MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date	January 21, 2026	**Agenda Item **4**
Company	Northern States Power Company, d/b/a Xcel Energy (Xcel or the Company)	
Docket No.	E002/CN-23-212 E002/RP-24-67	

In the Matter of Northern States Power Company, d/b/a Xcel Energy's, Petition for Approval of PPAs for Firm Dispatchable Resources

In the Matter of Northern States Power Company, d/b/a Xcel Energy's, 2024-2040 Integrated Resource Plan

Issues

Should the Commission approve the Invenergy Cannon Falls, Onward Mankato Energy Center (MEC) 1, Onward MEC Battery Energy Storage System (BESS), and DESRI North Star Energy Power Purchase Agreements (PPAs)?

Should the Commission authorize Xcel to recover the Minnesota jurisdictional portion of the costs incurred under the agreements from Minnesota retail customers through the Fuel Clause Rider?

Should the Commission condition approval of the North Star and MEC BESS agreements on a requirement that Xcel demonstrate New Trade Measure Event costs are just and reasonable for ratepayers?

Should the Commission determine that Xcel's shareholders may be required to bear future costs necessary to offset carbon emissions from the Cannon Falls Energy Center from 2040-2048?

Should the Commission require Xcel to resume negotiations in good faith with Invenergy for the Lake Wilson Solar Energy Center?

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✓ **Relevant Documents**	**Date**
Commission Order Approving Settlement	April 21, 2025
Xcel, Petition (Public only)	September 29, 2025
Xcel, Revised Petition (Non-Public only)	October 27, 2025
Xcel, Second Revised Petition (Public and Non-Public)	October 29, 2025
Xcel, Update on Lake Wilson and Plum Creek Replacement	October 31, 2025
Office of the Attorney General, Comments (Public)	October 31, 2025
Department, Comments (Public and Non-Public)	November 3, 2025
Invenergy, Request for Action	November 10, 2025
Xcel, Reply Comments (Public and Non-Public)	November 12, 2025
Murray County, Comments	November 18, 2025
Department, Supplemental Comments	November 19, 2025
Office of the Attorney General, Supplemental Comments (Public)	November 19, 2025
LIUNA, Comments	November 20, 2025
Department, Comments	November 24, 2025
Invenergy, Comments	November 24, 2025
Clean Energy Organizations, Comments	November 24, 2025
Xcel Energy, Comments (Public and Non-Public)	November 24, 2025
Xcel Energy, Supplemented Responses to DOC IRs Nos. 8 and 9 (Public and Non-Public)	December 15, 2025

STATEMENT OF THE ISSUES

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Should the Commission condition approval of the North Star and MEC BESS agreements on a requirement that Xcel demonstrate New Trade Measure Event costs are just and reasonable for ratepayers?

Should the Commission determine that Xcel's shareholders may be required to bear future costs necessary to offset carbon emissions from the Cannon Falls PPA from 2040-2048?

Should the Commission require Xcel to resume negotiations in good faith with Invenergy for the Lake Wilson Solar Energy Center?

PROCEDURAL BACKGROUND

The instant proceeding, referred to herein as the "Firm Dispatchable Docket," originated from the Commission's April 15, 2022, Order in Xcel's 2019 Integrated Resource Plan (IRP),[1] which required Xcel to acquire up to 800 megawatts (MW) of firm dispatchable resources using the Track 2, Contested Case competitive resource acquisition process. Bids were filed in January 2024 and, once determined complete, referred to the Office of Administrative Hearings (OAH). In October 2024, Xcel and several parties reached a Settlement Agreement, resolving issues across both the Firm Dispatchable Docket and Xcel's subsequent IRP, Xcel's 2024 IRP,[2] which was also ongoing. The Commission's April 21, 2025, *Order Approving Settlement Agreement with Modifications* (IRP/Firm Dispatchable Order) selected the following combination of Xcel self-builds and PPAs, with the PPAs to enter the negotiation phase:

[1] Docket No. E002/RP-19-368.

[2] Docket No. E002/RP-24-67.

Table 1. Selected Bids in the Settlement Agreement

Developer	Bid	Project Type	Size	Location
Xcel	Lyon County CT	Natural gas CT	420 MW	Lyon County, MN
Xcel	Sherco BESS	4-hour battery	300 MW	Sherburne County, MN
DESRI	North Star Solar BESS	4-hour battery	50-80 MW	Chisago County, MN
Invenergy	Lake Wilson Solar	Solar + storage	150 MW solar + 95 MW storage	Murray County, MN
Invenergy	Cannon Falls Thermal Energy Center	Natural gas CT	357 MW	Cannon Falls, MN
NG Renewables	Plum Creek Wind + Storage	Wind + storage	230 MW wind + 150 MW storage	Redwood, Murray, and Cottonwood Counties, MN
Onward	Mankato Energy Center I with BESS black start	Natural Gas CC BESS	375 MW CC + 11 MW storage	Mankato, MN

On April 25, 2025, National Grid Renewables (NG Renewables) filed a letter withdrawing its Plum Creek Wind + Storage project.

On September 26, 2025, Xcel filed an initial petition requesting Commission approval of four PPAs:

- **Invenergy – Cannon Falls**: an existing gas-fired facility consisting of two simple cycle combustion turbines, totaling 357 MW located in Cannon Falls, Minnesota.

- **Onward – Mankato Energy Center (MEC)**:
  - an existing, 375 MW gas-fired combined cycle facility, and
  - a separate, 12 MW / 48 MWh battery energy storage system (BESS).

- **DESRI – North Star Energy**: a new, 100 MW surplus BESS sited at the existing North Star Solar facility located in Chisago County, Minnesota.

Of note, on May 9, 2025, Xcel filed a petition for a Certificate of Need (CON) for the Lyon County Generating Station in Docket No. E002/CN-25-145.

Importantly, the petition indicated that negotiations with Invenergy for the Lake Wilson Solar and Storage project were still ongoing; however, on October 31, 2025, Xcel notified the Commission that the Company has been unable to resolve the heightened supply chain, cost, and other risks associated with the bid and will therefore end negotiations with Invenergy.

On November 10, 2025, Invenergy filed a response requesting the Commission require Xcel to resume negotiations for Lake Wilson. Invenergy's request is also on the Commission's January 21, 2026, agenda meeting, and party comments and decision options are included in these briefing papers.

SUMMARY

I. Summary of Filings

Staff notes that Docket No. 24-195 is a separate docket involving this matter, which was opened during the contested case process for Xcel and parties to file "Highly Sensitive Trade Secret Information" (HSTS Information). HSTS Information includes Critical Energy Infrastructure Information (CEII) and confidential negotiation details, pricing, and other contractual terms. Because these briefing papers include public information only, Staff will not discuss information filed in the HSTS Information docket. Staff refers the Commission to Docket No. 24-195 for portions of Xcel's Petition and parties' comments that contain HSTS Information.

Also, as noted above, Xcel's original petition was filed on September 26, 2025. However, Xcel later filed a Revised Petition on October 27, 2025 and Second Revised Petition on October 29, 2025. These briefing papers rely on information filed in Xcel's October 29, 2025, Second Revised Petition (referred to herein as "the Petition").

II. Summary of the Petition

The Petition requests that the Commission approve four PPAs totaling 844 MW in firm dispatchable capacity. Table 2 provides details of the projects. Of note, the MEC 1 and MEC BESS agreements are designed to expire simultaneously with the existing MEC 2 PPA on May 31, 2039. Additionally, the North Star project was originally proposed as an 80 MW facility, but the final negotiated agreement increased the project size to 100 MW.[3]

Table 2. Project Details – Final PPA Portfolio

Name	Type	Nameplate Capacity	Developer	Location	COD	Contract Terms
Cannon Falls	NG Simple Cycle CTs	357 MW	Invenergy	Cannon Falls, MN	June 2028	20 years
MEC 1	NG Combined Cycle	375 MW	Onward	Mankato, MN	September 2028	10 years, 9 months
MEC 1 BESS	BESS	12 MW / 48 MWh	Onward	Mankato, MN	September 1, 2028	10 years, 9 months
North Star BESS	BESS	100 MW / 400 MWh	DESRI	Chisago County, MN	May 30, 2027	15 years

The Petition describes a "challenging landscape" characterized by overlapping industry

[3] While DESRI had already obtained 80 MW of surplus interconnection capacity for the battery, the expansion to 100 MW requires them to apply for an additional 20 MW of surplus interconnection service with MISO. The additional 20 MW of capacity is conditioned on successfully obtaining the amendment for the full 100 MW of surplus interconnection

pressures and "unprecedented uncertainty," which impacted PPAs negotiations following the Commission's IRP/Firm Dispatchable Order and resulted in costs being higher than originally bid.

For example, Xcel pointed to "critical shortages" of essential components, such as transformers and inverters, longer lead times for gas turbines, and component costs increasing by as much as 250%. Moreover, federal trade policies have created uncertainty regarding the price of steel, aluminum, and solar components. Additionally, due in large part to data centers and electrification, electricity demand is growing at a faster rate than it has in three decades, thus creating grid and reliability risks.

Six main challenges Xcel discussed are:

- Supply chain disruptions and equipment availability
- Generation capacity lagging behind demand growth
- Rising labor costs and workforce constraints
- Impact of elevated interest rates on project financing
- Evolving trade policies
- Modifications to renewable energy tax credit provisions

While the costs of the projects have increased, Xcel claims that its EnCompass modeling demonstrates that the portfolio remains cost-effective and is aligned with the public interest. Specifically, updated modeling shows that, over the 2024–2050 timeframe, the portfolio (excluding Lake Wilson) results in:

- a net benefit of $103 million on a Present Value Revenue Requirement (PVRR) basis, and
- a net cost of $33 million on a Present Value Societal Cost (PVSC) basis compared to the updated base case.[4]

One of the main issues in this proceeding involves how the PPAs comply with Order Point 19 of the Commission's IRP/Firm Dispatchable Order, which established four evaluation criteria:

> 19. The evaluation of these non-utility bidders' projects PPAs as contemplated in the Settlement Agreement will include, but not be limited to, whether:
>   a. the prices and terms put ratepayers at risk for costs that are higher than bid or for benefits assumed in bids that do not materialize;
>   b. the agreement had terms which sufficiently protected ratepayers from risks associated with the non-deliverability of accredited capacity and/or energy from the project(s) as proposed;

[4] **PVSC**, or Present Value Societal Costs, is the net present value cost of a utility's revenue requirement for a particular resource addition or portfolio when environmental externality and regulatory cost of carbon values <u>are incorporated</u> into a production cost run. **PVRR**, or Present Value Revenue Requirements, is the net present value cost of a utility's revenue requirement for a particular resource addition or portfolio <u>without consideration of carbon and environmental externality values</u> over a modeling period in a production cost run.

c. the terms of any agreement that inappropriately shifted risk or unknown costs to ratepayers; and
d. the reasonableness of delay and cancellation provisions.

According to Xcel, all of the PPAs meet the Commission's evaluation criteria. Overall, Xcel argued that the PPAs:

- provide needed capacity and energy;
- reasonably address and allocate project risk;
- include performance standards and milestone requirements to ensure customers pay only for delivered and contracted capacity and energy;
- protect customers from cost escalations, underperformance, and regulatory uncertainty; and
- support long-term planning goals.

Later in the briefing papers, Staff will discuss how specific aspects of each PPA complies with Order Points 19.a.-d.

One notable change from the original PPAs is the introduction of "relief mechanisms" Xcel granted new construction resources (North Star BESS and MEC BESS). These provisions intend to address ongoing regulatory uncertainty, evolving reliability standards, and macroeconomic disruptions. Xcel believes the relief mechanisms will "stabilize and promote the continued development of" the projects, and they are offered under the following circumstances:

- **Specified Change in Tax Law:** Allows the seller to exit the contract if a material change in tax law prevents the realization of tax credit benefits, following a negotiation period.
- **Extraordinary Federal Action:** Grants a day-for-day extension if a federal permit is withheld or denied, allowing parties to exit without penalty if the delay exceeds one year.
- **New Trade Measure Event:** Allows the seller to request a rate increase, capped at 20%, if a new or modified tariff is imposed on major components, subject to verification by an independent auditor.

Another issue Xcel raised is the potential impact to the Company's credit rating. Xcel noted that certain agreements for resources with dispatch rights and capacity-based payments may be viewed as imputed debt by credit rating agencies. If these debt-like obligations are added to reported debt, key financial metrics worsen, potentially leading to lower credit ratings and increased borrowing costs. Xcel estimated that imputed debt is about $1.3 billion, and Xcel plans to mitigate this material negative credit quality impact by proposing an increase in its equity ratio in its next electric rate case filing. Some parties argued this issue is outside the scope of this proceeding.

Finally, as mentioned above, Xcel decided to end negotiations with Invenergy and will explore a replacement project. On November 10, 2025, Invenergy filed a Response and Request for Action, asking the Commission to require Xcel to resume negotiations for the Lake Wilson project. Because Xcel's request for approval of the four PPAs and Invenergy's Request for Action require two separate Commission decisions, these briefing papers are separated into two parts: Part 1 – PPA Approval and Part 2 – Invenergy's Request.

III. Summary of Party Positions – PPA Approval

A. Department of Commerce

The Department of Commerce (Department) recommends that the Commission approve the four PPAs and authorize Xcel to recover the Minnesota jurisdictional portion of the costs incurred under the PPAs from Minnesota retail customers through the FCR. The Department also recommended the Commission take no action regarding imputed debt at this time.

The Department's analysis reviewed Xcel's EnCompass modeling, which the Department found to be reasonable estimates of the costs. Second, the Department evaluated ratepayer risks associated with the PPAs based on the criteria established in Order Point 19 of the Commission's IRP/Firm Dispatchable Order.

B. OAG

The Office of the Attorney General—Residential Utilities Division (OAG) ultimately recommended two Commission actions following Xcel's Reply Comments, which resolved some of the OAG's concerns. The two remaining issues are:

1. **New Trade Measure Event:** Condition approval of the North Star Energy BESS and MEC BESS PPAs on a requirement that before Xcel can recover increased costs from ratepayers due a New Trade Measure Event, Xcel must make a filing showing that the increased costs are just and reasonable for ratepayers to bear.

2. **Renewable Energy Credits:** Make clear that Xcel's shareholders may be required to bear future costs necessary to procure renewable energy credits or construct additional renewable energy assets to offset carbon emissions from the Cannon Falls PPA from 2040-2048.

The issues that were resolved involve: 1) Right of First Offer (ROFO) provisions in the PPAs, and 2) imputed debt.

Regarding the ROFO provisions, the OAG argued that this primarily benefits Xcel rather than ratepayers, and if Xcel exercises these rights, Xcel could purchase the facilities and place them into its rate base, enabling the Company to earn a return on the purchase cost. In Reply Comments, Xcel assured the OAG that "exercise of purchase options as a result of these provisions will be subject to Commission approval, consistent with Minn. Stat. § 216B.50."[5]

[5] Xcel reply comments, p. 8.

Regarding imputed debt, the OAG argued that Xcel's claims were insufficiently supported and that the current proceeding was an inappropriate forum to address changes to the Company's capital structure. Xcel agreed the issue would be addressed in a general rate case.

C. LIUNA Reply Comments

LIUNA supports the PPAs, arguing they are necessary for maintaining reliable and affordable service. LIUNA commented that the ROFO provisions ensure ratepayers can potentially benefit from regulated ownership, and Xcel has exercised ROFO in the past when the Commission determined acquisitions were in the public interest. Finally, LIUNA agreed with Xcel that the PPAs are consistent with the Company's carbon-free obligations.

D. Xcel Response to Parties

While Xcel's responses are briefly stated above, Table 3 summarizes the areas of agreement and disagreement between Xcel, the Department, and the OAG, who were the only parties that filed Initial Comments on PPA approval.

Table 3. Xcel Response to Parties

Party	Topic	Recommendation	Xcel Response
Department	Approval	Approve the PPAs and authorize Xcel to recover the Minnesota portion of costs through the FCR	Agrees
Department	Modeling	EnCompass modeling is reasonable	Agrees
Department / OAG	Imputed Debt	Take no action on imputed debt or capital structure in this proceeding	Agrees
OAG	New Trade Measure Event	The New Trade Measure Event inappropriately makes ratepayers the sole bearers of geopolitical risk.	The 20% adjustment is not automatic, is a clear cap, and avoids delays from a second Commission review. An independent auditor will ensure costs are just and reasonable.
OAG	CFS Compliance	Shareholders, not ratepayers, should bear the costs associated with additional REC purchases post-2040.	Xcel will meet the CFS through 2048 even with the Cannon Falls PPA.
OAG	ROFO	ROFO provisions primarily benefit Xcel, and the Commission should clarify that exercising ROFO remains subject to Commission review.	ROFO provisions ensure long-term project success and prioritize future customer ownership. Xcel agrees that, if exercised, any purchase will be subject to Commission approval.

IV. Summary of Party Positions – Invenergy Request to Resume Negotiations

A. Invenergy

Invenergy recommends the Commission order Xcel to resume negotiations in good faith on an expedited basis for the Lake Wilson Solar Energy Center, a 150 MW solar and 95 MW battery storage project. Invenergy argues that Lake Wilson is a mature, new-build resource that has reached an advanced stage of development, including secured site control, a Site Permit, and a CON. Invenergy contends that the project is essential because it is the only remaining renewable-plus-storage project selected in the Settlement Agreement that can meet Xcel's firm dispatchable needs.

Invenergy emphasizes an urgency for action to capture expiring federal tax credits and avoid cascading risks, such as the loss of their preferred construction contractor and the potential termination of their Generator Interconnection Agreement (GIA).

B. Xcel's Response to Invenergy

Xcel opposes Invenergy's request, stating that the process is exhausted after more than a year of negotiations. Xcel provided the following reasons for ending negotiations:

- Lake Wilson's costs are significantly higher than other solar projects bid into the Company's 2024 Solar Request for Proposals (RFP).[6]
- Invenergy has not secured their major equipment or demonstrated any reasonable efforts to mitigate supply chain or tariff risks.
- Invenergy conditioned its bid on the right to potentially recover additional interconnection costs from customers in the future, beyond those reflected in their bid, despite having an executed GIA with known study results.
- Xcel's reliability analysis indicates that the solar component would exacerbate congestion in an already oversaturated area – with expected solar curtailment reaching significant levels – and the battery component is too small to mitigate these impacts. Xcel attempted to negotiate for only the battery portion, but Invenergy declined.

Ultimately, Xcel believes that forcing negotiations would be a misuse of customer resources.

C. Department

The Department concluded that there is insufficient information to decide if negotiations should resume, noting that neither Xcel nor Invenergy has provided objective evidence to quantify their competing claims regarding congestion impacts at the Nobles County Substation. The Department believes the following information is required to clarify the record:

- How the project's solar-to-storage ratio impacts congestion;
- The pricing and certainty of replacement projects Xcel may be considering; and
- Detailed modeling of expected curtailment and locational marginal prices (LMP).

[6] Docket No. 24-230.

D. CEOs

The Clean Energy Organizations (CEOs)[7] support further consideration of the project because it provides technological diversity to Xcel's system. The CEOs acknowledged market uncertainties but noted that Lake Wilson is uniquely positioned to utilize tax credits before they expire. The CEOs recommend the Commission order negotiations to continue while further developing the record. Specifically, the CEOs believe more information is needed on whether planned transmission upgrades will resolve local congestion and whether there are any other late-stage renewable hybrids available to fill the gap if Lake Wilson is abandoned.

E. Murray County

Murray County discussed the ongoing curtailment of energy production within their jurisdiction and its negative financial impact on local government. Murray County noted that existing facilities like the Fenton Wind Farm have suffered from curtailments due to transmission line inadequacies and economic dispatch drivers. This creates a significant fiscal issue because the county relies on production tax revenue, which is paid in lieu of property taxes. When energy generation is curtailed, these payments to local governments are reduced.

Murray County questioned Xcel's decision not to move forward with Lake Wilson, which is a project designed to mitigate local congestion at the Nobles County Substation. For example, a previous analysis from Xcel estimated that the battery component could reduce curtailments by 25%, yet Xcel appears to be prioritizing a different battery project at Sherco that will not address the transmission issues in southwest Minnesota.

V. Summary of Commission Decision Options

There are four main decision options pertaining to PPA approval. These include:

- Approving the PPAs;
- Authorizing cost recovery through the FCR; and
- Two recommendations from the OAG, pertaining to:
    - the New Trade Measure Event in the MEC BESS and North Star PPAs, and
    - purchasing carbon offsets associated with the Cannon Falls PPA.

For the Invenergy request, there are two main categories of decision options:

- Granting or denying Invenergy's request to resume negotiations for Lake Wilson; and
- Whether further record development is necessary on this issue.

PART 1: ISSUES DISCUSSION – PPA PORTFOLIO WITHOUT LAKE WILSON

In this section, Staff will discuss four major areas of the Petition and parties' comments on

[7] CEOs include Clean Grid Alliance, Fresh Energy, Minnesota Center for Environmental Advocacy, and Sierra Club.

these issues:

- Cost pressures and market and policy uncertainties that impacted the negotiations;
- Ratepayer risks established by the Commission's IRP/Firm Dispatchable Order;
- Xcel's EnCompass analysis and the Department's modeling review; and
- Authorization to recover costs through the FCR.

I. Cost Pressures and Market/Policy Uncertainty

Section II of the Petition describes cost pressures and uncertainties affecting the economics of both new and existing generation resources generally. These factors "contributed to adjustments in PPA pricing relative to original bids" since bids were submitted in January 2024. According to Xcel:

> Global supply chain disruptions, growing demand, labor market constraints, higher interest rates, evolving trade policies, and new tax regulations are collectively driving up the cost of project development and operations and have continued to fluctuate since bidders submitted their proposals in 2024. These factors in conjunction with global geopolitical uncertainty, have elevated project risk and contributed to adjustments in PPA pricing relative to original bids.[8]

Xcel elaborated on six main factors that led to adjustments in PPA pricing:

1. **Supply chain disruptions and equipment availability:** Long lead times and elevated prices for key components – such as transformers and inverters – are disrupting project schedules and driving up overall costs.

2. **Generation capacity lagging behind demand growth**: Electricity demand is rising faster than at any point in the past three decades, increasing competition for generation resources and driving up market prices.

3. **Rising labor costs and workforce constraints**: Labor shortages and rising demand for energy infrastructure development are driving up labor costs across the industry. Because a significant portion of battery installation work requires specific electrical expertise, labor constraints are also increasingly impacting battery installations. Overall, the availability, complexity, and cost of skilled labor is becoming a central factor in determining project feasibility, pricing, and execution timelines.

4. **Impact of elevated interest rates on project financing**: Higher interest rates translate into increased borrowing costs and a higher cost of capital.

5. **Evolving trade policies**: Federal trade policy has directly affected steel, aluminum, solar panels, lithium-ion batteries, and other critical materials used in energy infrastructure.

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[8] Xcel, Second Revised Petition, p. 6.

The timing of the tariff announcement presented some logistical challenges for project negotiations as well, since these policies are not only increasing the cost of developing and maintaining energy assets but also introducing significant uncertainty into procurement and development processes. As trade policy continues to evolve, developers face heightened exposure to price volatility, supply chain risk, and changes in regulation.

6. **Modifications to renewable energy tax credit provisions**: The passage of Public Law No. 119-21, also known as the One Big Beautiful Bill Act (OBBBA), on July 4, 2025, introduces a significant restructuring of federal tax incentives for renewable energy development. The legislation imposes a phasedown of key tax credits that have historically supported the viability of wind, solar, and energy storage projects. Under the OBBBA, wind and solar projects that do not begin construction by July 4, 2026, must be placed in service by December 31, 2027, to qualify for full tax credits. Narrowing eligibility windows have already begun to reshape market behavior, as projects currently in development must accelerate permitting, interconnection, and procurement activities to meet the statutory deadlines.

Attachment E of the Petition provides a comparison of the final pricing terms included in the MEC, Cannon Falls, and North Star PPAs to the pricing at the time of the Settlement Agreement. The details of the terms were designated as trade secret; however, Staff provides the public version of the tables below so that the Commission can see which PPA terms changed.

Table 4. Changes to Mankato Energy Center PPA

Price Term	Settlement	Final
Capacity Price	[PROTECTED DATA BEGINS	
Energy Tolling Price		
Turbine Start Payment		
Fired-Hours Payment		
Dispatchability Payment		
BESS		PROTECTED DATA ENDS]

Table 5. Changes to Cannon Falls PPA

Price Term	Settlement	Final
Capacity Price	[PROTECTED DATA BEGINS	
Energy Tolling Price		
Turbine Start Payment		
Fired-Hours Payment		
Dispatchability Payment		PROTECTED DATA ENDS]

Table 6. Changes to North Star BESS PPA

Price Term	Settlement	Final
Capacity Price	[PROTECTED DATA BEGINS	PROTECTED DATA ENDS]

II. Ratepayer Risks

As noted above, Order Point 19 of the IRP/Firm Dispatchable Order requires that the evaluation of these PPAs include, but not be limited to, whether:

a. the prices and terms put ratepayers at risk for costs that are higher than bid or for benefits assumed in bids that do not materialize;
b. the agreement had terms which sufficiently protected ratepayers from risks associated with the non-deliverability of accredited capacity and/or energy from the project(s) as proposed;
c. the terms of any agreement that inappropriately shifted risk or unknown costs to ratepayers; and
d. the reasonableness of delay and cancellation provisions.

This section will summarize Xcel's and the parties' discussion of how the PPAs meet the Commission's evaluation criteria. Staff notes again that many of the details of the PPAs, including price terms and descriptions of various provisions, were designated as HSTS Information.

The emphasis of Xcel's Petition is on general industry risks, which are summarized in the previous section, and the Petition often describes terms that apply to all PPAs. These provisions include performance guarantees and critical path milestones that were incorporated to insulate ratepayers from these industry risks.

A. Pricing and Cost Risk (Order Point 19.a)

1. Xcel

Xcel explained that the PPAs include fixed or formula-based pricing, with clearly defined escalation factors, and performance-based payment adjustments to ensure customers pay only for delivered capacity and energy. This structure is intended to provide long-term price certainty for customers and protection from unmaterialized benefits.

Moreover, updated modeling shows the portfolio provides a benefit of $153 million on a PVRR basis and a slight cost increase on a PVSC basis. According to Xcel, this demonstrates that the projects remain cost-effective and aligned with the public interest.

2. Department

The Department examined each PPA's compliance with Order Point 19. Regarding Order Point 19.a., the Department concluded:

- **MEC 1:** The increases to the capacity payment rate and additional charges are capped at reasonable levels, and the improved PPA terms protect customers from financial risks.

- **MEC BESS:** The PPA outlines scenarios that could result in higher fees, but the Department found these to be reasonable provisions. Xcel implemented steps to limit price increases due to contingencies like changes in tax law or increases in tariffs.

- **Cannon Falls:** PPA term improvements such as stronger performance standards and improved security requirements reduce risks associated with the PPA.

- **North Star:** The PPA protects ratepayers from risks of costs higher than bid. Capacity price increases due to New Trade Measure Events (e.g., new tariffs) are allowed, but capped at a reasonable level (20%).

3. OAG

The OAG's main cost-related concerns include: 1) a general increase in project prices; 2) the potential costs of purchasing RECs for CFS compliance; 3) ROFO provisions; and 4) Xcel's initially-proposed increase to its equity ratio. Xcel's Reply Comments resolved the OAG's ROFO and equity ratio concerns.

First, the OAG noted that, after negotiations, the PPAs have come back at higher prices than their original bids. The Cannon Falls PPA, for example, increased over 19% relative to the original bid.

Second, because Cannon Falls is a gas-fired power plant, and the proposed PPA runs until 2048, the OAG argued that Xcel may be forced to procure carbon-free offsets to comply with the CFS between 2040 and 2048. The OAG criticized Xcel for failing to model or analyze how these costs may impact the reasonableness of the PPA. The OAG argued that without a clear understanding of these future costs, Xcel has not demonstrated that the PPA is in the public interest.

Third, the ROFO provisions allow Xcel to potentially purchase the gas plants, which the OAG believes primarily benefits Xcel by allowing the Company to increase its rate base and earn a return on the assets. Initially, the OAG recommended that the Commission should "explicitly state in its order that final approval of any attempt to exercise the ROFOs will trigger the investigation required by statute." In Reply Comments, Xcel agreed that the ROFO provisions do not supplant the requirements of Minn. Stat. § 216B.50, which provide for Commission review of any such plant purchase of $1,000,000 or more.

Finally, Xcel suggested seeking an increased equity ratio in a future rate case due to the $1.3 billion in imputed debt from the PPAs. The OAG stressed that this docket is an inappropriate forum for determining or pre-authorizing any changes to Xcel's actual or ratemaking capital structure. Xcel agreed in Reply Comments that the Commission should take no action on the equity ratio in this proceeding.

4. LIUNA

LIUNA believes the ROFO provisions are prudent to ensure that ratepayers can benefit from regulated ownership of generation resources whenever the utility can negotiate terms that are in the public interest. LIUNA expects that ROFO options could continue to provide value to ratepayers, especially if electricity demand growth continues.

B. Deliverability Protection Risk (Order Point 19.b)

1. Xcel

According to Xcel, the PPAs incorporate robust performance guarantees and remedies for non-delivery of accredited capacity and energy.

For example, for all projects, if performance falls below contractual thresholds, the Company has the right to recover damages or eventually terminate the agreement and purchase the facility at fair market value in the event of seller default.

For new construction resources (MEC BESS and North Star BESS), the contracts include performance mechanisms like Capacity Availability Factor (CAF) adjustments and Round-Trip Efficiency (RTE) adjustments, which financially motivate the seller to maintain high reliability and efficiency.

There are also provisions absent from initial PPAs, such as Elevated System Condition (ESC) Adjustments and Availability Adjustment mechanisms, which were added to the Cannon Falls and MEC 1 PPAs. These maximize operational performance, especially when the system is under stress, and support the resource's ability to qualify for MISO's Available Maximum Emergency (AME) accreditation.

2. Department

For compliance with Order Point 19.b., the Department concluded that each PPA reasonably protects ratepayers from non-deliverability risks:

- **MEC:** The PPA contains provisions that protect ratepayers from the non-deliverability of both capacity and energy.
- **Cannon Falls:** The PPA includes strong performance standards that protect ratepayers from the non-deliverability of both capacity and energy. Xcel retains the right to terminate the agreement and recover damages or purchase the facility at fair market value in case of seller default.
- **North Star:** The PPA ensures performance and protection against non-deliverable capacity through adjustments applied if the BESS efficiency is lower than guaranteed.

C. Shifting Risk/Unknown Costs (Order Point 19.c)

1. Xcel

Xcel claims that the agreements fairly allocate risk between the Company and the seller by limiting the Company's cost exposure and clearly defining costs for ratepayers. For example, key risks, such as construction delays, underperformance, and certain changes in circumstance, are borne by the seller. For new resources, sellers are responsible for all costs associated with construction and permitting and must post security to guarantee performance.

2. Department

For compliance with Order Point 19.c., the Department concluded that each PPA reasonably protects ratepayers from unknown risks and cost shifting (the provisions are described in the HSTS Information docket):

- **MEC:** The PPA includes several terms designed to protect ratepayers from unknown risks.
- **MEC BESS:** Certain parts of the MEC BESS PPA could result in cost shifting to Xcel's customers, but Xcel has taken measures to minimize losses.
- **Cannon Falls:** The PPA includes various provisions designed to safeguard ratepayers against unknown risks.
- **North Star:** The PPA does not shift any significant risks or unknown costs to ratepayers and includes sufficient ratepayer protection provisions.

3. OAG

In Supplemental Comments, the OAG discussed two issues that could potentially shift costs to ratepayers: 1) potentially substantial cost increases due to geopolitical uncertainty and 2) renewable energy offsets that may be needed to comply with the CFS.

- **New Trade Measure Event:** The PPAs contain provisions allowing sellers to request a cost increase, capped at no more than 20%, if a new or modified import tariff is imposed on major project components. According to the OAG, this "inappropriately makes ratepayers the sole bearers of geopolitical risk."[9] The OAG strongly objects to Xcel's proposal to automatically pass these costs onto ratepayers without Commission review. While Xcel responded that an independent auditor would ensure these costs are "just and reasonable," the OAG contended that the auditor's role is strictly limited to verifying that a tariff was enacted and that the seller's calculation of the rate increase is correct; it is not within the role or authority for the auditor to assess the reasonableness

[9] OAG Initial Comments, p. 6.

of imposing those costs on ratepayers.

- **Costs of REC purchases:** The OAG also argued that purchasing gas-fired power from Invenergy until 2048 exposes ratepayers to risks of increased costs for renewable energy offsets well after 2040. Since the Cannon Falls PPA has a 20-year term, the contract will extend past the requirement in the CFS to be carbon-free by 2040. The OAG argued that Xcel failed to model or analyze any costs that might be necessary to comply with the CFS during the last eight years of the PPA. Thus, the Commission should make clear that Xcel's shareholders may be required to bear these costs.

D. Timeliness Provisions (Order Point 19.d)

1. Xcel

According to Xcel, the PPAs include clear, enforceable provisions for delay and cancellation that align with industry standards and protect customers. For example, if the seller fails to meet critical path milestones or the COD, liquidated damages are owed to the Company. Also, the North Star BESS agreement requires the seller to maintain a security fund that the Company can draw from to recover liquidated delay damages and termination damages, which creates an incentive for timely project delivery.

2. Department

For compliance with Order Point 19.d., the Department concluded that each PPA reasonably protects ratepayers from delay and cancellation risks:

- **MEC I and Cannon Falls:** Since both are existing facilities, risks related to construction delay or cancellation are minimal. The Department's review of seller default provisions for both projects did not reveal any notable risks.

- **MEC BESS:** The PPA takes measures to secure customers from the risk of delay (the provisions are described in the HSTS Information docket).

- **North Star:** The risk of construction delay is addressed through provisions for liquidated delay damages paid to Xcel if key deadlines are missed. Cancellation due to a specified change in tax law is conditioned upon independent auditor verification and a negotiation period.

III. Economic Analysis

A. Xcel

Xcel's EnCompass modeling found that the final agreements resulted in <u>net savings</u> of $103 million on a PVRR basis and <u>net cost</u> of $33 million on a PVSC basis. This represents an increase of approximately 0.2% relative to total system costs, which the Company characterizes as a reasonable impact given current market challenges.

To perform the analysis, Xcel created an updated base case, starting with the EnCompass modeling used in Xcel's Lyon County CT CON filing.[10] The modeling removed the Plum Creek wind resource that was withdrawn and updated various assumptions. As shown by the table below, scenarios were run with and without the Lake Wilson project:

Table 7. PVSC / PVRR ($2024 mil.) With and Without Lake Wilson

PVSC	Delta from Updated Base ($ million)	NPV 2024-2050 ($ million)
Updated Base - Updated Lyon Co CT CON	$0	$69,043
Final 800 MW - No Lake Wilson	$33	$69,076
PVRR	**Delta from Updated Base ($ million)**	**NPV 2024-2050 ($ million)**
Updated Base - Updated Lyon Co CT CON	$0	$ 49,910
Final 800 MW - No Lake Wilson	($103)	$ 49,808

B. Department

Xcel's Petition shows its EnCompass analysis in four steps. The Department analyzed each step, briefly summarized as follows:

- **Step 1:** Verified the "as bid" project costs from the Lyon County CT CON, confirming the input files were unchanged.

- **Step 2:** Established an updated base case by removing the withdrawn Plum Creek project and incorporating the MEC BESS.

- **Step 3:** Created the initial change case by applying final contracted costs to the PPAs (MEC, MEC BESS, Cannon Falls, North Star) and updating the North Star BESS size.

- **Step 4:** Removed Lake Wilson from the change case to analyze only the finalized PPAs that were filed.

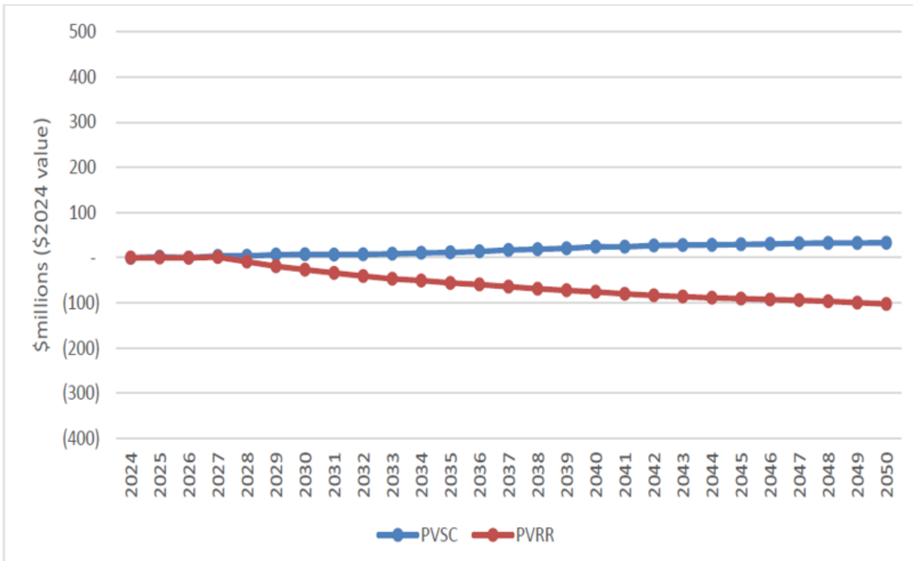
The Department performed its own EnCompass runs to match Xcel's results and found that costs were consistently 2% less than Xcel's results, which the Department attributed to differences in the capital cost recovery method. Despite this small variation, the Department concluded that Xcel's EnCompass modeling represented a reasonable estimate of the incremental impact of changes made during the negotiation process.

[1010] On May 9, 2025, Xcel filed a Combined Application for a Certificate of Need, Site Permit, Transmission Line Route Permit, & Partial Exemption and Pipeline Routing Permit for the Lyon County CT, Docket Nos. E002/CN-25-145, G002/GS-25-154, E002/TL-25-161 and G002/GP-25-163.

C. Staff Comment

As shown in Figure 1, the EnCompass modeling resulted in a net benefit under the PVRR (no externality costs) but a net cost under PVSC (with externality costs). Specifically, excluding the Lake Wilson project, the portfolio yields a net benefit of $103 million on a PVRR basis (the blue line) and a net cost of $33 million on a PVSC basis (the red line).

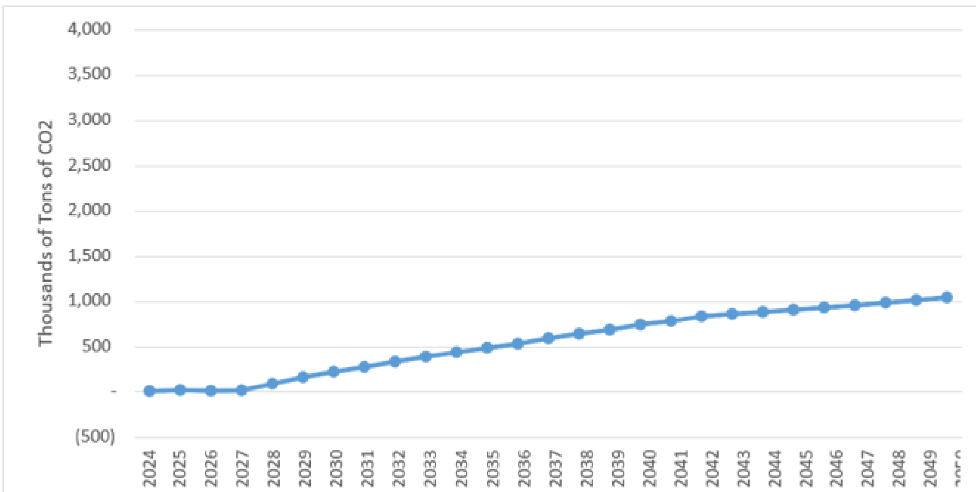
Figure 1. Annual Cumulative PVSC and PVRR Costs/(Savings) Resulting from Final 800 MW Portfolio Relative to Updated Lyon County CT CON Case without Lake Wilson



In addition, as shown in Figure 2 below,[11] the PPA portfolio (without Lake Wilson) increases system CO_2 emissions over time, by about 1.3% between 2025 and 2050 on average relative to the base scenario.

[11] Xcel response to MPUC Information Request No. 3.

Figure 2. Cumulative Additional Carbon Emissions Resulting from Final 800 MW Portfolio relative to the Updated Base – Updated Lyon County CT CON Case without Lake Wilson



The net cost under the PVSC is the result of the increased carbon emissions in the No Lake Wilson scenario; because the PVSC includes the Commission's CO_2 regulatory costs and externalities, a higher carbon-emitting portfolio generally adds system costs.

In response to PUC Information Request No. 4, Xcel confirmed that the increase in cumulative additional carbon emissions (and therefore the PVSC) relative to the updated base case is:

> due to the removal of Lake Wilson from the Final 800 MW Portfolio without Lake Wilson as compared to the base case (Updated Lyon County CT CON), which includes Lake Wilson.[12]

IV. Authorizing Fuel Clause Recovery

A. Xcel

Pursuant to Minn. Stat. § 216B.16 subd. 7(3), the costs for "fuel used in generation of electricity" are eligible for automatic adjustment under the FCR. Under the terms of the Company's currently-effective FCR in its tariff, "[t]he energy cost of purchases from a qualifying facility" are "qualifying costs" that comprise the cost of energy. Because the projects satisfy the conditions of a qualifying facility, Xcel proposes to recover the costs of these agreements through the FCR.

B. Department

The Department's analysis of Xcel's request is stated below:

[12] Xcel response to MPUC Information Request No. 4.

> Minn. Stat. § 216B.16 subd. 7(3) states that the Commission may permit a public utility to file rate schedules containing provisions for the automatic adjustment of charges for public utility service in direct relation to changes in … costs for fuel used in generation of electricity." Given the analysis of the PPAs above, <u>the Department recommends that the Commission authorize the Company to recover the Minnesota jurisdictional portion of the costs incurred under the PPAs from Minnesota retail customers under Minn. Stat. § 216B.16</u>.[13]

STAFF DISCUSSION – PPA APPROVAL

I. PPA Approval

Staff supports the Xcel/Department/LIUNA position to approve the four PPAs and authorize cost recovery through the FCR. The OAG did not appear to make a recommendation on PPA approval one way or another, although the OAG indicated that Xcel has not yet demonstrated that the Cannon Falls PPA is in the public interest.

From Staff's perspective, the primary reason to approve the portfolio is that, despite costs being higher than originally bid, the likelihood of finding cheaper replacement projects is low due to a combination of factors described in the Petition, including industry-wide cost pressures, expiring tax incentives, and long lead times for equipment. At the same time, Xcel has a need for a substantial amount of firm dispatchable resources.

Staff is not suggesting that the existence of these cost pressures means the economic analysis is unimportant. Rather, Staff considers the price increases to be reasonable because Xcel's modeling indicates that, even with the price adjustments, the portfolio (excluding Lake Wilson) results in a $103 million benefit on a PVRR basis. Importantly, the Department concluded that Xcel's EnCompass modeling was reasonable. Notably, after negotiations, the DESRI North Star project was able to reduce the base costs <u>below</u> the original bid, while increasing the project size from 80 MW to 100 MW.

That said, Staff generally does not support bidders adjusting prices after bids were submitted and selected by the Commission. The Commission may need to weigh whether the price increases since its IRP/Firm Dispatchable Order were reasonable given the circumstances encountered during the negotiation phase.

Additional rationale for approving the portfolio could be:

- The PPAs appear to meet the Commission's evaluation criteria established by Order Point 19 of the IRP/Firm Dispatchable Order; while costs are higher than the original bids, Xcel and the Department agree that the increases are justified and capped at reasonable levels (although the OAG disagrees).

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[13] Department, initial comments, p. 17.

- Xcel and the Department agreed that the negotiations resulted in improved, valuable terms, which insulate ratepayers from several risks. For example, the Department found that updated terms for the MEC I and Cannon Falls PPAs reduce financial risks and align supplier incentives with system needs, justifying the price increases.

- The PPAs include deliverability guarantees, such as performance standards and, for the BESS projects, Round-Trip Efficiency (RTE) guarantees, which require the BESS to meet committed efficiency levels.

- The PPAs appropriately address delay and cancellation risks. In North Star's case, the PPA includes liquidated delay damages if the project fails to meet its COD or critical path development milestones. MEC and Cannon Falls are existing facilities, so there is virtually no risk of construction delays or cancellation due to development failure.

II. OAG Recommendations

The remaining disputed issues on PPA approval involve the OAG's recommendations that:

- Condition approval of the North Star Energy BESS and MEC BESS PPAs on a requirement that before Xcel can recover increased costs from ratepayers due a New Trade Measure Event, Xcel must make a filing showing that the increased costs are just and reasonable for ratepayers to bear versus Xcel's shareholders.

- Make clear that Xcel's shareholders may be required to bear future costs necessary to procure renewable energy credits or construct additional renewable energy assets to offset carbon emissions from the Cannon Falls Energy Center from 2040-2048.

Staff supports the OAG's recommendation regarding the New Trade Measure Event, primarily because it further insulates ratepayers from financial risk associated the PPAs with no apparent jeopardy to project development risk. The OAG appears to merely be asking for Xcel to notify the Commission through a filing that the increased costs were reasonable. As Staff understands the OAG's recommendation, the OAG's point is to place decisions concerning just and reasonable costs squarely within the purview of the Commission, not an independent auditor, which Staff supports.

The OAG's second recommendation concerns future costs associated with the potential procurement of carbon offsets due to extending the gas-fired Cannon Falls facility beyond 2040. Staff takes no position on this matter, as there could be valid arguments for adopting it or not.

On the one hand, conceptually, it would make sense to maximize financial protections for ratepayers to the extent those protections do not place the project's development at risk. Xcel's response to this recommendation was that the Settlement has already demonstrated CFS compliance, and the 20-year term was already incorporated into the modeling. If that is the case, then the OAG's recommendation would have no apparent impact to Xcel, since the modeling already accounted for CFS compliance. At the same time, ratepayers would be financially protected from any RECs that may be needed if Xcel's position turns out to be incorrect.

On the other hand, Staff generally does not support signals of what the Commission may decide in a future proceeding, especially without having all the information currently in the record that would be necessary to make that decision. There is ample opportunity to raise the issue of REC cost recovery at a later date, if and when that situation arises, with more than sufficient time to decide the issue. It is a long-held principle of decision-making that the Commission does not make decisions that bind future Commissions. If the OAG's point is to warn the Company that a future Commission might find future REC costs associated with Cannon Falls to be imprudent, then it could seem contradictory to concurrently approve the Cannon Falls PPA, and Staff does not agree that approving the Cannon Falls PPA would be imprudent.

PART 2: INVENERGY'S REQUEST FOR ACTION

I. Invenergy

On November 10, 2025, Invenergy filed a Request for Action, which asked the Commission to require Xcel to resume good faith negotiations for a PPA regarding the Lake Wilson Solar Energy Center. Although the Commission previously selected the Lake Wilson project to help meet Xcel's firm dispatchable resource needs between 2027-2029, Xcel notified the Commission on October 31, 2025, that it intended to abandon negotiations.

Invenergy argued that Lake Wilson is the only remaining firm dispatchable resource in the Firm Dispatchable Docket with a renewable component, and it is essential for grid reliability and meeting the utility's identified capacity needs. Invenergy further stated that Lake Wilson is a mature, "derisked" project that has already secured necessary site permits, interconnection agreements, and land rights, which positions the project to meet a COD of December 31, 2027, and qualify for expiring federal tax credits.

Invenergy explained that the pricing disputes that stalled negotiations resulted from necessary price adjustments, primarily driven by unpredictable tariff volatility and supply chain uncertainty, which are factors Xcel also acknowledged and accommodated for its own self-build projects and other PPAs. Invenergy warned that abandoning Lake Wilson for market purchases or less-advanced alternatives could threaten reliability and ratepayer costs.

Invenergy explained that the Lake Wilson project is in an advanced stage of development, but it cannot advance further without a finalized PPA. Further delay creates the following risks:

- **EPC Contractor Availability:** Invenergy's preferred Engineering, Procurement and Construction (EPC) contractor may no longer be available if the EPC contract is not executed soon.

- **Generator Interconnection Agreement (GIA) Risk:** If Lake Wilson cannot meet a December 31, 2027, COD, Invenergy will be required to seek a waiver from the Federal

Energy Regulatory Commission (FERC) to prevent the termination of its GIA.

- **Harm to Local Farmers:** Local farmers who have leased land to Invenergy for the project will likely be harmed if the PPA is not finalized soon, as they would be forced to "pivot and purchase inputs and prepare the ground for planting next season." Approving the PPA would provide these farmers with a reliable, multi-year income source.

II. Xcel

Explaining its decision to end negotiations, Xcel cited "unresolvable issues with the solar component of the project and its associated costs."[14] According to Xcel, the Lake Wilson solar component is priced significantly higher than any other solar project for which the Company has requested Commission approval in its 2024 RFP.[15]

Further, the project's location in a highly-congested area, and adding additional solar generation would further strain an already-oversaturated area. Xcel attempted to resolve this issue by proposing to contract for only the battery portion of the project, but Invenergy declined.

Additionally, Invenergy's bid includes several other risks:

- **Supply chain and tariff risk:** Invenergy has not secured their major equipment or demonstrated any reasonable efforts to mitigate supply chain or tariff risks.

- **Atypical interconnection cost recovery condition:** Invenergy conditioned its bid on the right to potentially recover additional interconnection costs from customers in the future, beyond those reflected in their bid, despite having an executed GIA.

- **Development security disparity:** Invenergy's bid includes funding for only approximately 60% of the development security compared to other projects Xcel has advanced for consideration, which presents more project risk and undermines the integrity and fairness of the RFP process.

Xcel concluded that requiring negotiations to continue would misuse customer resources, delay progress on more suitable projects, and risk incurring additional costs.

III. Department

The Department found there is insufficient information in the record to make an informed recommendation and requested that Xcel provide additional data.

The Department noted that while Xcel's stated reasons might justify ceasing negotiations, those

[14] Xcel response comments, November 24, 2025, p. 1.

[15] Docket No. E002/M-24-230.

claims are "not yet adequately supported." The Department also pointed out that Xcel had increased prices for its own self-build options and other approved PPAs, so the price increases Xcel cited as one of their chief concerns are not unique to Lake Wilson.

The Department identified the following areas that require record development:

- **Congestion and solar-to-storage ratio:** The Department recognized that modeling congestion is a difficult task, but there is currently no objective evidence in the record quantifying the impact of the Lake Wilson project on congestion at the Nobles County Substation.

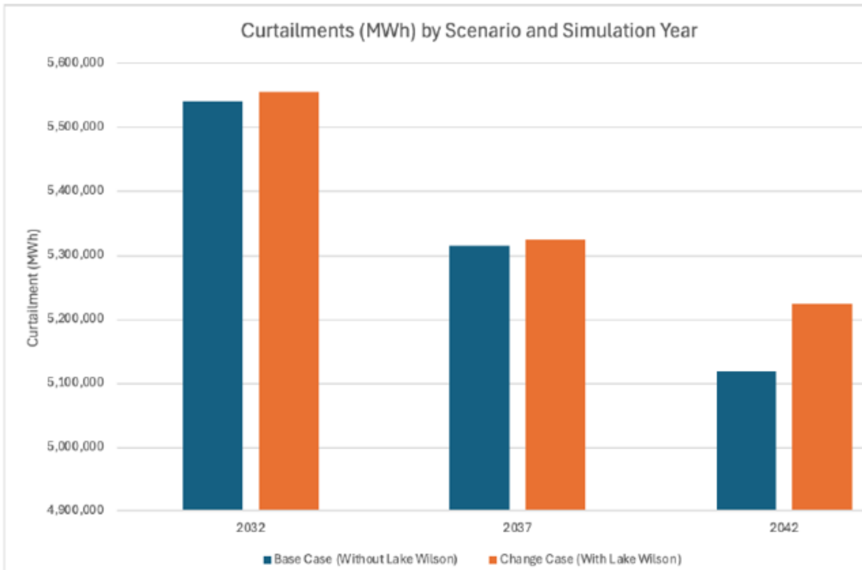
- **Alternative replacement projects:** The Department emphasized that while pricing for Lake Wilson is important, it must be assessed against the pricing, timing, and certainty of alternative replacement projects. The Department noted that Xcel had not offered any evidence on the pricing or risks of alternative projects, nor on the likelihood of those projects being available in time to meet demand. Therefore, the Department requested Xcel identify the possible alternative resources under consideration, including the project location, capacity offered, expected availability timing, and pricing information, if available.

The Department stressed that timely action is essential to protect ratepayer interests, either by finalizing the PPA quickly to secure tax credits or by allowing Xcel to line up replacement resources if the PPA is not viable.

Staff notes that the information the Department identified as necessary to evaluate these claims were submitted to Xcel as information requests and included as Attachment A of the Department's November 24, 2025, comments. Xcel filed a response on December 12, 2025; however, the Department has not provided comments or a recommendation on whether Xcel's response satisfies the need for more record development.

In its response to the Department, Xcel explained that, to quantify congestion impacts, PROMOD modeling was used to simulate hourly dispatch for the years 2032, 2037, and 2042. The analysis found that adding Lake Wilson would increase regional congestion charges by $1.5-$3.5 million compared to the base case. Furthermore, the inclusion of the project's battery storage was found to negatively impact regional curtailment levels. Xcel's simulations across all modeled years indicate that the 95 MW storage component does not provide significant relief for neighboring renewable resources, nor does it materially reduce curtailment for the on-site solar facility. Figure 3 below compares curtailments, in MWh, by simulation (2032, 2037, 2042) in the Base (No Lake Wilson) and Change (with Lake Wilson) scenarios:

Figure 3. Base and Change (with Lake Wilson) Case Curtailments (MWh) by Simulation Year



IV. Clean Energy Organizations

The CEOs support resuming negotiations, agreeing with Invenergy that Lake Wilson is the only remaining firm dispatchable project selected in the Settlement Agreement with a renewable component. The CEOs also agree with Invenergy that the project is "advanced" in its development process, with an expected COD in 2027, which is important because it can capture expiring tax credits.

The CEOs acknowledged Xcel's concern regarding congestion in the project area, but pointed out that this issue has been well-known for quite some time, and solutions are already under investigation. The CEOs requested that the record be further developed concerning:

- Whether the congestion will impact the economics of the Lake Wilson project and for how long;
- The timelines for implementing recently completed or planned transmission projects, upgrades, grid-enhancing technologies (GETs), or other solutions; and
- Whether there are comparable, late-stage renewable or renewable/storage hybrid projects that are not impacted by similar system constraints.

V. STAFF COMMENT

A. Modeling Results with and without Lake Wilson

Staff takes no position on Invenergy's request and will only remind the Commission that the Company's base case modeling included Lake Wilson, and the $103 million PVRR net benefit and $33 million PVSC net cost are relative to a No Lake Wilson scenario. The table below shows the impact of removing Lake Wilson; the PVSC (with CO_2 costs) increased, while the PVRR (no CO_2 costs) reduced. As noted previously, this occurs because the No Lake Wilson scenario increases system CO_2 emissions.

Table 8. PVSC / PVRR ($2024 millions)
With and Without Lake Wilson Solar and Storage Project

PVSC	Delta from Updated Base in NPV 2024-2050 ($ million)	NPV 2024-2050 ($ million)
Updated Base - Updated Lyon Co. CT CON (with Lake Wilson)	$0	$69,043
Final 800 MW - No Lake Wilson	$33	$69,076
PVRR	**Delta from Updated Base in NPV 2024-2050 ($ million)**	**NPV 2024-2050 ($ million)**
Updated Base - Updated Lyon Co. CT CON (with Lake Wilson)	$0	$ 49,910
Final 800 MW - No Lake Wilson	($103)	$ 49,808

B. Summary of Decision Options

The decision options are separated by Part 1 – PPA Approval and Part 2 – Invenergy's Request. For PPA approval, the Commission has the option to approve each PPA individually. The remaining decision options pertain to Xcel's cost recovery request and the OAG's two remaining concerns with the PPAs.

Regarding Invenergy's request, the Commission will need to decide (1) to either grant or deny Invenergy's request to resume negotiations and (2) whether more record development is necessary on this issue.

DECISION OPTIONS – PPA APPROVAL

1. Approve the following PPAs:
    a. Invenergy Cannon Falls Energy Center,
    b. Onward Mankato Energy Center 1,
    c. Onward Mankato Energy Center BESS,
    d. DESRI North Star Energy. (Xcel, Department)

2. Authorize the Company to recover, through the Fuel Clause Rider, pursuant to Minn. Stat. § 216B.16 subd. 7(3), the Minnesota jurisdictional portion of prudent costs incurred under the agreements from Minnesota retail customers. (Xcel, Department)

3. Condition approval of the North Star Energy BESS and MEC BESS PPAs on a requirement that, before Xcel can recover increased costs from ratepayers due to a New Trade Measure Event, Xcel must make a filing for Commission approval showing that it is just and reasonable for ratepayers, rather than Xcel's shareholders, to bear the increased costs. (OAG)

4. Determine that Xcel's shareholders may be required to bear future costs necessary to procure renewable energy credits or construct additional renewable energy assets to offset carbon emissions from the Cannon Falls Energy Center from 2040-2048. (OAG)

DECISION OPTIONS – INVENERGY REQUEST

5. Grant Invenergy's request to require Xcel to resume negotiations in good faith with Invenergy for the Lake Wilson Solar Energy Center. (Invenergy, CEOs, Murray County)

6. Deny Invenergy's request. (Xcel)

7. Require Xcel to file the following information. *(Staff notes that Xcel's Response to DOC IRs 8-9, Xcel provided the Department with information related to Decision Options 7.a-c.; however, it is unclear whether this sufficiently addressed the Department's concerns.)*
    a. How the "intermittent solar component and solar to storage ratio" would be an impairment to a project and exacerbate congestion. *(Department)*
    b. The estimated impact of the Lake Wilson project on existing congestion in the project area. *(Department/CEOs)*
    c. Possible resources being considered to replace the Lake Wilson project, including the location of the project, the capacity being offered, when the capacity is expected to be available, and pricing information, if available. *(Department/CEOs)*
    d. The timelines for implementing recently completed or planned transmission projects, upgrades, grid-enhancing technologies (GETs), or other solutions. *(CEOs)*