

Staff Briefing Papers

Meeting Date September 15, 2022 Agenda Item **5

Company Xcel Energy (Xcel or the Company)

Docket No. **E002/M-20-891**

In the Matter of Xcel Energy's Sherco Solar Project

Issues Should the Commission approve Xcel's Energy's acquisition and construction of the 460 MW Sherco Solar Project, subject to conditions?

Should the Commission authorize the Company to recover costs of the Project through the RES Rider?

Should the Commission determine that any future cost recovery is limited to the Minnesota jurisdictional allocators approved by the Commission?

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.



Relevant Documents

Date

Commission Orders

Order Granting Certificate of Need Exemption	July 6, 2021
Order Approving Resource Plan (Docket No. 19-368)	April 15, 2022

Petitions, Compliance Filings, and Informational Letters

Xcel Energy, Initial Filing (Public and Non-Public)	April 12, 2021
Xcel Energy, Informational Letter	May 19, 2021
Xcel Energy, Modeling Compliance Filing (Public and Non-Public)	July 9, 2021
Xcel Energy, Informational Letter	August 4, 2021
Xcel Energy, Informational Letter	September 7, 2021
Xcel Energy, Letter to Becker Township Board	April 21, 2022
Xcel Energy, Informational Letter	June 2, 2022
Xcel Energy, Supplemental Filing with Revised Pricing	July 27, 2022

Initial Comments – CN Exemption (Parties)

Institute for Local Self-Reliance	April 30, 2021
Department of Commerce-DER	April 30, 2021
Department of Commerce-EERA	April 30, 2021
Office of the Attorney General	April 30, 2021
City of Becker	April 30, 2021
Becker Township	April 30, 2021
LIUNA Minnesota & North Dakota	April 30, 2021

Initial Comments – Project Approval (Parties)

City of Becker	August 10, 2021
International Brotherhood of Electrical Workers 292	November 5, 2021
Department of Commerce-DER (Public and Non-Public)	November 10, 2021
Office of the Attorney General (Public and Non-Public)	November 10, 2021
LIUNA Minnesota & North Dakota	November 10, 2021
Institute for Local Self-Reliance	November 16, 2021

✓ **Relevant Documents**

Date

Reply Comments (Parties)

Center for Energy and the Environment	April 8, 2022
IUOE Local 49	April 8, 2022
Office of the Attorney General	April 8, 2022
Xcel Energy (Public and Non-Public)	April 8, 2022
North Central States Regional Council of Carpenters	April 11, 2022
LIUNA Minnesota & North Dakota	April 11, 2022
City of Becker	May 3, 2021
Becker Township	May 4, 2021

Comments on Supplemental Filing (Parties)

Clean Energy Organizations	August 17, 2022
Department of Commerce-DER	August 17, 2022
IUOE Local 49 and NCSRC of Carpenters	August 17, 2022
Office of the Attorney General	August 17, 2022
Xcel Energy, Reply Comments	August 23, 2022

Participant and Public Comments

R.D. Offutt Farms	May 18, 2021, August 6, 2021, and April 5, 2022
Big Lake Sno Cruisers	May 20, 2021
Clear Lake Township Board	May 25, 2021
L. Gallus	May 26, 2021
K. Jaeger	June 1, 2021
K. and J. Goenner	June 9, 2021
Pillsbury United Communities	April 6, 2022
Unidos MN	April 14, 2022

I. Statement of the Issues

Should the Commission approve Xcel's Energy's (Xcel or the Company) acquisition and construction of the 460-megawatt (MW) Sherco Solar Project, subject to conditions?

Should the Commission authorize the Company to recover costs of the Project through the Renewable Energy Standard (RES) Rider?

Should the Commission determine that any future cost recovery is limited to the Minnesota jurisdictional allocators approved by the Commission?

II. Introduction

The Commission is asked to decide whether to approve the Sherco Solar project. Resource acquisitions traditionally follow Integrated Resource Plan (IRP) proceedings, and the resource to be acquired should be consistent with the size, type, and timing of the need determined in an IRP, as well as the underlying assumptions showing those resources are in the public interest. The need for resources can also be established by a statutory mandate, or if additional economic analysis shows a benefit to ratepayers.

Xcel's recently-decided 2020-2034 IRP confirmed that there is a need for solar resources, like Sherco Solar. The Commission previously determined that a Certificate of Need (CN) is not required for Sherco Solar because Xcel conducted a Commission-approved request for proposals (RFP) bidding process – the Modified Track 2 process – in which Sherco Solar represented the best project; Sherco Solar was also incorporated into Xcel's IRP, although it was not specifically approved.

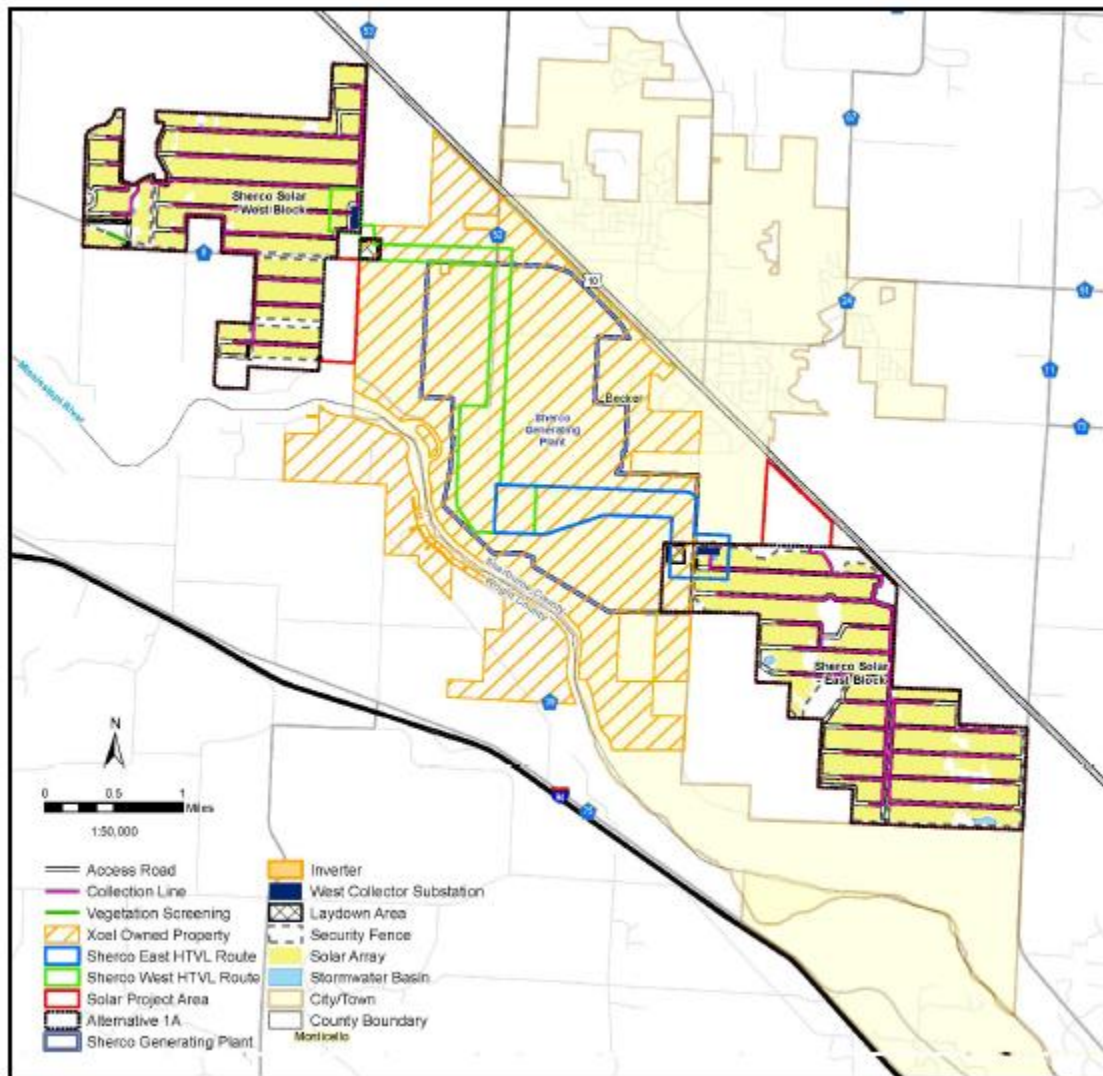
Since those decisions were made, Xcel's total installed capital costs estimate for the Project has increased significantly due to market factors largely outside Xcel's control. To further complicate the issue, the recently-passed Inflation Reduction Act (IRA) appears likely to reduce ultimate costs to ratepayers, but the extent of the reduction and mechanisms to ensure those benefits are maximized are unclear. Ultimately, the Commission needs to evaluate the claimed benefits of Sherco Solar against its costs, including the consumer protections proposed by the various parties, and determine whether it is the best option for ratepayers. This analysis is challenging because previous comparisons of Sherco Solar to other alternatives may not be valid, given the dramatic increase in the price of the project.

III. Project Description

The 460 MW Sherco Solar Project will consist of an East Block and a West Block located on approximately 3,479 acres of land adjacent to Xcel's existing Sherburne County Generating Facility (Sherco) in Sherburne County, Minnesota. The solar facility will connect to the electrical grid at the existing Sherburne County Substation by a new 1.7-mile single-circuit 345-kilovolt (kV) transmission line for the East Block and a new 3.2-mile single-circuit 345 kV transmission line for the West Block. The primary components of the solar facility would include bifacial photovoltaic panels affixed to a linear ground-mounted single-axis tracking system, solar inverters, an electrical collection system, access roads, security fencing, two electric collector

step-up substations, an operation and maintenance facility, 11 stormwater drainage basins, and 12 weather stations.¹

The figure below shows the overall project layout:



Xcel expects that all components of the Project (the solar project and West and East HTVL Projects) can be in-service in the fourth quarter of 2025, with the first phase being placed in-service in the fourth quarter of 2024. Xcel expects the full life of the project to be 35 years, and thus the two halves of the Project are anticipated to retire in 2058 and 2059, respectively.

¹ Staff briefing papers for Docket Nos: 21-191, 21-190, and 21-189, at 4-5 (August 18, 2022).

IV. Procedural Background

On January 13, 2021, Xcel filed a letter notifying the Commission that the Company issued an RFP for solar generation resources interconnecting at the Sherco site, with proposals due on February 2, 2021.

On April 12, 2021, Xcel made its initial filing requesting approval of Sherco Solar.

On April 30, 2021, the Commission issued a notice seeking input on whether Sherco Solar requires a CN and whether the Commission has enough information to evaluate whether the Sherco Solar project is needed and cost-effective (since the initial filing did not contain any EnCompass modeling analysis). Additionally, because Xcel proposed to recover 100 percent of the Project's costs from Minnesota ratepayers, the notice requested comments on whether the initial filing sufficiently explained how the Company would assign the benefits from the Project to Minnesota.

After comments from parties, on July 6, 2021, the Commission issued its *Order Granting Certificate of Need Exemption* (Process Order) determining that:

- the proposed Project is exempt from a CN pursuant to Minn. Stat. §216B.2422, subd. 5 (b);
- the record shall be developed using the initial and reply comment process; and
- by July 9, 2021, Xcel shall provide new EnCompass modeling that evaluates Sherco Solar as a system resource and includes an analysis that reflects the cost allocation between Xcel's various jurisdictions.

On July 9, 2021, Xcel made a compliance filing providing the information required by the Process Order. For its modeling analysis, Xcel compared the Alternate Plan presented in the Company's 2020-2034 IRP to a "change case" in which Sherco Solar specifically was added to the Alternate Plan in lieu of "generic" solar units (generic solar units are not location-specific, nor do they assume company-ownership).

In Xcel's April 8, 2022 Reply Comments, the Company asked to temporarily suspend this proceeding due to supply chain shortages and the U.S. Department of Commerce's anti-dumping circumvention investigation of solar cells.

On July 27, 2022, Xcel made a Supplemental Filing requesting approval of Sherco Solar, which included revised pricing at an increased cost relative to the Project's pricing in the initial filing. Xcel further requested a Commission decision by September 15, 2022, stating that any delay would move construction to the next season.

At the Commission's August 18, 2022 agenda meeting, the Commission issued a site permit and two route permits to Xcel for Sherco Solar.² The decision before the Commission today involves

² Docket Nos. E002/GS-21-191; E002/TL-21-190; E002/TL-21-189 In the Matter of the Application of Xcel Energy for a Site Permit and Two Route Permits for the up to 460 Megawatt Sherco Solar Energy Generating System and

whether to approve Xcel's acquisition and construction of Sherco Solar, subject to conditions, and matters related to cost recovery.

V. April 12, 2021 Initial Filing

Xcel's initial filing outlined four key objectives met by the proposed project:

1. It helps meet a significant capacity need identified in its 2020-2034 IRP;
2. It reutilizes valuable interconnection rights after the retirement of Sherco Unit 2;
3. It is least-cost among the alternatives; and
4. It advances Minnesota's clean energy policy goals and fulfills the Commission's request for investments that can spur economic relief and recovery in Minnesota, including by supporting well-paying union jobs.

While the initial filing was made prior to the Commission's approval of the Company's 2020-2034 IRP, Xcel stated that the Project is consistent with its most recently-approved, 2015-2029 IRP; moreover, modeling conducted by Xcel and other parties in the then-pending 2020-2034 IRP included substantial investments in solar to replace retiring coal plants.

Xcel stated that Sherco Solar was bid in response to an RFP process that followed the Commission's approved "Modified Track 2" process, using an internal firewall protocol and reviewed by an Independent Auditor (IA) to ensure that all projects were evaluated in a fair and consistent manner. Xcel explained:

The Company received 43 questions from 15 outside developers regarding the RFP before bids were submitted. As discussed further in the IA Report, many of the questions were about siting and land rights; several developers asked if the project could be developed on the existing Sherco land. In its response to these questions, the Company clarified that bidders needed to indicate how they would procure the necessary land for the proposed project, and either needed to have site control secured at the time of submitting their proposals or needed to show a clear path to site control for the development of the project. Other common questions regarded transmission, specifically about the MISO interconnection requirements at the Sherco site.³

Sherco Solar was the only project that met the RFP's threshold review criteria and thus was the only project that was shortlisted. Table 4 on page 33 of the non-public version of Xcel's initial filing displays the three bids, including the Company's self-build proposal.

Table 1 of Xcel's initial filing compared the price of Sherco Solar to other solar projects. Specifically, Sherco Solar compared favorably to four solar projects in Wisconsin on a \$/kWac basis. (Staff notes that Xcel's July 27, 2022 Supplemental Filing highlighted the six-site, 675 MW WPL project that is in a similar situation as Sherco Solar regarding increased costs.)

Associated 345 Kilovolt Transmission Lines in Sherburne County, Minnesota. (*Order forthcoming*)

³ Xcel initial filing, at 32-33.

Table 1: Sherco Solar Project Compared to Other Regional Solar Projects

Resource	Size (MWac)	Price \$/kWac (excluding AFUDC)
<i>Recently Proposed Projects</i>		[PROTECTED DATA BEGINS]
Bid #1 from RFP	75	
Bid #2 from RFP	450	PROTECTED DATA ENDS]
Wisconsin Public Service (WPS)&Madison Gas and Electric (MG&E) Badger Hollow Solar Farm and Two Creeks Solar	300	\$1,299
Wisconsin Electric Power Company (WEPCO), WPS and MG&E Darien Solar Energy Center	250	\$1,298
WEPCO, WPS and MG&E Paris Solar Farm	200	\$1,301
Wisconsin Power and Light Company Projects (6 sites) ⁴	675	\$1,277
Sherco Solar Project	460	[PROTECTED DATA BEGINS PROTECTED DATA ENDS]
Resource		
<i>Operational Projects on the NSP System</i>		[PROTECTED DATA BEGINS]
Aurora Solar	100	
North Star Solar	100	
Marshall Solar	62	
Community Solar Gardens ⁵	789	
Sherco Solar Project	460	PROTECTED DATA ENDS]

In addition to the favorable economics of the Project, Xcel estimated that Sherco Solar will generate \$115 million in wages from nearly 900 union construction jobs and more than \$240 million in local benefits (including landowner payments and state and local taxes) over the life of the project. The Project will also offer significant progress towards the Solar Energy Standard (SES) goal set forth in Minnesota Statute 216B.1691 subd. 2f, part (e) of 10 percent of sales coming from solar resources by 2030. Further, Sherco Solar will help Xcel maintain compliance toward the RES.

⁴ Wisconsin Public Service Commission Case No 6680-CE-182. *Application of Wisconsin Power and Light Company for a Certificate of Authority to Acquire, Construct, Own, and Operate Six Solar Electric Generation Facilities, Known as the North Rock, Grant County, Crawfish River, Onion River, Richland County, and Wood County Projects, to be Located in Rock County, Grant County, Jefferson County, Sheboygan County, Richland County, and Wood County, Wisconsin.* (May 29, 2020), at 8.

⁵ Total Community Solar Garden size based on the March 2021 status report. Price based on average project.

VI. July 9, 2021 Compliance Filing

The Commission's July 6, 2021 Process Order required Xcel to provide new EnCompass modeling evaluating the cost-effectiveness of the Project by July 9, 2021.⁶ Xcel's analysis began with its IRP Reference Case (i.e. "business as usual")⁷ and evaluated the cost differences between a case with the Alternate Plan proposed in the Company's June 25, 2021 IRP Reply Comments to a scenario in which a generic solar unit was removed and replaced with Sherco Solar (i.e. a "change case"). The results are shown in Tables 2 and 3 of the compliance filing.

Table 2: PVSC Results

Analysis Case	2020-2045 Total system cost result (\$ millions, PVSC)	2020-2045 Delta from Reference Case (\$ millions, PVSC)
IRP Reference Case	41,067	-
Sherco Solar Base Case (IRP Alternate Plan)	40,461	(606)
Sherco Solar Change Case (IRP Alternate Plan + Sherco Solar Project)	40,524	(543)

Table 3: PVRR Results

Analysis Case	2020-2045 Total system cost result (\$ millions, PVRR)	2020-2045 Delta from Reference Case (\$ millions, PVRR)
IRP Reference Case	37,165	-
Sherco Solar Base Case (IRP Alternate Plan)	37,120	(46)
Sherco Solar Change Case (IRP Alternate Plan + Sherco Solar Project)	37,170	5

Tables 2 and 3 show that when Sherco Solar was added to the Alternate Plan, savings decreased on a Present Value of Societal Costs, or PVSC, basis. The Sherco Solar change case increased costs overall on a Present Value Revenue Requirements, or PVRR, basis.⁸ (Again, this was prior to the revised pricing.)

⁶ While the Commission issued its Order on July 6, 2021, the agenda meeting that instructed Xcel to conduct new EnCompass modeling took place on June 3, 2021.

⁷ The IRP Reference Case assumed that all units retire at their current dates (King in 2038, Sherco 3 in 2034, Monticello in 2030 and Prairie Island 1 and 2 in 2033 and 2034 respectively).

⁸ **PVSC (Present Value Societal Costs):** The Present Value of Societal Costs (PVSC) is the net present value cost of a utility's revenue requirement for a particular resource addition or portfolio plan when environmental externality and regulatory cost of carbon values are incorporated into a production cost run. The calculation of PVSC is required using Commission-approved values for the regulatory cost of carbon dioxide and externality values for carbon dioxide and criteria pollutants.

PVRR (Present Value Revenue Requirements): The Present Value of Revenue Requirements (PVRR) is the net present value cost of a utility's revenue requirement for a particular resource addition or portfolio plan without

According to Xcel, these findings show that Sherco Solar, as proposed initially, is only slightly more expensive over the long run than assumptions for generic solar resources used in the IRP modeling. Moreover, Xcel claimed this should not be concerning because actual project costs always deviate from generic assumptions. Xcel explained:

There are several reasons for the divergence between the Sherco Solar project costs and our generic assumptions. As a threshold matter, we note that generic representations of solar resources in our IRP modeling are intended to be broad and based on publicly available sources, and as such, they make certain generalizing assumptions regarding inputs that affect the LCOE and, therefore, are not intended to perfectly align with project and regionally specific inputs. Said another way, models that use generic cost assumptions based on external, public sources will inherently not take into account project specific factors that can only be known once a specific project is under development and bid into a solicitation. We use the National Renewable Energy Laboratory's *Annual Technology Baseline* to inform our generic cost assumptions, and there are factors specific to the Sherco Solar project that are likely to vary from this public resource and these factors can have varying effects on costs. For example, it is possible that the cost of acquiring land in a relatively more developed area exceeds the cost included in the NREL assumptions; while this increased cost may be applicable to solar developed nearby to the Sherco site, it will not necessarily apply to every future project proposed for generator interconnection re-use. This project is also scheduled to span multiple construction seasons, which can have an effect on several cost parameters underlying the generic resources that NREL may not capture. There are several other factors such as cost of construction and operational labor, project-specific transmission investments, the type and yield of solar panels chosen, balance of system costs, and other components that, even if relatively small individually, can add up to differences of a larger magnitude over the full analysis period, and in aggregate could certainly account for differences in comparing generic costs to specific projects.⁹

VII. 2020-2034 Integrated Resource Plan

This section will briefly recap the Alternate Plan and the Commission's order points relevant to solar acquisition in the near-term. This may help refamiliarize the Commission with the IRP Order and provide a broader lens through which to view Sherco Solar.

On April 15, 2022, the Commission issued its Order approving Xcel's 2020-2034 IRP with modifications based on Xcel's June 25, 2021 Alternate Plan.¹⁰ A summary of Xcel's Alternate Plan is shown below in Table 3-1 of Xcel's June 25, 2021 IRP Reply Comments.¹¹ The table

consideration of carbon and environmental externality values over a modeling period in a production cost run.

⁹ Xcel July 9 compliance filing, p. 11.

¹⁰ Docket No. E-002/RP-19-368.

¹¹ This plan was proposed in Xcel's June 25, 2021 Reply Comments and does not include the 835 MW natural gas

compares large-scale resource additions on an annual basis to total capacity retired, including expiring PPAs. The most significant capacity removals are from the retirement of Sherco Unit 2 in 2023 (680 MW), Sherco Unit 1 in 2026 (680 MW), the Allen S. King Plant in 2028 (511 MW), and Sherco Unit 3 in 2030 (517 MW). The takeaway from this table is that a substantial amount of baseload generation will be removed over the next several years, and approximately 1,300 MW of company-own solar was approved in 2024-2025 to replace a portion of this capacity.

Table 3-1: Planned Generation Retirements Through 2030

Year	Total MW Retired	Alternate Plan Resource Additions
2023	874 MW	
2024	358 MW	700 MW Solar
2025	695 MW	600 MW Solar 60 MW Firm Dispatchable
2026	1,311 MW	260 MW Firm Dispatchable
2027	210 MW	600 MW Solar 374 MW Firm Peak
2028	511 MW	200 MW Wind 150 MW Solar
2029	876 MW	400 MW Wind 400 MW Solar 374 MW Firm Dispatchable
2030	173 MW	200 MW Storage 950 MW Wind 100 MW Solar 374 MW Firm Dispatchable
2031	322 MW	50 MW Storage 350 MW Wind
2032		450 MW Wind 374 MW Firm Dispatchable
2033		100 MW Solar 748 MW Firm Dispatchable
2034	765 MW	500 MW Solar 500 MW Wind 374 MW Firm Dispatchable
2035	31 MW	600 MW Wind

Reutilizing existing interconnections at Sherco and King is a core piece of Xcel's coal retirement and renewable energy acquisition plan. This means that Xcel must own the generation because there are specific requirements for replacement resources. First, per MISO's generator replacement rules set out in Attachment X of the MISO Tariff, Xcel has a three-year window to reuse interconnection rights. Second, replacement facilities cannot transfer interconnection rights between entities.

On April 15, 2022, the Commission approved Xcel's 2020-2034 IRP as summarized in Order Point 2:¹²

combined cycle facility at the Sherco site.

¹² Staff omitted non-relevant order subpoints 1-4, 11.

2. Regarding Xcel's 2020–2034 Upper Midwest Integrated Resource Plan, the Commission finds as follows:

A. Xcel's Alternate Plan as filed on June 25, 2021, is approved for planning purposes, and the following elements are specifically approved:

5) By 2026 Xcel shall acquire –

A) Approximately 720 megawatts of company-owned solar-powered generators to fully reutilize the interconnection capacity to be made available following the retirement of the Sherco Unit 2—460 MW of which could come from the proposed Sherco Solar project if approved by the Commission—and

B) An additional 600 MW of solar resources unconstrained by interconnection location or ownership.

6) Xcel shall begin Certificate of Need and route permit proceedings for transmission lines with a capacity of 345 kilovolts extending from the locations of the retiring King and Sherco generators designed to permit new energy resources to connect to the transmission grid of the Midcontinent Independent System Operator, Inc.

7) For each gen-tie line for which Xcel obtains the necessary Certificate of Need and route permit, Xcel may own the line and the renewable resources that connect to the line, up to the company's current interconnection rights for that location. Approvals for company ownership of resources interconnecting to the gen-tie lines identified in this order are conditioned on the outcome of the Certificate of Need and route permit decisions for the Sherco and King gen-tie lines.

8) Xcel has 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.

9) Xcel has demonstrated that, between 2028 and 2030, it will need approximately 600 MW of company-owned solar and/or storage resources to maximize the use of the King gen-tie line and fully reuse the King interconnection.

10) Any acquisition proceeding for surplus generation on the King and Sherco gen-tie lines, beyond the amount required to fully reuse the Sherco and King interconnections, must be open to either company-owned or non-company-owned resources.

VIII. New Solar RFP

On July 20, 2022, Xcel made a filing in Docket Nos. E002/RP-19-368 and E002/M-22-403¹³ announcing that the Company will soon issue a solar RFP for the solar approved in Order Point 2.A.5. On August 1, 2022, Xcel issued the RFP, with proposals due September 30, 2022, seeking approximately 300 MW that can interconnect to the MISO grid through Xcel's existing interconnection rights at the Sherco site, and another 600 MW sought in the broader Upper Midwest area. Each project considered as part of the 600 MW target must be over 5 MWac and connected to the MISO Zone 1 transmission grid or the Xcel distribution grid. At this time, Xcel does not anticipate any projects selected from the upcoming solar RFP would be brought to the Commission for final approval until sometime in 2023.

IX. Supplemental Filing

On July 27, 2022, Xcel resumed the instant proceeding by making its Supplemental Filing, which included revised pricing and a request that the Commission hear this matter no later than September 15, 2022.

A. Project Benefits

Xcel touted that Sherco Solar will be the largest single solar development in the Upper Midwest and among the largest in the United States. Additional benefits include:

1. As a Company-owned solar development, Xcel can pass any applicable benefits from future tax reform on to ratepayers. Xcel explained that "unlike a PPA price that is set at a point in time and generally cannot be adjusted, when the Company owns a renewable facility, we are able to obtain, and pass on to our customers, incremental project benefits that may not have been available at the time the Project was acquired or approved."¹⁴
2. By being located near the Sherco plant, the Project will support a just transition for workers at the plant. Xcel projects that Sherco Solar will create more than 900 well-paying construction jobs and \$115 million in wages across three years of construction activities. It will also offer an important career pathway for Sherco plant workers interested in transitioning to solar. Additionally, over the life of the Project, Sherco Solar will generate \$240 million in local economic benefits (including landowner payments and state and local taxes).
3. The Project will provide a training opportunity for 75 participants in the Company's approved Workforce Development and Training pilot program,¹⁵ called Xcel Energy's

¹³ Docket No. 22-403 is a new docket opened specifically for forthcoming solar or solar-plus-storage hybrid acquisitions.

¹⁴ Supplemental Filing, at 15.

¹⁵ The Commission issued its *Order Approving Framework and Setting Additional Requirements* (February 22, 2022)

Power Up program, which aims to engage traditionally underserved communities and offer the opportunity to receive hands-on skills training through a 13- to 20-week construction apprenticeship-readiness program.

4. The Project has been designed to minimally impact the state's prime agricultural land and will employ best practices to ensure the land is productive into the future and ecologically sustainable during the operation of the facility. Xcel explained that "the Company is committed to revegetating the Project with a native prairie mix that will provide beneficial habitat. The mixes are designed to include both native grasses and wildflowers and achieve our goal of operating a pollinator-friendly solar facility by providing native perennial vegetation and foraging habitat beneficial to game birds, songbirds, and pollinators."¹⁶
5. The Project will dramatically reduce carbon dioxide (CO₂) emissions, avoiding 250,000 to 300,000 tons of CO₂ emissions (in addition to other criteria pollutants) annually. In recent years, the existing Sherco Unit 2 has emitted between 3 to 5 million tons of CO₂, nearly one million pounds of sulfur dioxide (SO₂), and 3 to 6 million pounds of nitrous oxide (NO_x) annually.
6. The Project provides a unique research opportunity in partnership with the Great Plains Institute (GPI) to study the ecosystem benefits offered by solar projects. Xcel is working with GPI on a potential funding opportunity from the U.S. Department of Energy (DOE) for "Deploying Solar with Wildlife and Ecosystem Services Benefits (SolWEB)."

Xcel also mentioned the strong support for Sherco Solar from a broad cross-section of stakeholders. Importantly, Xcel discussed its extensive work with the City of Becker and Becker Township, such that they now fully support the Project. Xcel presented the following list of stakeholders who also support the Project:

- City of Becker;
- Becker Township;
- Big Lake Sno Cruisers (BLSC);
- BlueGreen Alliance;
- Center for Energy and Environment (CEE);
- Clean Energy Organizations (Fresh Energy, Clean Grid Alliance, Minnesota Center for Environmental Advocacy and Sierra Club);
- Clear Lake Township;
- Department of Commerce (Department)
- Friends of the Mississippi River;

in Docket No. E002/M-21-558 for this workforce training and development program.

¹⁶ Supplemental Filing, at 18.

- International Brotherhood of Electrical Workers (IBEW), Local 292;
- International Union of Operating Engineers, Local 49;
- LIUNA Minnesota & North Dakota;
- The Nature Conservancy;
- Neighboring landowners (Kendra Jaeger and Mike Braddock);
- North Central States Regional Council of Carpenters;
- Participating landowners (Del Hayes & Sons Inc., Kevin & Jean Goenner, Loretta Rose Revocable Trust);
- Pillsbury United Communities;
- R.D. Offutt (RDO) Farms; and
- Rep. Jamie Long, Chair, Climate and Energy Committee, Minnesota House of Representatives.

Xcel acknowledged the increased pricing (on a levelized cost of energy, or LCOE, basis) relative to the initial petition filed on April 12, 2021; the second paragraph on page 2 of the non-public version of the Petition shows the Project’s cost, excluding AFUDC, and compares the revised pricing with the costs included in the initial filing. Xcel explained that the higher cost is not specific to Sherco Solar, but to the industry as a whole. Xcel stated that since the initial filing, “solar PPA prices in the U.S. have increased dramatically by more than 25%, including rising 8% in the second quarter of 2022 alone.”¹⁷

Xcel also recognized that the Department and OAG previously raised concerns with the bid solicitation process used to select Sherco Solar and whether the Project’s price was sufficiently competitive. Xcel stated an agreement was reached with the Department on an approach that will both ensure the Project remains on schedule and is competitively priced compared to other proximate projects.

Throughout the Supplemental Filing, Xcel repeatedly stressed the urgency of the Project. For example, in requesting the Commission hear the matter no later than September 15, 2022, stating that “[a]ny delay in a decision beyond September 15, 2022 will also delay our solar panel order and push us into the next construction season at best,”¹⁸ as well as risk “securing the many benefits presented by the Project, including well-paying jobs, new workforce training opportunities, and significant local economic benefits.”¹⁹ For the same reason, Xcel strongly opposed a requirement that Sherco Solar be rebid as part of the upcoming RFP process:

If the Project were delayed to simply allow parties to compare bids from our upcoming IRP RFP against the price of the Sherco Solar Project, that would delay the Project by at least one additional year and place the final commercial

¹⁷ “U.S. solar prices soared over 8% in 2nd qtr. – report,” Reuters, July 14, 2022

<https://www.reuters.com/business/energy/us-solar-prices-soared-over-8-2nd-qtr-report-2022-07-14/>.

¹⁸ Supplemental Filing, at 20.

¹⁹ Ibid.

operation date very near the deadline for reusing our Sherco 2 interconnection rights at the end of 2026. This becomes an even greater concern when considering that approximately 300 MW of additional resources acquired through the upcoming RFP also need to be designed, procured and constructed by the end of 2026 in the same general area.²⁰

B. Sherco Solar is Consistent with the Recently Approved IRP and Needed to Meet the Company's Capacity Needs

Xcel points to the Commission's April 15, 2022 Order approving Xcel's 2020-2034 IRP Order as one criterion for establishing the need for the Project:

Approximately 720 megawatts of company-owned solar-powered generators to fully reutilize the interconnection capacity to be made available following the retirement of the Sherco Unit 2—460 MW of which could come from the proposed Sherco Solar project if approved by the Commission.²¹

The Commission's IRP Order also authorized Xcel to procure resources following the Modified Track 2 acquisition process, which is what the Company employed to select Sherco Solar. According to Xcel, Sherco Solar compares favorably not only to the other bids in that RFP, but also all other projects in the Upper Midwest for which there is publicly available pricing information.

C. Sherco Solar is Least-Cost

Xcel noted that, if approved, Sherco Solar would be the least-cost solar resource in all of the Northern States Power (NSP) system; it would have a lower cost on an LCOE basis than any other solar facility currently operating on the NSP system; and the price would be approximately half the price of the average Community Solar Garden (CSG) project.

Xcel also made comparisons to other projects with which there is publicly available information. For example, as noted previously, a WPL project has encountered similar supply chain constraints. In May 2020, WPL requested approval for an initial tranche of 675 MW of solar spread across six different sites, with an estimate of \$1,277/kWac (as shown in Table 1 of Xcel's initial filing). Since that time, WPL requested approval for a second tranche of its solar projects, made up of 414 MW of solar resources, with an estimate of \$660 million, or \$1,594/kWac (excluding AFUDC).

Also, Xcel stated that "recent industry data on PPA prices is consistent with our updated pricing for the Project. Edison Energy's Q1 2022 Renewables Market Update – which was released before the announcement of the DOC's investigation – found that solar PPAs in MISO included

²⁰ Ibid.

²¹ Commission, Order, Integrated Resource Plan proceeding (Docket No. 19-368), April 15, 2022.

projects priced at approximately \$60/MWh and, in PJM and SPP, there were projects well above \$60/MWh.”²²

Reasons cited for recent increases in solar projects include: global supply chain shortages, rising commodity prices, transmission constraints, interconnection process delays, and an overall inflationary environment, which have collectively led not only to increases in costs but project delays and/or project failures.

D. Cost Recovery

As noted above, Xcel worked with the Department to incorporate several customer protections, and the Department indicated its support for the Project and recovery through the RES Rider. Specifically, Xcel agreed to compare the revised pricing presented in the Supplement Filing to its August 1, 2022 RFP and impose a price cap that ensures the Project would have been selected in the RFP. Xcel detailed its agreement with the Department in the excerpt below. In bold font, staff highlighted crucial elements of the proposal, which staff will revisit in the Staff Analysis section.

1. If the forthcoming RFP does not result in sufficient projects to meet the need identified in Order Point 2.a.5 of the IRP Order without also constructing Sherco Solar (in other words, if less than 300 MW of company-owned projects interconnecting at Sherco and an additional 600 MW of solar resources unconstrained by interconnection location or ownership **pass through both the completeness and threshold reviews of the RFP**, excluding those that are not selected for shortlisting by the Company due to factors outside the Company’s control (e.g., the bidder opts to sell the project or energy from the project to a different party)), such that Sherco Solar would have been selected in the RFP were it to be bid in, **then rider recovery for Sherco Solar is capped at the revised pricing discussed in this filing.** *(Emphasis added by staff.)*

2. If the forthcoming RFP results in sufficient projects to meet the need identified in Order Point 2.a.5 of the IRP Order without also constructing Sherco Solar (in other words, if 300 MW or more of company-owned projects interconnecting at Sherco and 600 MW or more of additional projects unconstrained by interconnection location or ownership pass through both the completeness and threshold reviews of the RFP, excluding those that are not selected for shortlisting by the Company due to factors outside the Company’s control), **then rider recovery for Sherco Solar is capped at the lower of the dollar per kw of (1) the revised pricing discussed in this filing or (2) the highest-priced completed project selected in the RFP** (meaning, on time, all proposed MW, using union labor), thereby ensuring customers only pay costs for Sherco Solar at an amount that would have been selected in the RFP.²³ *(Emphasis added by staff.)*

²² Supplemental Filing, at 7.

²³ Supplemental Filing, at 10-11.

X. Comments

Subsequent to the Process Order and Xcel's July 9, 2021 compliance filing, Initial Comments were received by November 16, 2021. Several comments provided additional comments following Xcel's July 27, 2022 Supplemental Filing. In total, the following parties filed comments:

- Becker Township;
- Center for Energy and the Environment;
- City of Becker;
- Department of Commerce (Department);
- LIUNA Minnesota & North Dakota (LIUNA);
- Institute of Local Self-Reliance (ILSR);
- International Brotherhood of Electrical Workers 292;
- IUOE Local 49;
- North Central States Regional Council of Carpenters; and
- Office of the Attorney General (OAG)

Participant and public comments were also filed by:

- R.D. Offutt Farms;
- Big Lake Sno Cruisers;
- Clear Lake Township Board,
- L. Gallus;
- Kendra Jaeger;
- Kevin and Jean Goenner;
- Pillsbury United Communities; and
- Unido MN.

A. *Department of Commerce*

1. November 10, 2021 Comments

In its initial, November 10, 2021 comments, the Department concluded that Sherco Solar would be consistent with the generic size, type, and timing proposed by the Department in the IRP – which was a pending matter at the time of the Department's Initial Comments – as long as the pricing is reasonable.

In the IRP proceeding, the Department ran several scenarios and ultimately proposed a preferred case referred to as "Scenario 11." For the Sherco Solar proceeding, the Department ran Scenario 11 with and without Sherco Solar and presented the results in Table 2 below. Table 2 shows that Sherco Solar "consistently raises PVSC, by between \$175 million and \$250 million in the base case and various contingencies."^{24,25}

²⁴ Department staff, November 10, 2021 comments, at 12.

²⁵ Staff notes that the upper bound – the approximately \$250 million that Sherco Solar raises the PVSC – occurs in

Table 2: System PVSC (\$ Million)

	Scenario 11	Scenario 11 w Sherco Solar	Difference
Base Case	\$36,479	\$36,660	\$181
B-Low Gas, Market	\$36,432	\$36,646	\$214
C-High Gas, Market	\$36,186	\$36,412	\$226
D-Low Load	\$35,603	\$35,854	\$251
E-High Load	\$37,307	\$37,504	\$198
H-High Ext, High Reg	\$37,841	\$38,016	\$175
I-Low Externality	\$35,975	\$36,175	\$200
J-Low Ext, Low Reg	\$35,091	\$35,276	\$185
K2-Mid Externality	\$38,745	\$38,939	\$194
L-High Externality	\$41,672	\$41,861	\$188
M-No Externality	\$34,056	\$34,258	\$202
W-Low Wind	\$36,142	\$36,386	\$245
X-High Wind	\$36,688	\$36,895	\$206
Y-Low Solar	\$36,197	\$36,455	\$258
Z-High Solar	\$36,718	\$36,827	\$109

According to the Department, its EnCompass analysis “demonstrates that Xcel’s proposed Project will create a significant cost increase for the Company’s ratepayers.”²⁶ As one possible explanation for this result, the Department discussed Xcel’s solar RFP, which “was designed with significant limitations on the point of interconnection (POI).”²⁷ The lack of competition resulted in a price that was above the prices the Company expected in the IRP. Therefore, the Department recommended – initially – that Xcel should be allowed to re-submit the Sherco Solar bid in a new RFP process.

2. August 17, 2022 Comments

Following the Commission’s April 15, 2022 IRP Order, and with Xcel’s agreement to impose a price cap based on the results of the August 1, 2022 solar RFP, the Department is satisfied with Xcel’s proposal, and it resolves their previous concerns. The Department also agrees with Xcel that requiring the Sherco Solar project to join the upcoming RFP would “result in an unreasonable delay in project construction.”²⁸

Additionally, the Department states that they have been charged by statute to promote renewable energy wherever possible, and they believe that delaying this project could make community members, who have spent significant time and effort on the project, frustrated. The Department worries that frustration can extend to clean energy generally and lead to

the “Low Load” contingency. The Department argued in the IRP that Xcel’s load forecast was “systematically biased” and overstated its resource need.

²⁶ Id, at 13.

²⁷ Department, November 10, 2021 comments, at 19.

²⁸ Department, August 27, 2022 comments, at 4.

resentment.²⁹ The Department believes that Sherco Solar provides “economic development that is targeted to the impacted community, provides high-quality jobs to workers impacted by transitions away from fossil fuel use, provides some tax revenue replacement, and reutilizes existing infrastructure” and can help “[smooth] this difficult economic transition.”³⁰

The Department recommends that the Commission approve Xcel’s request to build, own, and operate the proposed Project, subject to conditions and updated information from the Company’s July 27, 2022 Supplemental Filing.

The Department recommends that the Commission approve Xcel’s proposed approach of recovering project costs through the RES rider, with the clarification that any recovery through the RES Rider will require a separate determination that the project is eligible.

Lastly, the Department recommends the following ratepayer protections:

- a) Xcel must justify any costs (including operations and management expense, ongoing capital expense – including revenue requirements related to capital included in rate base – insurance expense, land-lease expense, and property/production tax expense) that are higher than forecasted in this proceeding
- b) Ratepayers will not be put at risk for any assumed benefits that do not materialize.
- c) Xcel customers must be protected from risks associated with the non-deliverability of accredited capacity and/or energy from the proposed Project, other than non-deliverability caused by weather. The Commission may adjust Xcel’s recovery of costs associated with this proposed Project in the future if actual production varies significantly from assumed production over an extended period, for reasons other than those related to weather.
- d) The Company must report in its fuel clause filing and annual automatic adjustment filings the amount of any curtailment payments, along with explanations for the curtailments, for the proposed Project
- e) The Company must clearly account for all costs incurred for the proposed Project
- f) The Company must report quarterly, until the proposed Project is in service, project failures along with the options available to the Commission to remedy any failures that occur
- g) Report on how the proposed Project as built is consistent with the information requested in the Commission’s May 20, 2020, notice issued in Docket No. E,G-999/CI-20-492 (the COVID Relief docket).

B. Becker Township

In its April 30, 2021 filing, the Township of Becker (the Township) provided comments indicating significant public safety and mobility hazard concerns regarding the proposed solar project on the Town's transportation system.

²⁹ Department, August 27, 2022 comments, at 4.

³⁰ P. 5, The Department, Initial, 8/27/22

Specifically, the Township noted that the Project's magnitude, scope, and type of use proposed essentially preempts the Town's local land use plan, transportation plan, and zoning ordinance, by developing over 1,200 acres of land within the Township, and 3,400 continuous acres by affecting potential development of remaining land.

Additionally, the Township had significant safety concerns regarding the Project. There are concerns that land south of Highway 10 will be locked into unsafe access by the Project's development, and would require a thoughtful determination of a network of roads. The Township requests the Commission address the options already considered by the Township and other options to address its safety and mobility concerns.

According to Xcel's July 27, 2022 Supplemental Filing, the Company worked with Becker Township and the City of Becker to gain their support of the Project.

C. Big Lake Sno Cruisers

In Public Comments filed May 20, 2021, Big Lake Sno Cruisers indicated its support of the Sherco Solar project and the regular contact it has had with Xcel regarding snowmobile trail reroutes associated with activities at the current Sherco Plant, in addition to planning for the proposed Solar Project.

D. Center for Energy and the Environment

CEE recommended the Commission approve Sherco Solar with modifications to address siting concerns raised by the City of Becker. CEE stated that Sherco Solar draws on many of the best practices and recommendations from CEE's Minnesota Host Community Study, the Midwestern Governors Association's work on power plant communities under the leadership of Minnesota Governor Tim Walz, and the Energy Utility Diversity Stakeholder group report.³¹

E. Clean Energy Organizations

Fresh Energy, Clean Grid Alliance, Minnesota Center for Environmental Advocacy, and the Sierra Club, or "Clean Energy Organizations" (CEOs) filed brief comments in support of Xcel's proposal in the updated July 27, 2022 filing.

The CEOs argue that the project should be evaluated in the context of the current market which has seen inflated costs. These parties also point to the use of union labor, and use of Xcel's diversity workforce pilot as reasons for the Commission's approval of the Sherco project for near-term solar in accordance with Xcel's approved resource plan.

F. Clear Lake Township Board

In its May 25, 2021 Comments, Clear Lake Township Board indicated its support of the Sherco Solar project and noted that it had no issues with the proposed site or route permits.

³¹ <https://www.leg.mn.gov/docs/2020/mandated/200077.pdf>

G. City of Becker

In its April 30, 2021 filing, the City of Becker (the City) provided comments indicating significant concerns regarding the proposed solar project on the City's economic development. The City also noted continued interest in all Sherco Solar dockets including West 345 kV transmission line, Docket No. E-002/TL-21-189, The East 345 kV transmission line, Docket No. E-002/TL-21-190, and the Site Permit for 460 MW solar installation, Docket No. E-002/GS-21-191.

The City first noted that it stands to lose 75 percent of its property tax base with the decommissioning of the Sherco coal-fired units and has been implementing a strategy of replacing this loss in tax revenue with tax revenue generated by private redevelopment. This development is accompanied by new infrastructure such as new water and sewer mains around the City's Business Park and investment of commercial and industrial development of Energy Drive on the eastern portion of the Sherco Project. The City asserts that the Project "includes properties abutting the City's new infrastructure that would easily and logically be expected to develop and connect thereto." This has the potential for blocking industrial growth and development adjacent and limiting the benefits received from these significant state and local infrastructure investments to the detriment of the City's residents and businesses.

However, as noted above, according to Xcel's July 27, 2022 Supplemental Filing, the Company worked with Becker Township and the City of Becker to gain their support of the Project. Also, in the Site Permit docket (Docket No. E-002/GS-21-191), the City stated:

The City of Becker had previously narrowly objected to the inclusion of certain parcels abutting the City of Becker's corporate boundary in the Sherco Solar project. Through collaborative discussions with the applicant, Xcel Energy, the City of Becker has been able to resolve its concerns, and now joins Xcel Energy in requesting that Xcel Energy be issued a site permit and two route permits consistent with Site Alternative 1A, as detailed in a joint letter of today's date from Xcel Energy and the City of Becker.

H. Institute for Local Self-Reliance

Institute for Local Self-Reliance (ILSR) recommended the Commission require Xcel to start the bidding process over and obtain proposals for utility-scale solar projects with more reasonable costs, arguing that Xcel's RFP was poorly structured; resulted in unreasonable costs, and disproportionately benefitted shareholders. ILSR agreed that company-owned projects can provide benefits such as union employment, but asking customers to pay a premium for these benefits must be reasonable and transparent.

I. International Brotherhood of Electrical Workers (IBEW) 292

IBEW Local 292 is fully supportive of the proposal. IBEW states that the project would potentially create jobs for their members in Becker and that they are trained and ready to work

on the project.³² The group states that “the Residents living near the proposed facility, and the general public, should expect a safe, reliable, and high-quality installation.”³³

IBEW also recommends the Commission make the project follow the Minnesota State Building, Construction and Electrical codes and standards as well as the requirements for local worker hiring and registered apprenticeship programs. They believe doing so will be the best investment for the Residents of Minnesota and the most responsible way to spend rate payers’ money.

J. International Union of Operating Engineers Local 49 (IUOE 49)

IUOE 49 reaffirm their support for the Sherco Solar project and expresses appreciation for the work of the Department of Commerce and Xcel Energy in arriving at an agreement that includes important protections for ratepayers.³⁴

K. IUOE Local 49

IUOE Local 49 supports Xcel’s commitment to using union labor on the Project and the Workforce Training Development, which IUOE Local 49 advocated for. IUOE Local 49 stated the Project “will help prepare more women, people of color, and veterans for apprenticeship opportunities doing energy work in the construction industry.”³⁵

L. Kendra Jaeger

On June 1, 2021, Public Comments from Kendra Jaeger and Mike Braddock, landowners adjacent to the Solar Project, were filed in support of the Project. The comments pointed to the environmental benefits and economic opportunities of the project.

M. Kevin and Jean Goenner

On June 9, 2021, Public Comments were filed on behalf of participating landowners Kevin and Jean Goenner. The Comments supported the project as an opportunity to provide stable income, preserve the participating land for future generations, and support the use of renewable resources.

N. LIUNA

LIUNA supports the Sherco Solar project, believing that while their members are worried they will lose work in the coal fired power facility, this project could provide “a chance for some of these members to direct their careers toward renewable energy work.”³⁶ LIUNA also believes

³² P. 1, IBEW Local 292, 11/2/21

³³ P. 2, IBEW Local 292, 11/2/21

³⁴ P. 1, IUOE, Initial, 8/17/2022

³⁵ IUOE Local 49 comments, at 1.

³⁶ P. 1, LIUNA, 11/10/21

the project can “maximize the socioeconomic benefits of utility investments in renewable energy by providing pathways to the middle class for communities that are underrepresented in construction and energy employment.” LIUNA also thinks the project, being close to working-class communities of color in the Twin Cities and St. Cloud, is an ideal vehicle to advance workforce and equity goals.

O. North Central States Regional Council of Carpenters

The North Central States Regional Council of Carpenters (NCSRCC) provided comments filed April 11, 2022, supporting Commission approval of the Project. The NCSRCC supports approval for the opportunity to provide a renewable energy project in the Becker community that will create good paying jobs for coal construction workers.

The NCSRCC also cites Xcel’s commitment to give minority business contractors preference and utilize the Commission approved Workforce Training Development Program to provide industry training and support women, veterans and BIPOC in the project’s construction.

P. Office of the Attorney General

On November 10, 2021, the OAG filed comments requesting that the Commission not approve the Sherco Solar project and instead require Xcel to issue a new solar RFP without ownership or geographic limitations. The OAG cited the high anticipated cost of the project and asked the Commission to take steps to insure that Xcel’s customers are not overpaying for new solar generation.

On August 17, 2022, the OAG filed comments generally supporting Xcel’s proposal with some minor changes to one portion of the proposal are essential in order to protect ratepayers.

The OAG supports Xcel’s proposed cap on the project limited by the results of the RFP process in the Commission-ordered 2020-2034 resource plan. The OAG finds the limitations of the project’s costs to be reasonable to protect the interests of ratepayers subject to the following modifications: (1) changing the language regarding company-owned projects from 300 MW to 260 MW to align with the IRP order; and (2) the Commission should calculate the cost cap using project costs per kWh instead of kW. The OAG provides redlined language outlining their proposed changes.

The OAG reasons the first change is because the IRP order approved acquisition of “[a]pproximately 720 megawatts of company-owned solar-powered generators [...] 460 MW of which could come from the proposed Sherco Solar project if approved by the Commission.” Thus, if the Sherco Solar project is approved, the Company would need to procure approximately 260 MW of company-owned solar, not 300 MW (720-460=260 MW).

The OAG reasons the second change would result in several benefits to ratepayers. First, it may be more consistent and accurate to compare kWh costs, as kW costs are subject to considerations like capacity factors even while kWh costs are levelized across projects. Using kWh may result in cost savings for ratepayers. Additionally, basing the cost cap on kWh would potentially allow a PPA to set the cost cap.

OAG indicates that a cost cap is reasonable for this docket, but takes issue with the Xcel's Supplemental Filing, and statements therein which are not based in the record. For example, the characterization of the Sherco Solar RFP process as "successful" is inaccurate, because the RFP process was severely restricted and as a result the only conforming bid was the Company's own.

Q. Pillsbury United Communities

On April 6, 2022, Pillsbury United Communities filed Public Comments in support of the Sherco Project, citing environmental and economic benefits of the project, including a benefit to Sherco Plant workers in transition to solar plant development.

R. R.D. Offutt Farms

On May 18, 2021, August 6, 2021, and April 5, 2022, Public Comments were filed on behalf of R.D. Offutt Farms (RDO), which has a farm located in Becker Township, Minnesota. In the May, 2021 Comments, R.D. Offutt Farms indicated its support for the Sherco Solar project, indicating its agreement to participate in the project, investing 1,500 acres of farmland for conversion to host solar panels.

In the August 6, 2021 comments, RDO offered comments concerning the City of Becker's Comprehensive Plan, and specifically the inclusion of a Business Park expansions. RDO asserts that while an easement was agreed to for the Sherco Solar project, other economic development and public road development projects were not discussed.

In its April 5, 2022 Public Comments, RDO indicated its continued support for the Sherco Solar project and indicates that if the project does not move forward, the land leased on RDO's farms will be used to continued agricultural production.

This letter was also filed as a Public Comment by Lawrence Gallus, Trail Coordinator at Big Lake Sno Cruisers, on May 26, 2021.

S. Unidos MN

On April 14, 2022, Public Comments were filed by Unidos MN, which support the Company's Proposal for its role in the transition to renewable energy, and its potential to provide economic opportunities for BIPOC communities in the Twin Cities. Specifically, Unidos MN asserts that the project will result in opportunities for people of color, women, immigrants, and other represented groups, to pursue careers in the energy industry.

XI. Xcel Reply Comments

A. Inflation Reduction Act

On August 16, 2022, the President signed into law the Inflation Reduction Act (IRA), which proposes important tax changes to spur U.S. clean energy production. On page 5 of Xcel

Energy's August 23, 2022 Reply Comments, the Company provided a very preliminary estimate on the potential impact of the IRA:

Specific to Sherco Solar, we currently estimate that passage of the IRA could lead to incremental customer savings of 20 percent or more compared to estimates provided in our July 27, 2022 Supplemental Filing.

However, in Xcel's August 31, 2022 response to PUC Information Request No. 11, Xcel updated its estimate, stating that savings may actually be greater than the estimate from the Company's Reply Comments:

Since filing our supplemental comments, we have continued to refine our analysis and currently estimate incremental customer savings of approximately 32 percent compared to estimates provided in our July 27, 2022 Supplemental Filing, resulting in an estimated levelized cost of energy (LCOE) of **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]**. This LCOE estimate assumes that the Project qualifies for the 10-year full Production Tax Credit (PTC) plus the 10 percent bonus credit under the "Energy Community" provision of the IRA, related to the Project being located at the Sherco site in Becker. It also assumes the sale/transfer of PTCs at an estimated 5 percent cost, with the net benefit passed on to customers. We note, however, that while we believe these are reasonable assumptions for a likely LCOE for the Project, they all involve a level of uncertainty. For example, it is possible that our sale of PTCs may involve higher costs. Therefore, as an additional reference point, we highlight that the incremental savings would be reduced to approximately 27 percent (or an LCOE of **[PROTECTED DATA BEGINS PROTECTED DATA ENDS]**) without the bonus credit, and assuming a higher sale/transfer cost of 10 percent.

B. Response to OAG

Xcel opposes the OAG proposed modifications to (1) change the language regarding company-owned projects from 300 MW to 260 MW to align with the IRP order; and (2) calculate the cost cap using project costs per kWh instead of kW.

Regarding the first proposed modification, Xcel asserts the proposed revision to be based on 260 MW of potential projects interconnecting rather than 300 MW is not necessary. Specifically, Xcel asserts the additional 40 MW is an appropriately conservative estimate of additional resources to fill the remainder of Sherco 2's interconnection which provides insurance against potential size and scope modifications, the possibility that any individual project in the upcoming RFP does not materialize and protects consumer interests because any additional MW can go toward requirements for fulfilling the Sherco Unit 1 interconnection when that unit retires in 2026. Xcel also notes that the inherent flexibility in resource plans allows for variation in actual power production from year to year.

Regarding the latter proposed modification, Xcel asserts that the cost cap would most accurately be set at a per-kW basis, instead of the kWh basis articulated by the OAG. Xcel provides two reasons in support of its assertion.

First, the OAG's recommendation would allow the Commission to compare Sherco Solar to PPA's and thus allow a PPA to potentially set the cost cap. Xcel argues that PPAs cannot fulfill the interconnection reuse plans at Sherco and the Commission has thus approved Company ownership of resources needed to fulfill interconnection. Additionally, Xcel states that the full cost of a third-party-owned project is not transparent – "PPAs are routinely proposed for time periods that are shorter than the full life of a project" and "the price of the PPA may reflect the owner's full revenue requirement over the life of the system, or it may be something higher or lower than the full LCOE of the project" depending on the owner's bidding strategy and other assumptions.³⁷ As such, Xcel argues that a dollar/MWh from PPA bids is not directly comparable to projects the Company will own.

Second, Xcel asserts a per-kW price cap is straightforward and fully aligned with how Sherco will be recovered from customers in rates. Additionally, a per-kWh cost is subject to change based on weather and other factors, and may result in a moving target. Further, Xcel argues that the OAG has not explained how a cap could reasonably be implemented on a kWh basis, and that any concerns on assumptions about the Project's efficiency can be addressed by the additional customer protections proposed by the Department.

³⁷ Xcel reply comments (August 23, 2022), at 3.

XII. Staff Analysis

Overall, the socioeconomic benefits of the Project are undisputed. Moreover, all parties (and staff) agree that Sherco Solar is consistent with Order Point 2.A.5 of the Commission's IRP order. This leaves four central questions for the Commission to consider:

1. Are the Project's costs reasonable?
2. If the Project's costs are too high, do the socioeconomic benefits outweigh the cost premium?
3. Is there too much downside risk in not approving Sherco Solar at this time? (For example, could additional process, such as requiring Sherco Solar to be bid into another RFP, risk meeting an identified need?)
4. To what extent should the recent passage of the IRA factor into the Commission's decision, and if it does, how should this be reflected in cost recovery, if at all?

A. Consistency with Xcel's Approved IRP

The Supplemental Filing lists at least six benefits that the Sherco Solar Project will provide: 1) Company-ownership; (2) job creation and socioeconomic benefits to the region; (3) a Workforce Development and Training pilot program; (4) minimal impact to prime agricultural land; (5) avoided pollution; and (6) studying ecosystem benefits of solar projects.

Xcel further argued that Sherco Solar is consistent with the Company's recently-approved IRP, and the Project is needed to meet the Company's capacity needs in the mid-2020s. Specifically, Order Point 2.A.5. of the Commission's IRP Order stated:

5) By 2026 Xcel shall acquire –

A) Approximately 720 megawatts of company-owned solar-powered generators to fully reutilize the interconnection capacity to be made available following the retirement of the Sherco Unit 2—460 MW of which could come from the proposed Sherco Solar project if approved by the Commission—and

B) An additional 600 MW of solar resources unconstrained by interconnection location or ownership.

Sherco Solar will be company-owned, reutilize existing interconnection capacity, and be able to come online by the end of 2026. Therefore, Sherco Solar clearly meets all requirements listed in Order Point 2.A.5.

Staff also believes consideration should be given to the potential challenges in developing 1,300 MW of new solar over the next four years. Sherco Solar itself will involve installing panels across roughly 3,500 acres of land and constructing two 345-kV transmission lines. Therefore, staff agrees with Xcel that, with future plant retirements and an associated capacity need, adding further process does carry some downside risk.

Staff also agrees with Xcel's arguments regarding ongoing interconnection issues in MISO. Xcel referenced Elk Creek Solar as a cautionary tale about possible project delays associated with interconnection. The Commission approved Elk Creek Solar in June 2019, and since that time, there were significant delays in the MISO GIQ that resulted in Xcel requesting, in a November 2021 letter, to temporarily suspend the Renewable*Connect Modifications docket, due to project delays resulting from Elk Creek Solar.

Having said that, the need for Sherco Solar was established by the Xcel's 2020-2034 IRP, and the justification for the amount of solar approved in the IRP depended on a range of assumptions to conduct the analysis. To say that a resource is "consistent with the IRP" implies that the resource is consistent with those assumptions, and the revised pricing of Sherco Solar described in Xcel's July 27, 2022 Supplemental Filing is, on an LCOE basis, outside of the range of sensitivities examined—in other words, the revised pricing is above the High Solar Price sensitivity, which is cause for concern.

B. Project Price

As shown below in an excerpt of the staff briefing papers for Xcel's IRP,³⁸ which collected information from Tables 21 (base), 22 (low) and 23 (high) of Xcel's June 25, 2021 IRP Reply Comments, the LCOE for Sherco Solar is well-above the range of sensitivities considered in Xcel's EnCompass analysis used to develop its Alternate Plan:

Table 24: Sherco and King Gen-Tie Solar
LCOE by Year (\$/MWh)

COD	Low	Base	High
2024	\$25.43	\$33.56	\$38.88
2025	\$25.97	\$35.19	\$41.80
2026	\$28.98	\$40.38	\$49.20
2027	\$27.96	\$40.14	\$50.18
2028	\$26.90	\$39.87	\$51.19

Xcel also evaluated generic solar units, based on the 2019 NREL ATB. The two takeaways are that (1) Sherco Solar, even before the revised pricing, is still above the high end of the sensitivity analysis, and (2) Xcel assumed that Sherco gen-tie solar would be significantly lower in cost than a generic solar unit.

³⁸ Staff briefing papers, at 41-42.

Utility-Scale Solar
LCOE by Year (\$/MWh)

COD	Low	Base	High
2024	\$38.49	\$46.62	\$51.94
2025	\$39.29	\$48.51	\$55.12
2026	\$42.57	\$53.97	\$62.79
2027	\$41.82	\$53.99	\$64.04
2028	\$41.04	\$54.01	\$65.32

Notably, the Department’s analysis in the IRP found that EnCompass was very sensitive to small increases in solar prices:

[S]mall increases in solar prices have a large impact, eliminating near term (through 2024) solar acquisitions. For the near-term decisions, which are all that matter since additions in later years will be reviewed in future resource plans, Department Staff concludes that small decreases in solar prices do not have a significant impact. However, **small increases are significant and should be taken into account in the subsequent resource acquisition proceeding.**³⁹ *(Emphasis added by staff.)*

Xcel and the CEOs argued that the higher cost is not specific to Sherco Solar, but to the industry as a whole. As such, the Project should be evaluated in the context of the current market. Furthermore, Xcel argued that the IRA will significantly mitigate the ratepayer impact. These are fair points, but if the expectation is that everything will be more expensive than expected, staff is concerned about the cumulative impact on rates in acquiring more than 1,300 MW of solar, plus constructing transmission lines. Moreover, only Xcel produced an IRA, and Xcel acknowledged that its assumptions “involve a level of uncertainty, and that “these estimates are dependent upon current interpretation of IRS guidance and expectations regarding the PTC transfer market.”⁴⁰

C. Xcel’s Justifications for Project Costs

This section provides additional context and analysis of some of the arguments made by Xcel:

- Xcel argued there are factors specific to the Sherco Solar project, such as the cost of acquiring land, that are likely to vary from the NREL ATB assumptions.

In Xcel’s July 9, 2021 compliance filing, Xcel explained that “generic representations of solar resources in our IRP modeling are intended to be broad and based on publicly available sources, and as such, they make certain generalizing assumptions regarding inputs that affect the LCOE

³⁹ Docket No. 19-368, Department of Commerce comments, p. 42.

⁴⁰ Xcel response to PUC Information Request No. 11.

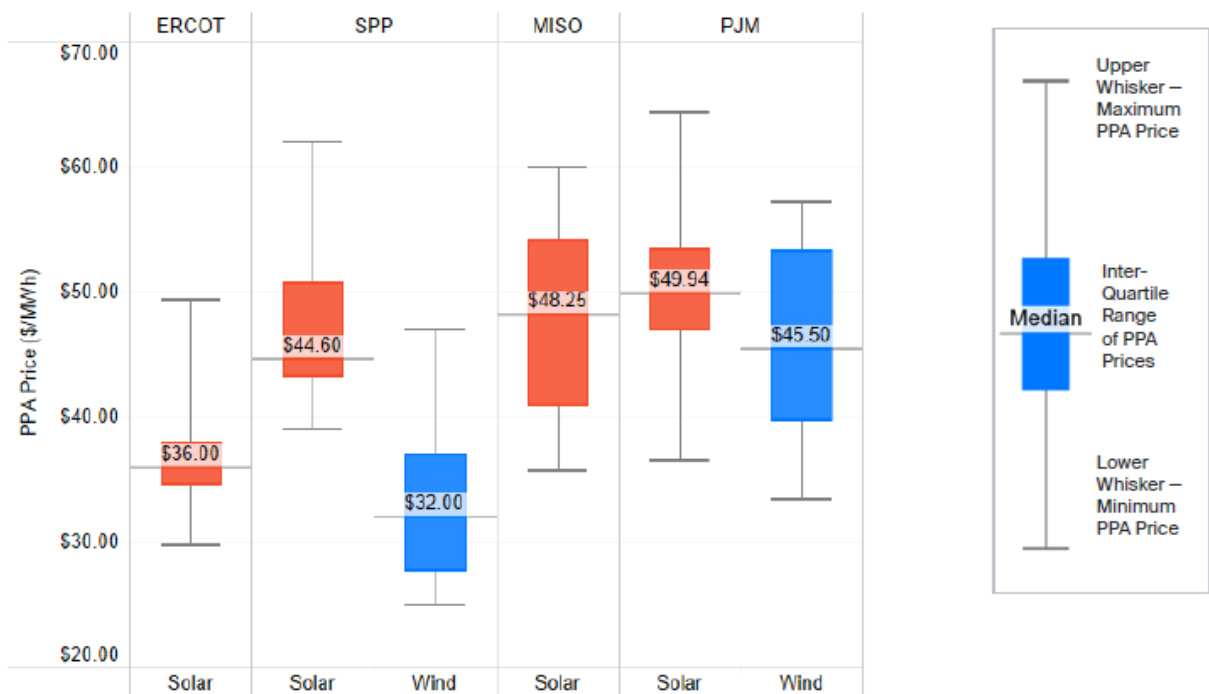
and, therefore, **are not intended to perfectly align with project and regionally specific inputs.**⁴¹ (*Emphasis added by staff.*)

The issue is not that the generic assumptions do not “perfectly align” with Sherco Solar; it is the LCOE is above the range.

- Xcel cited an Edison Energy’s Q1 2022 Renewables Market Update to show that solar PPAs in MISO included projects priced at approximately \$60/MWh.⁴²

Xcel cited the Edison Market Update to justify the Project’s price, but Xcel did not include the range of pricing from that update—Xcel only mentioned the maximum PPA price. Figure 4 of the Edison Market Update – which was not included in the Supplemental Filing – is shown below.

Figure 4. Current PPA Prices: Q1 2022



What Xcel neglected to acknowledge was that the median solar PPA price in MISO in Q1 2022 was \$48.25/MWh, and the lower end of the range was roughly \$38/MWh. In other words, the most accurate way to characterize the Edison Market Update would be that Q1 2022 solar PPA prices in MISO ranged from roughly \$38/MWh-\$60/MWh, with \$48.25/MWh being the median price.

- Xcel argued Sherco Solar will be the lowest-cost solar resource on its system on an LCOE basis and roughly half the cost of CSG.

⁴¹ July 9, 2021 compliance filing, at 11.

⁴² Supplement, at 7.

Setting aside Elk Creek Solar, which was approved at a much lower LCOE than Sherco Solar but is not yet in-service, Xcel is correct that Sherco Solar would have a lower LCOE than CSG and other approved utility-scale projects. However, these comparisons have limitations. First, staff does not believe CSG is an apples-to-apples comparison to a 460 MW solar facility. Moreover, Xcel has not acquired any utility-scale solar projects in several years, which means the precipitous decline in solar prices over time has been largely ignored.

After the SES was passed, Xcel issued an RFP for up to 100 MW of utility-scale solar generation in April 2014. Xcel later received Commission approval for three solar PPAs selected from that RFP process – North Star Solar (100 MW), Marshall Solar (62.5 MW), and MN Solar I (24.75 MW)⁴³ – at an average price of \$73.20/MWh, in 2014 dollars. So while it is true that Sherco Solar is less expensive than these PPAs on a levelized cost basis, comparing the LCOE of Sherco Solar to smaller-sized PPA bids from 2014 both discounts the economies of scale from larger projects and the maturity of the solar industry since that time.

- Xcel argues that four solar projects in Wisconsin justify the reasonableness for the costs of Sherco Solar.

Table 1 of Xcel’s initial filing, shown on page 8 of the briefing paper, compares Sherco Solar to four solar projects in Wisconsin on a \$/kWac basis. Staff does not have enough information about these projects to assess their applicability to Sherco Solar, but based on a limited review, two of the projects are solar-battery projects, and the Badger Hollow II project includes the capital cost of “the solar facilities, transmission tie-in equipment and owners’ costs,”⁴⁴ which may be very different than Sherco Solar. Thus, staff does not believe there is enough information to conclude the Wisconsin projects reflect the broader solar market.

- Xcel argues that Sherco Solar was the least-cost resource in the RFP in which it was selected.

Sherco Solar was least-cost in the RFP because it was the *only* project that qualified under the RFP parameters. Previous arguments made by parties and staff concluded that the RFP that resulted in Sherco Solar was not an effective, market-based competitive process and had very little participation.

- Sherco Solar is better than alternative resource types.

Xcel argued that Sherco Solar is better than alternative resource types such as natural gas. This could be true, but what “alternative resource types” means is open for debate. For example, Xcel is claiming that without Sherco Solar, Xcel would need to procure natural gas resources. But in the IRP, it was argued that Xcel’s load forecast was too high, so Xcel’s resource need might not be as significant as the Company claims it to be (by the Department, OAG, and Sierra

⁴³ MN Solar I later exercised its right to terminate its PPA.

⁴⁴ Joint Application of Madison Gas and Electric and Wisconsin Electric Power Company Docket: 5-BS-234 for Approval to Acquire Ownership Interests in the Badger Hollow II Solar Electric Generating Facilities <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=373357>

Club), and that Xcel's distributed solar and CSG forecasts were unreasonably low (by Sierra Club and the Distributed Solar Parties). Therefore, there was evidence in the IRP record that natural gas resources were unlikely to be selected, even without Sherco Solar, but distributed solar could offset the need for some of the large-scale solar acquisitions, and if Xcel over-forecasted its need, solar acquisitions could be delayed. To be clear, this is not what the Commission decided in the IRP; staff is merely stating that without Sherco Solar, it is not necessarily the case that Xcel will need to add natural gas resources.

D. Cost Recovery

1. Cost Cap

Xcel proposes a price cap that allows full recovery of costs at the revised pricing if the Project would have been selected in the August 1, 2022 RFP, which could occur in two different ways:

1. If the RFP does not result in sufficient projects to meet the amount of solar in Order Point 2.A.5., then cost recovery is capped at the revised pricing, or,
2. If the RFP does result in sufficient projects to meet the need identified in Order Point 2.A.5, then rider recovery for Sherco Solar is capped at the lower of the dollar per kW of (1) the revised pricing or (2) the highest-priced completed project selected in the RFP.

Staff acknowledges that it is highly speculative to make assumptions about the outcome of the solar RFP. Nevertheless, staff believes it is prudent to consider the likelihood of these two outcomes in order to assess whether these cost caps are indeed ratepayer protections. In doing so, staff considered the fact that past market-based, unconstrained competitive bidding processes have received ample interest. For instance, in Xcel's 2014 solar RFP, Xcel received over 100 proposals for over 2,100 MW of solar capacity from 36 developers. In Xcel's 2016 wind RFP, the Company received proposals from 17 bidders for 48 different wind projects, amounting to 9,956 MW of total proposed wind resources.⁴⁵ If there is similar interest in Xcel's August 1, 2022 solar RFP, insufficient projects might not be a concern.

Staff then considered Xcel's proposal to cap cost recovery at the lower of the dollar per kW of (1) the revised pricing or (2) the *highest*-priced completed project selected in the RFP. Xcel may need to elaborate on this cost cap design because staff does not see how comparing Sherco Solar to the highest-priced complete project is a ratepayer protection. Since Xcel is soliciting bids for projects as low as 5 MW, whose capital cost per kW would presumably be higher than for a larger project like Sherco Solar, Xcel is likely to be capped at the revised pricing (since it would be the lower dollar per kW amount). If not, and Sherco Solar is the highest-priced project, it would still be capped at the revised pricing.

One way to address this would be to allow cost recovery based on the median-priced completed project selected in the RFP.

Next, there is the issue of how to incorporate the cost savings from the IRA into the cost cap. If the IRA is a primary reason to approve the Project – and staff believes that it is – then savings

⁴⁵ Docket No. 16-777, Xcel Informational Letter—RFP Bids Received, at 1 (January 4, 2017).

from the IRA should arguably be reflected into the cap. In other words, if the revised pricing provided in the July 27, 2022 Supplemental Filing is unacceptably high, but the IRA brings the ratepayer impact down to an acceptable level, then, arguably, the allowable costs should reflect the savings from the IRA. Xcel stated that it will pass all applicable tax benefits to its customers, so either way the net cost will be the same, but staff prefers a clear, transparent financial requirement that ratepayers will receive the maximum possible benefit from the IRA. Perhaps this is incorporated into a cap, or perhaps Xcel can, in a compliance filing, submit its own proposed cost recovery method to meet this requirement.

The OAG suggests that the cost cap for the project should be set on a per kWh basis, instead of a kW basis. Staff notes that the benefit of the IRA are a reduction in per kWh costs. If the Commission agrees with the OAG to set a cost cap using a per kWh rate, then it might be easier to incorporate the IRA benefits. Having said that, it is still very difficult to decide how much IRA benefits should be incorporated, because it is in flux and speculative.

2. RFP Projects

In its price cap proposal, Xcel refers to qualifying projects to mean those that “pass through both the completeness and threshold reviews of the RFP.”⁴⁶ To add context around what this means (as staff understands it), Xcel’s evaluation and shortlisting process generally sets out a four-phase analysis process to determine the final portfolio of proposed projects. These phases include: 1) Completeness Review; 2) Threshold Review; 3) Key Parameters Review and Scoring; and 4) Portfolio Analysis.

In the Completeness Review phase, Xcel’s evaluation team first screens the bids to ensure they have complied with basic submittal requirements. If there are deficiencies, Xcel will contact bidders to notify them of the deficiency and provide an opportunity to remedy. In Xcel’s Wind Repowering RFP, for example, Xcel’s Repowering RFP yielded 11 total bids for nine distinct projects, and four of the bids were initially incomplete. However, all bidders were able to remedy the deficiencies identified in this step, and all bids moved onto the Threshold Review evaluation stage. This means that projects deemed complete does not indicate much, if anything, about those projects’ benefits to ratepayers.

In the Threshold Review stage, Xcel’s team more thoroughly evaluates each bid with respect to the RFP’s requirements. In the Wind Repower RFP example noted above, Xcel ran each individual project through a “pro forma” spreadsheet analysis, which allows the review team to screen projects for expected benefits prior to full resource planning modeling. This means that projects that pass the Threshold Review could be likely to have benefits, but are not necessarily projects that will be proposed for Commission approval.

While capping the price of Sherco Solar based on the results of the RFP, it is important to recognize that Xcel has significant power over the results of the RFP, and that it may be difficult for the Department or other intervenors to identify how that influence is applied, other than an IA report, which may not provide the level of scrutiny as a typical analysis from the Department,

⁴⁶ Xcel Supplemental Filing, at 10.

for example. At this time, it is not clear how the Threshold Review would be designed such that certain project will not move forward to the Project Scoring phase. Having said that, in the past, the Threshold Review has been a good indicator when identifying projects that are likely to result in net benefits.

3. OAG Recommendations

Before discussing the OAG's recommendations, it might be worth describing how project costs for resource acquisitions would traditionally be recovered from ratepayers. If the Commission approves recovery through the RES Rider, all costs and offsets would tracked, including:

- Capital (construction, AFUDC, etc.);
- O&M;
- Return on capital; and
- Production tax credits.

When Xcel files its next rate case, these would go into rate base, where Xcel would then (a) depreciate it over time and (b) receive a Return on capital on the non-depreciated balance. Each year, Xcel will be credited a depreciation expense which will be included in rates during a rate case and an offsetting credit will reduce net rate base. Simultaneously, the amount ratepayers pay will be reduced by the estimated amount of the tax credits as an offset. Without interference, Xcel would receive a return on the whole investment.

The OAG believes the Commission should base the cost cap on the cost per-kWh. In response, Xcel stated that "a per-kW price cap is a straightforward and final comparison point that is fully aligned to how the cost of Sherco will be recovered from customers in rates."⁴⁷ Staff agrees with Xcel's response, although the OAG's recommendation would directly incorporate the benefits from the IRA upfront.

Second, the OAG and Xcel also disagree on whether Xcel's price cap proposal should be changed from 300 MW company-owned projects to 260 MW (720 MW from the IRP - 460 MW from Sherco Solar = 260 MW from the RFP), since 260 MW aligns with the remainder of company-owned capacity interconnecting at Sherco.

Staff supports the OAG's recommendation to modify the language from 300 MW to 260 MW due to concerns over cost, and because reducing the target likely has no impact on Xcel's ability to bring forward projects that are cost-effective. In fact, proposing higher-than-anticipated amounts is common. For instance:

- In February 2014, Xcel issued a solar RFP for 100 MW of solar to comply with the SES, and Xcel received approval for a portfolio of 187 MW of solar resources.
- In February 2013 – before its 2011-2025 IRP was even approved – Xcel notified the Commission of its intent to issue a 200 wind RFP. Xcel ultimately received Commission approval for four wind projects amounting to 750 MW of wind.

⁴⁷ Xcel reply comments, p. 4.

- In Xcel's 2015-2029 IRP, the Commission approved Xcel's plan to acquire 800 MW of wind in the five-year action plan, and the Commission made an additional finding that at least 1,000 MW of wind could be cost-effective. Xcel ultimately acquire more than 2,000 MW of wind resources, not including wind repowerings.

Therefore, staff believes that Xcel's response that "resource plans should not be viewed as an exact prescription of resources" exaggerates the consequences of the OAG's recommendation; the OAG merely proposes to align the RFP with the IRP, which is reasonable. To assuage Xcel's concerns, the Commission could add language to the OAG's recommendation, which states that "Xcel may request cost recovery for 300 MW of incremental, company-owned solar projects interconnecting at Sherco if it will benefit ratepayers."

4. Department Recommendations

Department recommendation 3.a. states:

- a. Xcel must justify any costs (including operations and management expense, ongoing capital expense – including revenue requirements related to capital included in rate base – insurance expense, land-lease expense, and property/production tax expense) that are higher than forecasted in this proceeding.

Staff is unsure if the Department's recommendation is compatible with Xcel's proposal to establish a cost at the revised pricing. The Department's recommendation appears to be a soft cap, in which Xcel has an opportunity to seek recovery for higher than forecasted costs, while Xcel's proposal seems to be a hard cap, in which the Company would absorb higher than forecasted costs on a \$/kW basis.

Department recommendation 3.b. states:

- b. Ratepayers will not be put at risk for any assumed benefits that do not materialize.

Based on EnCompass modeling conducted by Xcel and the Department, it could be argued that at the revised pricing proposed in the Supplemental Filing, ratepayers may not benefit at all. Of course, this is likely to change assuming benefits from the IRA are realized. Nonetheless, it is unclear how the Commission could enforce this recommendation if ratepayers do not benefit.

Department recommendation 3.e. states:

- e. the Company must clearly account for all costs incurred for the proposed Project.

Hopefully, Xcel would account for all costs incurred for the proposed Project even without this recommendation, but staff suggests the Department clarify whether this means in a compliance filing or in other dockets.

In general, staff believes that the consumer protections recommended by the Department may be difficult to implement, or may provide limited benefit, without additional details to explain exactly what is contemplated.

5. Jurisdictional Cost Allocation

In Xcel's initial filing, the Company proposed to recover 100 percent of the Project's costs from Minnesota customers. The July 27, 2022 Supplemental Filing did not specifically address jurisdictional cost allocation; however, in Xcel's supplemental response to PUC Information Request No. 9, Xcel stated that due to the passage of the IRA, the Company "now supports a determination that any future cost recovery is limited to the Minnesota jurisdictional allocators approved by the Commission."^{48,49}

E. Factors Weighing in Favor of Approval

Despite staff's several concerns discussed throughout the briefing paper, staff supports approving the Project. Mostly, this is due to the socioeconomic and environmental benefits related to the Project, which are more difficult to assign a monetary value to, coupled with the possibility that there is no guarantee Xcel could secure an alternative solar project at much lower of a price. Therefore, the correct read of the Staff Analysis is that there could be creative solutions that ensure every possible dollar ratepayers could receive will be received.

Xcel's initial filing, Supplemental Filing, and parties' comments identified several benefits. To briefly revisit those benefits, staff believes the Commission can approve the Project for the following reasons:

1. The size, type, and timing of Sherco Solar complies with Order Point 2.A.5 of the Commission's IRP Order.
2. Sherco Solar would be Xcel's lowest-cost solar project on its system to-date.
3. Company-ownership could provide tax benefits, such as from the IRA, which could then be passed through to ratepayers.
4. Current market dynamics have likely impacted the solar market more broadly, so requiring Xcel to rebid Sherco Solar into another solar RFP may not guarantee lower prices.
5. Xcel claims that Sherco Solar is better than alternative resource types; staff raised some concerns with this argument, but staff acknowledges one could reasonably agree with the Company.
6. Sherco Solar will create jobs and provide socioeconomic benefits to the region.
7. Xcel can put into practice its Workforce Development and Training pilot program.

⁴⁸ Xcel supplemental response to PUC Information Request No. 9, August 23, 2022.

⁴⁹ Xcel also stated that it has submitted a request for an Advance Determination of Prudence (ADP) for Sherco Solar to the North Dakota PSC, which seeks approval of proxy prices for both capacity and energy provided by Sherco Solar, allowing the Company to retain additional benefits of the Project (like tax credits and renewable energy credits) to flow back to Minnesota customers. Since the passage of the IRA, Xcel plans to update its ADP to seek full jurisdictional recovery of the Project from North Dakota customers.

8. There will be minimal impact to prime agricultural land.
9. The Project will avoid 250,000 to 300,000 tons of carbon emissions annually.

For the remainder of this section, staff will elaborate on a few of the points listed above.

A. Company Ownership

The recent passage of the IRA has shifted staff's perspective on the Project considerably; whereas in Xcel's initial filing, benefits from company ownership were largely hypothetical, the IRA reflects an actual and substantial benefit to ratepayers. If Xcel's estimate of the incremental cost savings due to the IRA are accurate, the adjusted LCOE can bring the Project's cost in line with its IRP assumptions (although still toward the high end).

B. State Goals and Greenhouse Gas Mitigation

Staff notes that the Department cited Minn. Stat. § 216C.05 subd. 1, which states that the legislature, through its committees, must:⁵⁰

monitor and evaluate progress toward greater reliance on cost-effective energy efficiency and renewable energy and lesser dependence on fossil fuels in order to reduce the economic burden of fuel imports, diversify utility-owned and consumer-owned energy resources, reduce utility costs for businesses and residents, improve the competitiveness and profitability of Minnesota businesses, create more energy-related jobs that contribute to the Minnesota economy, and reduce pollution and emissions that cause climate change.

Additionally, subd. 2 of the same statute addresses Minnesota's state energy policy which includes reductions in fossil fuel use, energy savings through energy efficiency measures, and a goal of "25 percent of the total energy used in the state [to] be derived from renewable energy resources by the year 2025."⁵¹ Staff agrees with the Department that Sherco Solar gets the State closer to meeting that goal. The statute is also explicit about reducing emissions that cause climate change and Xcel predicts that this facility will avoid 250,000 to 300,000 tons of carbon annually.

C. Community Involvement

The Department also suggests that not approving or delaying the Project could lead to frustration on behalf of the host communities. The Department is concerned that this frustration could lead to the communities fostering resentment to renewable projects generally because to them it will have seemed like their time and resources spent on the project were waste.⁵² Staff believes that this concern is not unfounded as there have been many examples in the past few years of communities deciding to limit, if not entirely forbid, renewable projects

⁵⁰ Minn. Stat. § 216C.05, subd. 1.

⁵¹ Minn. Stat. § 216C.05, subd. 2

⁵² Department August 27, 2022 comments.

from being built on their lands. Staff notes that it appears Xcel has done significant outreach and communication in these communities and achieving the support of so many parties, including the City of Becker and the Township of Becker, is good utility practice.

D. Workforce Development and Training pilot

With the approval of Sherco Solar, Xcel can put into practice its Workforce Development and Training pilot program, which will provide 75 participants from historically marginalized communities with an optimal training opportunity in the energy workforce. Staff believes pilots such as these are beneficial components of utilities' transitions from retiring coal plants to renewable energy facilities.

E. Guide to the Decision Options

Staff acknowledges that the Decision Options, as presented, will be complicated to navigate. In part, this is because Xcel's agreement with the Department on the cost cap proposal contains a lot of text, and staff chose to describe the modifications rather than present multiple redlined versions. Also, there are several ways to modify Xcel's proposal, which include modifying the targeted amount in the RFP, how to set the cost cap, whether to use \$/kW or \$/kWh, and how to factor in the IRA.

Basically, in 1.a. and 1.b., the Commission can choose to adopt the OAG's recommendation to reduce the targeted amount in the RFP (from 300 MW to 260 MW). Next, in 1.b., the Commission can set the cap at the revised pricing or the median-priced completed in the RFP, rather than at the highest-priced completed project. The Commission then needs to decide between the OAG's price per-kWh or Xcel's price per-kW. Staff believes Xcel's proposal aligns with traditional cost recovery methods, but the OAG's proposal might be the only way to directly incorporate the impacts of the IRA into a cost cap.

XIII. Decision Options

Approval with Ratepayer Protections

1. Approve the Company's acquisition and construction of the 460 MW Sherco Solar Project subject to the following conditions:
 - a. If the forthcoming RFP does not result in sufficient projects to meet the need identified in Order Point 2.a.5 of the IRP Order without also constructing Sherco Solar (in other words, if less than 300 MW of company-owned projects interconnecting at Sherco and an additional 600 MW of solar resources unconstrained by interconnection location or ownership pass through both the completeness and threshold reviews of the RFP, excluding those that are not selected for shortlisting by the Company due to factors outside the Company's control (e.g., the bidder opts to sell the project or energy from the project to a different party)), such that Sherco Solar would have been selected in the RFP were it to be bid in, then rider recovery for Sherco Solar is capped at the revised pricing discussed in this filing. **OR**
 - i. Modify 1.a. to delete 300 MW and replace with 260 MW. (*OAG, Staff*)

AND

- b. If the forthcoming RFP results in sufficient projects to meet the need identified in Order Point 2.a.5 of the IRP Order without also constructing Sherco Solar (in other words, if 300 MW or more of company-owned projects interconnecting at Sherco and 600 MW or more of additional projects unconstrained by interconnection location or ownership pass through both the completeness and threshold reviews of the RFP, excluding those that are not selected for shortlisting by the Company due to factors outside the Company's control), then rider recovery for Sherco Solar is capped at the lower of the dollar per kw of (1) the revised pricing discussed in this filing or (2) the highest-priced completed project selected in the RFP (meaning, on time, all proposed MW, using union labor), thereby ensuring customers only pay costs for Sherco Solar at an amount that would have been selected in the RFP. **OR**
 - i. Modify 1.b. to delete 300 MW and replace with 260 MW. (*OAG, Staff*)
 1. Xcel may request cost recovery for 300 MW of incremental, company-owned solar projects interconnecting at Sherco if it will benefit ratepayers. (*Staff option*)
 - ii. Modify 1.b. to delete "(2) the highest-priced completed project" and replace with "(2) the median-priced completed project." (*Staff variant of Xcel proposal*) **OR**
 - iii. Modify 1.b. to delete "lower of the dollar per kW" and replace with "lower of the dollar per kWh." (*OAG*) **OR**

- iv. If the Commission adopts the OAG recommendation to set the cost cap on a per kWh basis, the Commission could further reduce the cost cap by 32 percent relative to the revised pricing provided in Xcel's July 27, 2022 filing, unless Xcel can demonstrate that the Inflation Reduction Act did not reduce prices as it represented in this proceeding. *(Staff note: This option is only compatible with the per kWh recovery method proposed by the OAG in Decision Option 1.b.i. Staff's discussion of this option is on pages 34 and 35 of the briefing papers.)*

AND

- c. Adopt the Department's proposed ratepayer protections listed as follows:
 - i. Xcel must justify any costs (including operations and management expense, ongoing capital expense – including revenue requirements related to capital included in rate base – insurance expense, land-lease expense, and property/production tax expense) that are higher than forecasted in this proceeding. *(Staff does not support this option because staff believes Xcel should bear any cost overruns, and it might be incompatible with 1.a. and 1.b.)*
 - ii. Ratepayers will not be put at risk for any assumed benefits that do not materialize; Xcel customers must be protected from risks associated with the non-deliverability of accredited capacity and/or energy from the proposed Project, other than non-deliverability caused by weather. The Commission may adjust Xcel's recovery of costs associated with this proposed Project in the future if actual production varies significantly from assumed production over an extended period, for reasons other than those related to weather.
 - iii. Xcel must report in its fuel clause filing and annual automatic adjustment filings the amount of any curtailment payments, along with explanations for the curtailments, for the proposed Project;
 - iv. Xcel must clearly account for all costs incurred for the proposed Project;
 - v. Xcel must report quarterly, until the proposed Project is in service, project failures along with the options available to the Commission to remedy any failures that occur; and
 - vi. Report on how the proposed Project as built is consistent with the information requested in the May 20, 2020, notice issued in Docket No. E,G-999/CI-20-492.

Cost Recovery Mechanism

- 2. Approve Xcel's proposed approach of recovering project costs through the renewable energy standard (RES) rider, with the clarification that any recovery through the RES Rider will require a separate determination that the project is eligible. **AND**

- a. Any future cost recovery is limited to the Minnesota jurisdictional allocators approved by the Commission. *(Staff option)*
3. Require Xcel to maximize the benefits of the Inflation Reduction Act to ratepayers. *(Staff note: This is a placeholder decision option that staff expects can be modified based on parties' input. As an example, this could be accomplished in an annual compliance filing.)* **OR**
4. Require Xcel to submit a compliance filing by October 14, 2022 that includes a cost recovery proposal that ensures Xcel will maximize the benefits of the IRA in the ratepayers' favor. Delegate authority to the Executive Secretary to modify the deadline.

IBEW 292 Recommendation

5. Require the Project to follow the Minnesota State Building, Construction and Electrical codes and standards as well as the requirements for local worker hiring and registered apprenticeship programs.