

Staff Briefing Papers

Meeting Date January 25, 2024

Agenda Item **3

Company Northern States Power Company d/b/a Xcel Energy
(Xcel or the Company)

Docket No. E-002/M-13-867

**In the Matter of the Petition of Xcel Energy for Approval of its Proposed
Community Solar Garden Program**

Issues

- 1) Should the Commission approve the 2024 VOS?
- 2) Should the Commission eliminate the annual filing requirement for the VOS?

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Relevant Documents

Date

Compliance Filing, Xcel	September 1, 2023
Comments, Department	November 27, 2023
Reply Comments, Xcel	December 7, 2023
Reply Comments, CEF	December 7, 2023
Reply Comments, Clean Energy Advocates	December 7, 2023

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BACKGROUND

Issue Statement

During its November 16, 2023, agenda meeting, the Commission will consider whether to approve the 2024 Value of Solar (VOS) and whether to maintain the annual VOS filing requirement from its March 4, 2020 Order.

Overview

On September 1, 2023, Xcel Energy filed its VOS calculation for vintage year 2024 and related tariff sheets pursuant to the Commission’s March 9, 2020 Order requiring Xcel to file updated VOS calculations by September 1st each year.¹ The Community Solar Garden (CSG) Statute, Minn. Stat. § 216B.1641, was amended in the 2023 legislative session by Law 2023, Ch. 60, Art. 12, Sec. 14.² The legislative change to Minn. Stat. § 216B.1641, subd. 8 relates to the new CSG program administered by the Minnesota Department of Commerce and establishes a new rate methodology with rates approved by the Commission. Minn. Stat. 216B.1641, subdivision 1(h)(2)(i) notes that CSGs approved before January 1, 2024 in Xcel’s Legacy Program continue to receive compensation under subdivision 1(d), which includes the VOS rate. As additional

¹ Commission Order, March 4, 2020, at Order Point 3.

² [Minn. Stat. § 216B.1641 Community Solar Garden](#).

vintages of the VOS beyond the 2023 iteration are not required to determine CSG compensation at this time, Xcel requests that the Commission no longer require the Company to submit annual VOS updates.³

The Department of Commerce Division of Energy Resources (Department), Cooperative Energy Futures (CEF), and Clean Energy Advocates (CEA) all asserted that there is still a statutory requirement for Xcel to file the VOS calculations each year and therefore recommend the Commission not rescind its March 2020 Order. They each also argued that the VOS filing requirement still has value as an ongoing measure of the value of solar to the state, and CEA stated it could be an alternative tariff option.⁴ More, they all recommend the Commission reject Xcel's filing and require Xcel to resubmit its calculations using the updated cost of carbon. Xcel contested their recommendations in reply comments.

DISCUSSION

2024 VOS Update

Xcel used the same methodology for the 2024 VOS vintage as the 2023 vintage and calculated the levelized credit for the 2024 VOS vintage to be 12.49 cents per kWh, compared to 13.23 cents per kWh for the 2023 vintage.⁵ The hypothetical bill credit would be 9.90 cents per kWh in year 1 and 18.03 cents per kWh in year 25. The Company explained that the decrease relative to 2023 is driven primarily by a decrease to effective load-carrying capacity (ELCC) which resulted from the Midcontinent Independent System Operator's (MISO) change from an annual to seasonal construct and lower New York Mercantile Exchange (NYMEX) natural gas prices but is partially offset by environmental cost escalation, loss savings metrics, and reserve planning margin.⁶ Table 1 summarizes the effects on the VOS by component.

Table 1: Largest Drivers in VOS Change from 2023 to 2024⁷

Component	Change	Effect on 2024 VOS relative to 2023
ELCC Proxy	Fell from 67.91% to 43.03% due to adoption of MISO seasonal construct.	-1.89 cent
NYMEX Natural Gas Prices	Decreased 5 percent from	-.29 cent

³ Xcel Compliance Filing, September 1, 2023, at 7.

⁴ In light of the legislative changes, the Commission's notice of comment asked whether there are other potential uses or applications for the VOS.

⁵ Xcel Compliance Filing, September 1, 2023, at 1.

⁶ *Id.*, at 1-2.

⁷ *Id.*, at 3-7.

	2023. Fuel Price Overhead ⁸ also decreased.	
PV Fleet Production	First-year annual energy input increased from 1,913 MWh/MW to 1,915 MWh/MW.	-.01 cent
Avoided Distribution Costs	Five-year average Increased from \$300.15/kWh to \$320.39/kWh.	+.03 cent
Solar Weighted Heat Rate	Increase in natural GWh as a percent of total generation due to retirement of Sherco Unit 2 and an increase in renewable generation.	+.08 cent

In table 2, Staff compares the proposed levelized 2024 VOS with previously approved levelized VOS values.⁹

Table 2: VOS Vintages

VOS Vintage Year Bill Credit Rate	Levelized Value (\$/kWh)	First Year Value (\$/kWh)
2017	0.1275	0.1033
2018	0.1202	0.0976
2019	0.1109	0.0904
2020	0.1152	0.0904
2021	0.1104	0.0911
2022	0.1178	0.0965
2023	0.1323	0.1058
2024 (Proposed)	0.1249	0.0990

Approval of the 2024 VOS

Xcel did not request approval of the 2024 VOS, but as stated above, submitted it due to the March 2020 Order requirement. The Commission’s notice of comment period asked whether the 2024 VOS should be approved.

The Department recommends the Commission maintain the filing requirement (discussed in the next subsection) and does not recommend the Commission approve the 2024 VOS as submitted. The Department noted that while the submission does comply with the approved VOS methodology, the calculation of the avoided environmental cost “does not reflect current

⁸ The Natural Gas Prices are based on the Henry Hub, but Xcel trades at other points with lower prices. This is accounted for with the Fuel Price Overhead component.

⁹ Xcel Compliance Filing, September 25, 2023, at 3.

developments related to the social cost of carbon dioxide (a greenhouse gas).”¹⁰ Minn. Stat. § 216B.2422, subd. 3 was revised on February 7, 2023, and requires the Commission to “provisionally adopt and apply the draft cost of greenhouse gas emissions valuations, as presented in the U.S. Environmental Protection Agency’s (EPA): External Review Draft of Report on the Social Cost of Greenhouse Gases: Estimates incorporating Recent Scientific Advances.”¹¹ The Department noted that the Commission voted on September 14, 2023 to update the January 3, 2018 Order in Docket No. E-999/CI-14-643¹² to provisionally adopt and apply the EPA’s draft cost of greenhouse gas emissions. The Department argued this should be included in the 2024 VOS and recommends the Commission require Xcel to resubmit subject to a 30-day negative checkoff.

CEF and CEA both support the Department’s recommendation.¹³ In reply comments, CEA stated that Dr. Gabriel Chan, a professor at the University of Minnesota, estimated the first year of the 2024 VOS to be \$0.1996 per kWh instead of \$0.0990.¹⁴ CEA also noted that when the VOS was approved, the Department recommended using the EPA’s social cost of carbon values and that the Commission found these to be “suitable” for the VOS methodology in its April 1, 2014 Order.¹⁵

Xcel contested the recommendation to include the new social costs of emissions in its reply comments. The Company pointed¹⁶ to the following two Order Points from the December 19, 2023 Order:

Order Point 5: The Commission provisionally adopts and applies the draft measurement of costs related to the emission of greenhouse gasses as set forth in the EPA’s External Review Draft of Report on the Social Cost of Greenhouse Gases released in September 2022, and its successors. To this end, the Commission hereby revises its Order Updating Environmental Cost Values (January 3, 2018) in Docket No. E-999/CI-14-643, In the Matter of the Further Investigation into Environmental and Socioeconomic Costs Under Minnesota Statutes Section 216B.2422, Subdivision 3 accordingly.

¹⁰ Department Comments, November 27, 20 at 2

¹¹ [Minn. Stat. § 216B.2422 Resource Planning; Renewable Energy.](#)

¹² *In the Matter of the Further Investigation into Environmental and Socioeconomic Costs Under Minnesota Statutes Section 216B.2422, Subdivision 3.*

¹³ CEF Reply Comments, December 7, 2023, at 2. CEA Reply Comments, December 7, 2023, at 5.

¹⁴ CEA cited the Department’s September 28, 2023, Comments in 23-335, which included Dr. Chan’s analysis.

¹⁵ *Order Approving Distributed Solar Value Methodology*, in Docket No. E-999/M-14-65 at 12.

¹⁶ Technically, Xcel cited Commissioner Schuerger’s motion as the Order was not yet published, and Staff has inserted the relevant order points here.

Order Point 7: The Executive Secretary shall open comment period(s) as needed in Docket No. E-999/CI-14-643 to consider a process for doing the following:

- A. Applying the draft cost of greenhouse gas emissions valuations presented in the United States Environmental Protection Agency's EPA External Review Draft Report on the Social Cost of Greenhouse Gases released in September 2022, and its successors, as required by Minn. Stat. § 216B.2422, subd. 3(b).
- B. Adopting the working group estimates released by the Federal Interagency Working Group on the Social Cost of Greenhouse Gases or its successors, as required by Minn. Stat. § 216B.2422, subd. 3(c).

Xcel stated that they believe Minn. Stat. § 216B.2422, subd. 3 does not apply to the VOS, but based on the second of the above order points, the Executive Secretary could issue a notice of comment period in Docket No. 14-643 to consider whether these values should be applied to the VOS. More, the Company noted that § 216B.2422 is the resource planning statute and that the VOS is not a resource planning function. Xcel highlighted that the statute states in subd. 3(a) that "a utility shall use the values established by the commission [...] when evaluating and selecting resource options..."

Finally, Xcel explained that they filed the 2024 VOS using the Department's methodology and if the methodology is updated to include changes to the federal social cost of carbon, these should apply to future VOS filings, if applicable, but not the 2024 VOS.

VOS Filing Requirement

Because the VOS will not apply beyond 2023 gardens to CSG production, Xcel requests that the Commission lift the requirement to file the updated VOS by September 1st of each year, as found in the March 9, 2020 Order.

The Department recommends the Commission maintain the filing requirement and argued statute mandates this. The Department pointed to Minn. Stat. § 216B.164, which addresses tariff rates not limited to CSGs but includes the VOS, and explained that subd. 10(h) states that "[t]he utility shall recalculate the alternative tariff on an annual cycle, and shall file the recalculated alternative tariff with the commission for approval." CEF and CEA agreed with the Department's analysis that statute dictates Xcel continue to file the VOS.

The notice of comment additionally inquired whether there are other purposes for the VOS if the filing requirement was maintained. The Department and CEF did not point to any specific uses, but both asserted the VOS has ongoing value as an indication of the value of distributed solar to the state.¹⁷ CEA stated there could be other uses such as an alternative tariff option for

¹⁷ Department Comments, November 27, 2023, at 3. CEF Reply Comments, December 7, 2023, at 2.

projects not chosen to be a CSG.¹⁸

Xcel contested the recommendation to maintain the filing requirement in reply comments. The Company acknowledged the language in subd. 10(h) regarding an annual filing requirement, but highlighted that Minn. Stat. § 216B.164 subd. 10(a) states:

A public utility may apply for commission approval for an alternative tariff that compensates customers through a bill credit mechanism for the value to the utility, its customers, and society for operating distributed solar photovoltaic resources interconnected to the utility system and operated by customers primarily for meeting their own energy needs.

In other words, Xcel stated the subdivision “relates to approval of an alternative tariff at the Company’s request” and because they are not requesting approval, subd. 10(h) should not be applied.¹⁹ The Company also noted that other utilities are not required to file an alternative tariff calculation under the Department’s VOS methodology. Should the Commission wish to maintain the filing, Xcel requests it be moved to Docket. E-999/M-14-65.²⁰

STAFF ANALYSIS

VOS Filing Requirement

Because the filing requirement appears to supersede approval or recalculation of the VOS, Staff addresses this question first. Staff does not dispute the notion that the VOS may have value as an ongoing benchmark of the benefit of distributed solar to the state, but Staff agrees with Xcel that the complete reading of Minn. Stat. § 216B.164 subd. 10 does not dictate an annual filing requirement. To summarize the applicability of this statute, Staff notes that the CSG Statute, § 216B.1641, cites § 216B.164 subd. 10 for the establishment of the VOS.²¹ As pointed out by parties, subd. 10 is not specific to just the VOS but broadly refers to an alternative tariff for distributed solar which may be requested by the utility that complies with the methodology established by the Department, among other requirements.

¹⁸ CEA Reply Comments, December 7, 2023, at 5.

¹⁹ Xcel Reply Comments, December 7, 2023, at 4.

²⁰ *In the Matter of Establishing a Distributed Solar Value Methodology Under Minn. Stat. Minn. Stat. § 216B.164 subd. 10 (e) and (f).*

²¹ Subd. 1(d): The public utility must purchase from the community solar garden all energy generated by the solar garden. The purchase shall be at the rate calculated under section 216B.164, subdivision 10, or, until that rate for the public utility has been approved by the commission, the applicable retail rate. A solar garden is eligible for any incentive programs offered under section 116C.7792. A subscriber's portion of the purchase shall be provided by a credit on the subscriber's bill.

Prior to the revision of the CSG program, the CSG statute required Xcel to apply the VOS once the methodology was created by the Department and approved by the Commission, thus Xcel applied for the VOS as a tariff pursuant to Commission Order and state statute. Since the program has been reformed, the Company no longer has a need for the VOS as a tariff for 2024 gardens and beyond, and therefore Xcel is not applying for the “alternative tariff” described in subd. 10(a). Staff agrees then that subd. 10(h), which establishes an annual filing requirement, is not applicable because Xcel is no longer applying for approval of an alternative tariff. The Department’s interpretation of statute would also seem to indicate that the other investor-owned utilities should be filing a VOS rate, because § 216B.164 only refers to “a public utility” and is not subject to the same limitations as the CSG statute, which make it applicable to Xcel.²²

That said, if the Commission finds there is usefulness to maintaining the VOS as an annual update on the value of distributed solar to the state, it need not rely on Minn. Stat. § 216B.164 to maintain the filing requirement and could look to its broad authority in resource planning and responsibility to ensure just and reasonable rates as justification to preserve the yearly filing. Staff agrees with Xcel that in this case, it would make more sense for the filing to occur in Docket No. 14-65, which pertains to the value of solar and is not specific to CSGs (**Decision Option 4**). If the Commission finds the requirement unnecessary, it could lift it with **Decision Option 1**.

Updating Environmental Costs

Staff’s interpretation of the December 19, 2023 Order in Docket No. E-999/CI-14-643 is that should the Commission wish to apply the updated greenhouse gas values outside of resource planning, a notice of comment period on the proposed change should be issued in that docket. Once again, the relevant order point is:

Order Point 7: The Executive Secretary shall open comment period(s) as needed in Docket No. E-999/CI-14-643 to consider a process for doing the following:

- A. Applying the draft cost of greenhouse gas emissions valuations presented in the United States Environmental Protection Agency’s EPA External Review Draft Report on the Social Cost of Greenhouse Gases released in September 2022, and its successors, as required by Minn. Stat. § 216B.2422, subd. 3(b).

Staff also believes that given the projected magnitude of the change (\$0.1996 per kWh vs. \$0.0990), further record development would potentially be beneficial, even if this is not a rate of compensation at this time. If the Commission wishes to maintain the filing requirement, it can order a notice of comment period on applying the new greenhouse gas emission values to the VOS with **Decision Option 3**. If the Commission concludes additional record development is unnecessary and agrees that the updated values should be used, it can do so with **Decision Option 2**.

²² The CSG Statute, § 216B.1641, specifies “the public utility subject to Section 116C.77,” which is Xcel.

DECISION OPTIONS

1. Lift the annual filing requirement for the VOS from the March 9, 2020 Order. (*Xcel*)

OR

2. Require Xcel to recalculate the 2024 VOS using the greenhouse gas emission values found in the EPA's *External Review Draft of Report on the Social Cost of Greenhouse Gases: Estimates incorporating Recent Scientific Advances* and file the recalculated 2024 VOS within 30 days of the Order. Delegate authority to the Executive Secretary to approve the recalculated 2024 VOS via notice if no objections are filed within 20 days of Xcel's filing. Delegate authority to the Executive Secretary to approve, via notice, requests to extend the deadline to make the compliance filing. (*Department, CEF, CEA*)

OR

3. Delegate authority to the Executive Secretary to issue a notice of comment period in Docket No. E-999/CI-14-643 on applying the draft cost of greenhouse gas emissions valuations as found in the EPA's *External Review Draft of Report on the Social Cost of Greenhouse Gases: Estimates incorporating Recent Scientific Advances* to the VOS methodology. (*Staff Option*)

AND

4. Require Xcel to submit all future VOS compliance filings in Docket No. E-999/M-14-65. (*Decision Option 4 is Xcel's recommendation if the Commission maintains the filing requirement. The Commission does not need to choose Decision Options 2 or 3 to choose Decision Option 4.*)