for both financial and operational risks while being obtained for a reasonable price in line with other storage projects. Therefore, the Department recommends that the Commission approve the Crowned Ridge PPA.

J.7. Crane BESS PPA

J.7.1. Changes from Bid Price

For the Crane BESS project, **[TRADE SECRET DATA HAS BEEN EXCISED]**

J.7.2. Ratepayer Protections—Financial Risk

Events that could cause the Crane 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 Specified Change in Tax Law (SCTL) such as loss of investment or production tax credit benefits;
- **[TRADE SECRET DATA HAS BEEN EXCISED]**

These events 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]**

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

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.

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 a CPD milestone or COD target continues for over 365 days.¹³⁰ An EFA can include the denial or withholding of necessary permits due to a presidential executive order or other federal action.

Fourth, Article 20 includes a provision allowing the Seller to terminate the PPA if an SCTL occurs before COD. An SCTL is a decrease in ITCs and/or PTCs resulting in the Seller losing at least **[TRADE SECRET DATA HAS BEEN EXCISED]** in tax credit benefits. However, an independent auditor must verify that the SCTL has occurred, and that the **[TRADE SECRET DATA HAS BEEN EXCISED]** threshold has been reached.

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

The Crane 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 liquidated delay damages, actual damages, **[TRADE SECRET DATA HAS BEEN EXCISED]** and liquidated damages for failure to achieve COD.¹³¹

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]**

J.7.3. Ratepayer Protections—Operational Risk

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

¹³⁰ *Id.*, at 56.

¹³¹ *Ibid.*

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

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]**

Article 8 includes provisions that address operational risk related to variation in storage capacity availability and efficiency by adjusting capacity payments. First, the CAF, found in Article 8.1, adjusts payments such that Xcel only pays for the storage capacity that is actually available for dispatch in a given period.¹³² 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.¹³³

Second, capacity payments are reduced in the event that the storage system's round-trip efficiency is lower than the guaranteed level. In this case the Seller must comply with the following:

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.¹³⁴

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.¹³⁵ 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.¹³⁶

The Crane BESS PPA also has an Excess Throughput provision found in Article 8.4.¹³⁷ In this case if the Seller:

is entitled to an additional payment for each megawatt-hour (MWh) of excess energy delivered. This structure provides an incentive for the Seller

¹³² *Id.*, at 28.

¹³³ Petition at 60.

¹³⁴ *Ibid.*

¹³⁵ *Id.*, at 31.

¹³⁶ Petition at 61.

¹³⁷ Petition at Attachment L at 31-32.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

to make the system available beyond its planned throughput, while also protecting the facility from overuse that could degrade the asset.¹³⁸

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 Crane 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]**

J.7.4. 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 Crane BESS is not subject to curtailment in the same way other facilities being examined in this docket are, as the Crane BESS responds directly to dispatch as a storage peaking resource that does not generate its own electricity. If there is congestion on the grid preventing the use of the facility at any time, that power will not be lost and will be usable at some later time. As such the Department concludes that Xcel ratepayers would be reasonably protected from curtailment risks.

J.7.5. Conclusion Regarding PPA

After reviewing the Crane BESS PPA, the Department concludes that the PPA sufficiently protects ratepayers from most financial and operational risks. However, the extent of the financial risk posed by increased capacity payment rates due to **[TRADE SECRET DATA HAS BEEN EXCISED]** is unclear. The Department therefore recommends that Xcel provide in reply comments the additional information detailed in Section J.7.2 above.

J.8. Mayhew Lake BESS PPA

J.8.1. Changes from Bid Price

For the Mayhew Lake BESS project **[TRADE SECRET DATA HAS BEEN EXCISED]** This price is still competitive with other comparable projects and the Department concludes the change is reasonable in these circumstances.

J.8.2. Ratepayer Protections—Financial Risk

Events that could cause the Mayhew Lake 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; and

¹³⁸ Petition at 60.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

- an SCTL such as loss of investment or production tax credit benefits

These provisions are discussed in more detail below.

First, Article 12.1 of the Mayhew Lake BESS PPA 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 commercial operation date (COD) by their respective target dates.¹³⁹ **[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.

Second, Article 14 includes provisions related to **[TRADE SECRET DATA HAS BEEN EXCISED]** A similar provision allows either party to terminate the PPA if an EFA preventing the Seller from achieving a CPD milestone or COD target continues for over 365 days.¹⁴⁰ An EFA can include the denial or withholding of necessary permits due to a presidential executive order or other federal action.

Finally, Article 20 includes a provision allowing the Seller to terminate the PPA if an SCTL occurs before COD.¹⁴¹ An SCTL is a decrease in ITCs and/or PTCs resulting in the Seller losing at least **[TRADE SECRET DATA HAS BEEN EXCISED]** in tax credit benefits. However, an independent auditor must verify that the SCTL has occurred, and that the **[TRADE SECRET DATA HAS BEEN EXCISED]** threshold has been reached.

The Mayhew Lake BESS PPA includes various provisions protecting ratepayers from financial risk, detailed below.

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 liquidated delay damages, actual damages, and liquidated damages for failure to achieve COD.¹⁴²

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

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

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

¹³⁹ Petition at Attachment M at 44.

¹⁴⁰ *Id.*, at 53-54.

¹⁴¹ *Id.*, at 70.

¹⁴² *Id.*, at 36.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

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

J.8.3. 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]**

Article 8 includes provisions that address operational risk related to variation in storage capacity availability and efficiency by adjusting capacity payments. First, the CAF, found in Article 8.1, adjusts payments such that Xcel only pays for the storage capacity that is actually available for dispatch in a given period.¹⁴³ 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.¹⁴⁴

Second, capacity payments are reduced in the event that the storage system's round-trip efficiency is lower than the guaranteed level. In this case the Seller must comply with the following:

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.¹⁴⁵

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.¹⁴⁶ 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

¹⁴³ *Id.*, at 27.

¹⁴⁴ Petition at 60.

¹⁴⁵ *Ibid.*

¹⁴⁶ *Id.*, at 29.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

Company may pass through those charges to the Seller by reducing the next monthly payment.¹⁴⁷

The Mayhew Lake BESS PPA also has an Excess Throughput provision found in Article 8.4.¹⁴⁸ In this case if the Seller:

is entitled to an additional payment for each megawatt-hour (MWh) of excess energy delivered. This structure provides an incentive for the Seller to make the system available beyond its planned throughput, while also protecting the facility from overuse that could degrade the asset.¹⁴⁹

Specifically, Article 8.4 **[TRADE SECRET DATA HAS BEEN EXCISED]** These measures allow for flexibility in how the Company uses the Mayhew Lake 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]**

J.8.4. 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 Mayhew Lake BESS is not subject to curtailment in the same way other facilities being examined in this docket are, as the Mayhew Lake BESS responds directly to dispatch as a storage peaking resource that does not generate its own electricity. If there is congestion on the grid preventing the use of the facility at any time, that power will not be lost and will be usable at some later time. As such the Department concludes that Xcel ratepayers would be reasonably protected from curtailment risks.

J.8.5. Conclusion Regarding PPA

After reviewing the Mayhew Lake BESS PPA, the Department concludes that the PPA sufficiently protects ratepayers from financial and operational risks. Therefore, the Department recommends that the Commission approve the Mayhew Lake BESS PPA.

¹⁴⁷ Petition at 61.

¹⁴⁸ Petition at Attachment M at 29.

¹⁴⁹ Petition at 60.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

J.9. Sherco Solar 4 Asset Purchase Agreement

J.9.1. Changes from Bid Price

There are no changes from the bid price for the Sherco Solar 4 Asset Purchase Agreement (APA). For changes to the pricing of the Sherco Solar 4 project as a whole, see the Department's review of Xcel's bidding process, at Section III.E.5.

J.9.2. Ratepayer Protections—Financial Risk

Regarding financial risks, given the early stages of the work being purchased, the relatively small amounts in question, and the APA reaching its end relatively soon, the Department concludes that Xcel's ratepayers are exposed to minimal financial risks via the APA. Note that **[TRADE SECRET DATA HAS BEEN EXCISED]** Therefore, this provision does not trigger substantial financial risk.

J.9.3. Ratepayer Protections—Operational Risk

In a transaction where land rights are purchased there are no operational risks inherent in the APA because the assets are transferred to Xcel prior to construction and operation of the project.

J.9.4. Curtailment Provisions

Since the APA does not involve operation of a generating unit it does not contain any curtailment related provisions.

J.9.5. Conclusion Regarding APA

The Department concludes that the Sherco Solar 4 APA adequately protects ratepayers from financial and operational risks. Therefore, the Department recommends that the Commission approve the Sherco Solar 4 APA.

K. COMMISSION NOTICE

K.1. Xcel's Requested Actions

The first issue listed in the Notice is should the Commission take several actions. Each is addressed separately.

K.1.1. Approve PPAs and Self-build Projects?

The first action is should the Commission approve the proposed PPAs and the acquisition and construction of the Company's self-build projects.

The Department recommends the Commission approve the following PPAs:

- Fillmore Solar;
- Gopher State Solar;

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

- Lemon Hill Solar;
- Crowned Ridge BESS; and
- Mayhew Lake BESS.

Final recommendations regarding the Crane BESS and Grant Solar projects are pending further information in reply comments. The Department also recommends the Commission approve the acquisition and construction of the Company's Sherco 4 Solar, Blue Lake BESS, and Sherco South BESS self-build projects.

K.1.2. Approve Acquisition of Land Rights?

The second action is should the Commission approve the Company's acquisition of land rights for the Sherco Solar 4 project.

Based upon the analysis of the results of the RFP and review of the APA the Department recommends that the Commission find that the proposed acquisition of the land rights for Sherco Solar 4 is consistent with the public interest and approve the Company's acquisition of the land rights.

K.1.3. Approve the Variance?

The third action is should the Commission approve the Company's request for a variance of the requirements of Minn. R. 7825.1800, subp. B.

As discussion above, the Department agrees with Xcel's analysis and recommends that the Commission approve the requested variance to the requirements of Minn. R. 7825.1800, subp. B.

K.1.4. Approve RES Rider Recovery?

The fourth action is should the Commission approve the Company's proposed approach of recovery for these project costs for the Minnesota jurisdiction through the RES Rider.

The Department recommends that the Commission approve the Company's proposed approach of recovery for these project costs for the Minnesota jurisdiction through the RES Rider for the following projects:

- Sherco South BESS; and
- Sherco Solar 4.

The Department requests that Xcel provide additional discussion about the applicability of recovery through the RES rider for Blue Lake BESS in reply comments.

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

K.1.5. Approve Fuel Clause Rider Recovery?

The fifth action is should the Commission authorize the Company to recover the Minnesota jurisdictional portion of the costs incurred under the PPAs from Minnesota retail customers through the Fuel Clause Rider.

The Department recommends the Commission authorize the Company to recover the Minnesota jurisdictional portion of the costs incurred under the following PPAs from Minnesota retail customers through the Fuel Clause Rider:

- Fillmore Solar;
- Gopher State Solar;
- Lemon Hill Solar;
- Crowned Ridge BESS; and
- Mayhew Lake BESS.

Final recommendations regarding the Crane BESS and Grant Solar projects are pending further information in reply comments.

K.1. Other Issues

The second issue in the Notice asks if there other issues or concerns related to this matter.

The Department has no other issues or concerns related to this matter.

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.

G. TAX MATTERS

- The Department recommends Xcel explain the change in reply comments, including a calculation of the estimated value of both PTCs and ITCs for the Sherco Solar 4 project.

H. OTHER MATTERS

- H.2. The Department recommends that the Commission find that the proposed acquisition of the land rights for Sherco Solar 4 is consistent with the public interest.
- H.3. The Department agrees with Xcel's analysis and recommends that the Commission approve the requested variance.

I. XCEL'S SELF-BUILD PROJECTS

Analysts assigned: Michael Zajicek, Taryn Waite, Sachin Shah,
Donald Hirasuna, Diane Dietz, Steve Rakow

I.2.1. The Department recommends that the Commission determine the Sherco Solar 4 qualifies for recovery via Xcel's RES Rider.

- I.2.1. The Department recommends that the Commission determine the Sherco Solar 4 qualifies for recovery via Xcel's RES Rider.
- I.2.2. The Department requests that Xcel discuss in reply comments how specific, locational aspects of Blue Lake BESS apply to statutory criteria for recovery under the RES rider, or else why these criteria apply to BESS systems broadly, regardless of location.
- I.2.3. The Department recommends that the Commission determine the Sherco South BESS qualifies for recovery via Xcel's RES Rider.
- I.3.1. the Department recommends the Commission set Xcel's base cost recovery at the capital cost bid. The base cost recovery amounts are:
 - **[TRADE SECRET DATA HAS BEEN EXCISED]**
- I.4. The Department recommends the Commission take no action regarding the request to propose changes to the jurisdictional allocation approach in a future RES Rider filing for resources Xcel is not able to obtain approval of in another jurisdiction. This is because the Company already has the ability to propose changes to jurisdictional allocations in RES Rider filings.

J. PPA REVIEW

- J.2.5. The Department recommends that the Commission approve the Fillmore PPA.
- J.3.7. **[TRADE SECRET DATA HAS BEEN EXCISED]**
- J.4.5. The Department recommends that the Commission approve the Gopher State PPA.
- J.5.5. The Department recommends that the Commission approve the Lemon Hill PPA.
- J.6.5. The Department recommends that the Commission approve the Crowned Ridge PPA.
- J.7.2. **[TRADE SECRET DATA HAS BEEN EXCISED]**
- J.8.5. The Department recommends that the Commission approve the Mayhew Lake BESS PPA.
- J.9.5. The Department recommends that the Commission approve the Sherco Solar 4 APA.

Attachments

Attachments

- Not-Public Document – Not For Public Disclosure
 Public Document – Not-Public Data Has Been Excised
 Public Document

Xcel Energy Information Request No. 8
Docket No.: E002/M-24-230
Response To: Minnesota Department of Commerce
Requestor: Steve Rakow
Date Received: November 4, 2025

Question:

Please provide any changes in costs between each project as bid and each project's power purchase agreement:

- a) Fillmore Solar;
- b) Grant Solar;
- c) Gopher State Solar;
- d) Lemon Hill Solar;
- e) Crowned Ridge BESS;
- f) Crane BESS; and
- g) Mayhew Lake BESS.

Please specify the changes by cost category (such as energy payment, capacity payment, curtailment payment, etc).

Response:

Please see Attachment A to this response for changes to the energy payment rates and capacity payment rates for each project as bid compared to the final power purchase agreement. There are no specific 'curtailment payment' rates requested as part of the bid documentation, nor is there a specific rate stated in the final power purchase agreement. The amount a seller is paid for curtailed energy agreed to under the final power purchase agreements would equal the energy payment rates and include an amount to make seller whole for their lost production tax benefits.

Attachment A is marked "Not-Public" as it contains information the Company considers to be trade secret data as defined by Minn. Stat. §13.37(1)(b). This data includes competitive bid and pricing detail for purchased power. This information has independent economic value from not being generally known to, and not being readily ascertainable by, other parties who could obtain economic value from its disclosure or use.

Attachment A is marked “Not-Public” in its entirety. Pursuant to Minn. R. 7829.0500, subp. 3, the Company provides the following description of the excised material:

1. **Nature of the Material:** Microsoft Excel spreadsheet file containing competitive bid data and pricing for all projects with Power Purchase Agreements submitted for consideration in this petition.
2. **Authors:** The Company’s Purchased Power team.
3. **Importance:** This document includes confidential pricing and other contract terms and has independent economic value from not being generally known to or ascertainable by other parties who could obtain economic value from its disclosure or use.
4. **Date the Information was Prepared:** November 5, 2025

Preparer: Lex Crane
Title: Purchase Power Consultant
Department: Purchased Power
E-mail: lex.t.crane@xcelenergy.com
Date: November 13, 2025

Northern States Power Company

Docket No. E002/M-24-230
DOC Information Request No. 8
Attachment A

Attachment A provided with the Not-Public version of this response is marked “Not-Public” as it contains information the Company considers to be trade secret data as defined by Minn. Stat. §13.37(1)(b). This data includes competitive bid and pricing detail for purchased power. This information has independent economic value from not being generally known to, and not being readily ascertainable by, other parties who could obtain economic value from its disclosure or use.

Attachment A is marked “Not-Public” in its entirety. Pursuant to Minn. R. 7829.0500, subp. 3, the Company provides the following description of the excised material:

1. **Nature of the Material:** Microsoft Excel spreadsheet file containing competitive bid data and pricing for all projects with Power Purchase Agreements submitted for consideration in this petition.
2. **Authors:** The Company’s Purchased Power team.
3. **Importance:** This document includes confidential pricing and other contract terms and has independent economic value from not being generally known to or ascertainable by other parties who could obtain economic value from its disclosure or use.
4. **Date the Information was Prepared:** November 5, 2025

[PROTECTED DATA BEGINS

PROTECTED DATA ENDS]

- Not-Public Document – Not For Public Disclosure
 Public Document – Not-Public Data Has Been Excised
 Public Document

Xcel Energy Information Request No. 9
Docket No.: E002/M-24-230
Response To: Minnesota Department of Commerce
Requestor: Steve Rakow
Date Received: November 7, 2025

Question:

Please provide

- a. an updated Figure 18 of the Petition or an explanation of how to read the existing Figure 18;
- b. all data documenting the line (Carbon Free Standard);
- c. all data documenting the bottom column (Total MN Carbon Free Generation); and
- d. all data documenting the top column (EACs Available for Compliance).

Response:

- a. Please see Attachment A for an updated chart. The updated Figure 18 represents the anticipated forecast of Environmental Attribute Credits (EACs) through 2040. EACs represent the amount of renewable generation plus nuclear generation, which is carbon free generation, that the Company plans to generate. Including the production from the future Sherco Solar 4, the chart shows the amount of carbon-free generation forecasted to produce each year (light color bottom bar), along with how many banked, or carried forward, EACs are available each year (dark color top bar). The Carbon Free Standard (CFS) statute requires the Company's generation to be 80% carbon free by 2030, 90% by 2035, and 100% by 2040. As shown by the gold-colored line in Figure 18, we believe we will be able to satisfy CFS compliance requirements through 2037 with current and planned resources being utilized, assuming a four-year shelf life of EACs.
- b. See Attachment A: Line number 11.
- c. See Attachment A: Line number 32.
- d. See Attachment A: Line number 43.

Attachments A is marked “Not-Public” in its entirety. Pursuant to Minn. R. 7829.0500, subp. 3, the Company provides the following description of the excised material:

1. **Nature of the Material:** Microsoft Excel spreadsheet file containing confidential sales and generation forecasts.
2. **Authors:** Sarah Frazee
3. **Importance:** This document includes confidential pricing, and other contract terms and has independent economic value from not being generally known to or ascertainable by other parties who could obtain economic value from its disclosure or use.
4. **Date the Information was Prepared:** November 11, 2025

Preparer: Sarah Frazee
Title: Renewable Portfolio Consultant
Department: Environmental Services
Date: November 17, 2025

**PUBLIC DOCUMENT
NOT-PUBLIC DATA HAS BEEN EXCISED**

Attachments A is marked “Not-Public” in its entirety. Pursuant to Minn. R. 7829.0500, subp. 3, the Company provides the following description of the excised material:

1. **Nature of the Material:** Microsoft Excel spreadsheet file containing confidential sales and generation forecasts.
2. **Authors:** Sarah Frazee
3. **Importance:** This document includes confidential pricing, and other contract terms and has independent economic value from not being generally known to or ascertainable by other parties who could obtain economic value from its disclosure or use.
4. **Date the Information was Prepared:** November 11, 2025

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/M-24-230

Dated this 5th day of **December 2025**

/s/Sharon Ferguson

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
1	Sasha	Bergman	sasha.bergman@state.mn.us		Public Utilities Commission	121 7th Pl E Ste 350 St. Paul MN, 55101 United States	Electronic Service		No	24-230M-24-230
2	Matthew	Brodin	mbrodin@allete.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	24-230M-24-230
3	Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron		60 S 6th St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	24-230M-24-230
4	Mike	Bull	mike.bull@state.mn.us		Public Utilities Commission	121 7th Place East, Suite 350 St. Paul MN, 55101 United States	Electronic Service		Yes	24-230M-24-230
5	Jordan	Clitty	jordan.r.clitty@xcelenergy.com	Northern States Power Company dba Xcel Energy-Elec		414 Nicollet Mall Minneapolis MN, 55401 United States	Electronic Service		No	24-230M-24-230
6	John	Coffman	john@johncoffman.net	AARP		871 Tuxedo Blvd. St, Louis MO, 63119-2044 United States	Electronic Service		No	24-230M-24-230
7	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		Yes	24-230M-24-230
8	George	Crocker	gwillc@nawo.org	North American Water Office		5093 Keats Avenue Lake Elmo MN, 55042 United States	Electronic Service		No	24-230M-24-230
9	Christopher	Droske	christopher.droske@minneapolismn.gov	Northern States Power Company dba Xcel Energy-Elec		661 5th Ave N Minneapolis MN, 55405 United States	Electronic Service		No	24-230M-24-230
10	John	Farrell	jfarrell@ilsr.org	Institute for Local Self-Reliance		2720 E. 22nd St Institute for Local Self-Reliance Minneapolis MN, 55406 United States	Electronic Service		No	24-230M-24-230
11	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	24-230M-24-230
12	Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association		4300 220th St W Farmington MN, 55024 United States	Electronic Service		No	24-230M-24-230
13	Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.		445 Etna Street Ste. 61 St. Paul MN,	Electronic Service		No	24-230M-24-230

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						55106 United States				
14	Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law		2950 Yellowtail Ave. Marathon FL, 33050 United States	Electronic Service		No	24-230M-24-230
15	Richard	Johnson	rick.johnson@lawmoss.com	Moss & Barnett		150 S. 5th Street Suite 1200 Minneapolis MN, 55402 United States	Electronic Service		No	24-230M-24-230
16	Sarah	Johnson Phillips	sPhillips@stoel.com	Stoel Rives LLP		33 South Sixth Street Suite 4200 Minneapolis MN, 55402 United States	Electronic Service		No	24-230M-24-230
17	Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.		8300 Norman Center Drive Suite 1000 Bloomington MN, 55437 United States	Electronic Service		No	24-230M-24-230
18	Alicia	LaValla	alavalla@fredlaw.com	Fredrikson & Byron, P.A.		60 South Sixth St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	24-230M-24-230
19	Kavita	Maini	kmains@wi.rr.com	KM Energy Consulting, LLC		961 N Lost Woods Rd Oconomowoc WI, 53066 United States	Electronic Service		No	24-230M-24-230
20	Christine	Marquis	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall MN1180-07-MCA Minneapolis MN, 55401 United States	Electronic Service		Yes	24-230M-24-230
21	Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis		350 S. 5th Street Room M 301 Minneapolis MN, 55415 United States	Electronic Service		No	24-230M-24-230
22	David	Moeller	dmoeller@allete.com	Minnesota Power			Electronic Service		No	24-230M-24-230
23	Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP		33 South Sixth St Ste 4200 Minneapolis MN, 55402 United States	Electronic Service		No	24-230M-24-230
24	David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency		220 South Sixth Street Suite 1300 Minneapolis MN, 55402 United States	Electronic Service		No	24-230M-24-230
25	Carol A.	Overland	overland@legalelectric.org	Legalelectric - Overland Law Office		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	24-230M-24-230
26	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General -	1400 BRM Tower 445	Electronic Service		Yes	24-230M-24-230

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
					Residential Utilities Division	Minnesota St St. Paul MN, 55101-2131 United States				
27	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	24-230M-24-230
28	Bria	Shea	bria.e.shea@xcelenergy.com	Xcel Energy		414 Nicollet Mall Minneapolis MN, 55401 United States	Electronic Service		No	24-230M-24-230
29	Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.		76 W Kellogg Blvd St. Paul MN, 55102 United States	Electronic Service		No	24-230M-24-230
30	Byron E.	Starns	byron.starns@stinson.com	STINSON LLP		50 S 6th St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	24-230M-24-230
31	Lauren	Steinhaeuser	lauren.steinhaeuser@xcelenergy.com	Northern States Power Company dba Xcel Energy		414 Nicollet Mall, 401-08 Minneapolis MN, 55401 United States	Electronic Service		No	24-230M-24-230
32	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	24-230M-24-230
33	Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine		225 South Sixth Street, Suite 3500 Minneapolis MN, 55402 United States	Electronic Service		No	24-230M-24-230
34	Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW		2909 Anthony Ln St Anthony Village MN, 55418-3238 United States	Electronic Service		No	24-230M-24-230
35	Patrick	Zomer	pat.zomer@lawmoss.com	Moss & Barnett PA		150 S 5th St #1200 Minneapolis MN, 55402 United States	Electronic Service		No	24-230M-24-230