

Staff Briefing Papers

Meeting Date February 15, 2024

Agenda Item **2

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 Should the Commission approve Xcel Energy’s proposal to move all Applicable
Retail Rate-era community solar gardens to the 2017 Value-of-Solar Rate, as found
in the Company’s September 25, 2023 compliance filing?

Staff Jacob Strauss Jacob.Strauss@state.mn.us 651-201-2237

To request this document in another format such as large print or audio, call 651.296.0406 (voice). Persons with a hearing or speech impairment may call using their preferred Telecommunications Relay Service or email consumer.puc@state.mn.us for assistance.

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
Compliance Filing, Xcel	September 25, 2023
Comments, City of St. Paul	January 5, 2024
Comments, OAG RUD	January 8, 2024
Comments, CCSA and MnSEIA	January 8, 2024
Comments, NextEra Energy and US Solar	January 8, 2024
Comments, Fresh Energy	January 8, 2024
Comments, National Grid Renewables	January 8, 2024
Comments, Clean Energy Economy MN	January 8, 2024
Comments, Solar Equity Advocates	January 8, 2024
Comments, IUOE Local 49 and NCSRC	January 8, 2024
Comments, City of Minnetonka	January 8, 2024
Comments, City of Oakdale	January 8, 2024
Comments, Met Council	January 8, 2024
Comments, City of Burnsville	January 8, 2024
Comments, City of St. Cloud	January 8, 2024
Comments, City of Inver Grove Heights	January 8, 2024
Comments, Department	January 9, 2024
Comments, City of Minneapolis	January 9, 2024
Reply Comments, Fresh Energy	January 22, 2024
Reply Comments, NextEra and US Solar	January 22, 2024
Reply Comments, Xcel	January 22, 2024
Reply Comments, Solar Equity Advocates	January 22, 2024
Reply Comments, Local Government Coalition	January 22, 2024
Reply Comments, Met Council	January 22, 2024
Reply Comments, CCSA and MnSEIA	January 22, 2024
Reply Comments, Department	January 22, 2024
Reply Comments, Suburban Rate Authority	January 22, 2024



Relevant Documents

Date

Referenced Documents, Previously Before the Commission

Commission Order	June 27, 2023
Commission Order	September 6, 2016

A comprehensive list of commenters is provided in Appendix A.

Table of Contents

Background 3
Discussion 7
Staff Analysis..... 31
Decision Options 42

I. BACKGROUND

Issue Statement

During its February 15, 2024, agenda meeting, the Commission will decide whether to approve Xcel’s proposal to move all Applicable Retail Rate (ARR)-era community solar gardens to the 2017 Value-of-Solar (VOS) rate.

Overview

The Commission’s June 27, 2023 Order in Docket No. E002/M-13-867 modified the applicable retail rate (ARR) formula under the community solar garden (CSG) program by removing the compounding effect,¹ approving the 2023 ARR under the modified methodology, and ordering Xcel to submit a proposal to shift all ARR-era gardens to the appropriate VOS rate. On September 25, 2023, Xcel submitted its filing and proposed moving all ARR-era gardens to the 2017 VOS beginning April 1, 2025. Under the proposal, the gardens would begin receiving compensation at the Year 8 level of the 2017 VOS and then advance to the next year of the index each January 1.² Xcel estimated that moving the approximately 700 ARR-era gardens to the VOS would save ratepayers \$48.4 million annually based on the 2023 ARR rates. This would also constitute an equivalent annual decrease in compensation for subscribers and garden operators over the remaining years of the garden contracts.

¹ The Commission approved a change that removes above-market CSG costs from the energy charge component of the ARR formula.

² Xcel Compliance Filing, September 25, 2023, at 2 and Xcel Reply Comments, January 22, 2024, at 14. The Reply Comments updated the proposed implementation schedule.

Xcel's proposal, made at the request of the Commission, is heavily contested. Staff notes that while Xcel (the Company) stated in the initial filing that the public interest could be supported by the potential ratepayer savings, the Company has not explicitly taken a position on the proposal, and raised the potential shock to subscribers and public budgets in reply comments as additional considerations for the Commission. The proposal is supported by IUOE Local 49 and NCSRC of Carpenters (Labor) and five state Senators.³ The Office of Attorney General's Residential Utilities Division (OAG) supports a modified version where residential and small commercial customers remain on the ARR and/or supports taking other potential steps to limit ARR compensation. Fresh Energy similarly supports allowing residential customers to remain on the rate and also proposes an adder to soften the impact of the transition.

The proposal is opposed by the Minnesota Department of Commerce Division of Energy Resources (Department), the Coalition for Community Solar Access and the Minnesota Solar Energy Industries Association or the Joint Solar Associations (JSA), United States Solar Corporation (US Solar), NextEra Energy Resources (NextEra), National Grid Renewables (NG Renewables), the Solar Equity Advocates,⁴ Clean Energy Economy Minnesota (CEEM), the Metropolitan Council (Met Council), twenty State Representatives and a State Senator,⁵ the City of Minneapolis, the City of St. Paul, the City of Minnetonka, the City of Oakdale, the City of Burnsville, the City of St. Cloud, the City of Inver Grove Heights, the City of Northfield, the City of Maple Grove, the City of Spring Lake Park, the City of St. Clair, the City of Sauk Rapids, the City of Chanhassen, Winona Area Public Schools, Sibley County Board of Commissioners, Big Lake Schools, Mankato Area Public Schools, Rocori Public Schools, the Suburban Rate Authority, the Local Government Coalition,⁶ Winona County Board of Commissioners, Kwik Trip, the City of Rogers, and the University of Minnesota. The Commission has also received 683 comments from the public in opposition at the time of the filing of this paper.

Because Xcel has not taken a position on the issue, and because the Commission requested Xcel develop the proposal to move ARR-era gardens to the VOS, Staff notes that throughout the paper the use of "Xcel's proposal" should be considered interchangeable with "Xcel's compliance filing."

³ Senators Nick Frentz, Nicole Mitchell, Matt Klein, Tou Xiong, and John Hoffman.

⁴ The Solar Equity Advocates includes Cooperative Energy Futures, Minneapolis Climate Action, Institute for Local Self Reliance, Minnesota Interfaith Power and Light, Vote Solar, Solar United Neighbors, Saint Paul 350, Climate Generation, Sierra Club, and Community Power.

⁵ Representatives Melissa Hortman, Jamie Long, Athena Hollins, Liz Olson, Zack Stephenson, Frank Horenstein, Aisha Gomez, Rick Hansen, Sydney Jordan, Mohamud Noor, Patty Acomb, Larry Kraft, Leon Lillie, Fue Lee, Robert Bierman, Jerry Newton, Ester Agbaje, Lucy Rehm, Amanda Hemmingsen-Jaeger, Ned Carrol, and Senator John Marty.

⁶ City of Bayport, City of Chanhassen, City of Eden Prairie, City of Edina, City of Minneapolis, City of Minnetonka, City of North Mankato, City of Saint Paul, City of St. Cloud, City of St. Louis Park, and Ramsey County.

History of the ARR and the VOS

Minn. Stat. § 216B.1641, subd. 1(d) states:

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.

The referenced rate in section 216B.164, subd. 10 is the VOS, and this subdivision directs the Department to determine the appropriate methodology.⁷ Part (b) of this subdivision also states:

If approved, the alternative tariff shall apply to customers' interconnections occurring after the date of approval. The alternative tariff is in lieu of the applicable rate under subdivisions 3 and 3a.

In its April 1, 2014 Order in Docket No. E-999/M-14-65, the Commission approved the VOS methodology as proposed by the Department with some modifications that received the Department's consent.⁸

In its April 7, 2014 Order in the instant docket, the Commission determined that the applicable retail rate is "the full retail rate, including the energy charge, demand charge, customer charge and applicable riders, for the customer class applicable to the subscriber receiving the credit."⁹ The Commission also ordered that the CSG operator or developer may transfer the solar Renewable Energy Credits (RECs) to Xcel at a compensation rate of \$0.02 per kWh for CSGs with a capacity greater than 250 kW and \$0.03 for those with equal or less than 250 kW capacity.¹⁰ The Commission directed Xcel to file a VOS tariff for solar gardens or, alternatively, to file a calculation of the VOS rate for solar gardens and show cause why the rate should not be implemented for solar gardens

In its September 17, 2014 Order in the instant docket, the Commission considered Xcel's motion to show cause that the VOS should not be implemented and found that it was "not in

⁷ Staff notes this subdivision broadly refers to an "alternative tariff" that need not be the approved VOS, but in context of the discussion here it is the VOS.

⁸ Commission Order, April 1, 2014 in Docket No. E-999/M-14-65, at Order Point 1.

⁹ Commission Order, April 7, 2014, at Order Point 9.

¹⁰ *Id.*, at Order Point 10.

the public interest to use the value-of-solar rate [...] at this time” and approved the use of the ARR as previously set in its April Order.¹¹ The Commission explained that while the VOS might “provide greater predictability over time, it is much lower initially than the applicable retail rate and significantly below the level needed to support the financing and development of solar gardens as required by the applicable statute.”¹² In this Order, the Commission also approved recovery of CSG expenses through the Fuel Clause Adjustment (FCA), which in conjunction with the methodology inadvertently created the compounding effect through the recovery of above-market CSG program costs as part of the fuel charge revenues used to calculate the next year’s rate.¹³

Xcel began accepting applications in December 2014 and by July 2016 had 855 MW of active applications in the program.¹⁴

In its September 6, 2016 Order, the Commission approved the VOS rate for use as the bill credit for all CSG applications filed after December 31, 2016.¹⁵ The Commission explained that “although the statute allows for the applicable retail rate to be used on an interim basis until the Commission has approved the value-of-solar rate for a utility, the clear intent is that a solar-garden program will eventually transition to the value-of-solar rate” and stated this would “address concerns that nonparticipating ratepayers are subsidizing the program.”¹⁶ The Commission also noted that all parties supported applying the VOS prospectively so as “not to undermine the viability of existing applications,” and the Commission concurred.¹⁷ On this date, there were 4 gardens in operation and a further 336 which had signed interconnection agreements.

In its June 27, 2023 Order, the Commission adjusted the ARR methodology to remove the compounding effect and ordered Xcel to develop and file a proposal for Commission consideration for switching ARR-era (December 31, 2016 and before) gardens to the appropriate VOS rate. The Commission explained that “the current record raises questions about whether calculating CSG bill credits based on the ARR, as currently defined, remains consistent with the public interest and other statutory requirements of Minn. Stat. § 216B.1641.”¹⁸

¹¹ Commission Order, September 17, 2014, at Order Point 2.

¹² *Id.*, at 9.

¹³ *Id.*, at Order Point 19.

¹⁴ Commission Order September 6, 2016, at 6.

¹⁵ Commission Order, September 6, 2016, at Order Point 1.

¹⁶ *Id.*, at 13-14.

¹⁷ *Id.*, at 14.

¹⁸ Commission Order, June 27, 2023, at 9-10.

II. PROPOSAL DISCUSSION

Given the volume of comments submitted in the record, Staff is not able to summarize each stakeholder’s position in these briefing papers but appreciates the high level of participation and multitude of perspectives provided to the Commission on this issue. Staff first summarizes the proposal before discussing legal, economic, and environmental impact arguments and then alternative proposals. Staff provides a comprehensive list of all commenters in Appendix A.

A. Overview of Xcel’s Proposal

Xcel proposes to move all ARR-era gardens to Year 8 of the 2017 VOS vintage values beginning April 1, 2025, moving to the next year’s rate annually on January 1.¹⁹ As seen in the following table, subscribers would be compensated at \$.1212 per kWh beginning April 1, 2025, and move to \$.1241 per kWh on January 1, 2026, if the proposal was approved as filed and updated. For gardens that have more than 18 years of life remaining when transitioned, they would continue to receive the Year 25 level for all remaining years of operation once the schedule below is eclipsed.

Table 1: 2017 VOS Vintage Year Bill Credit Values²⁰

Year Number	Bill Credit Rate (\$/kWh)	Year Number	Bill Credit Rate (\$/kWh)	Year Number	Bill Credit Rate (\$/kWh)
Year 1	\$0.1033	Year 10	\$0.1269	Year 19	\$0.1560
Year 2	\$0.1057	Year 11	\$0.1299	Year 20	\$0.1597
Year 3	\$0.1081	Year 12	\$0.1329	Year 21	\$0.1634
Year 4	\$0.1106	Year 13	\$0.1360	Year 22	\$0.1672
Year 5	\$0.1132	Year 14	\$0.1391	Year 23	\$0.1710
Year 6	\$0.1158	Year 15	\$0.1424	Year 24	\$0.1750
Year 7	\$0.1185	Year 16	\$0.1457	Year 25	\$0.1791
Year 8	\$0.1212	Year 17	\$0.1490		
Year 9	\$0.1241	Year 18	\$0.1525		

The June 27, 2023 Commission Order afforded Xcel discretion in preparing its proposal by specifying the Company should determine the “appropriate VOS rate” because the ARR gardens largely came online from 2016-2019 rather than in a single year. Xcel stated that this

¹⁹ In the original proposal in September, Xcel proposed moving to year 7 on April 1, 2024. In their January 22, 2024 reply comments, Xcel requested that the changes be implemented on April 1, 2025. Staff clarified with Xcel that this would also be a move to Year 8 instead of Year 7, which was initially proposed in the September 25, 2023 compliance filing.

²⁰ Xcel Compliance Filing, September 25, 2023, at 2 (Table 2).

methodology is the “most administratively practical of all the options considered by the Company.”²¹ Xcel explained that the 2017 VOS vintage rates are already in the billing system and tariffs, which mitigates some administrative, technical, and regulatory costs. More, Xcel stated that “implementing the change is a manual process, so transitioning to the 2017 VOS vintage will reduce the likelihood of a manual error, and save time, cost, and information technology resources.”²²

Xcel also highlighted that the 2017 VOS is the second highest VOS bill credit rate that has been approved and tarified, as shown in Table 2 below.

Table 2: VOS Vintages²³

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

Xcel highlighted that unlike with the ARR, the VOS rates are the same for all classes which means residential and small general service subscribers would see a greater decrease to their bill credits than general service subscribers, as can be seen in Table 3.

Table 3: 2024 ARR and 2017 VOS Year 8²⁴

Class	Proposed 2024 ARR (\$/kWh)	Year 8 of 2017 VOS (\$/kWh)
Residential	\$.17789	\$.1212
Small General Service	\$.1765	\$.1212
Large General Service	\$.1517	\$.1212

Last, Xcel stated the implementation cost of moving all subscribers to this existing VOS rate would be *de minimis*. However, they explained that if the Commission wishes to implement a more complicated methodology, this would likely result in significant increases in

²¹ Xcel Compliance Filing, September 25, 2023, at 3.

²² *Id.*

²³ Adapted from Xcel Proposal, September 25, 2023, Table 1.

²⁴ Xcel Compliance Filing, February 1, 2024.

administrative expenses and may lead the Company to request an increase in the CSG participation fee²⁵ to cover these expenses.²⁶

B. Legal Considerations

Much of the record focused on whether statute requires or allows the Commission to change the rate, whether the Commission can modify the contract, whether the change would constitute retroactive ratemaking, and whether Xcel should have provided notice to municipal governments in its service territory.

Directive of Statute

A first question upon reading the CSG statute is whether the ARR-era CSGs ought to currently be on the VOS rate, and second, if statute permits the Commission to move the gardens now. Once again, Minn. Stat. § 216B.1641, subd. 1(d) states:

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.

The Department argued that the “threshold issue in this proceeding is whether the Commission is compelled by law” to move the ARR-era gardens to the VOS, and concluded that the Commission is not required by statute to do so.²⁷ The Department explained that Minn. Stat. 216B.164, subd. 10, which governs the VOS, must be read in harmony with the CSG Statute, Minn. § 216B.1641, and that the VOS statute is only applicable once the VOS was established. The Department further stated that because the ARR-era CSGs were approved before the VOS was established, the VOS is not applicable to those gardens. Staff notes that not all ARR CSGs were approved before the establishment of the VOS because the tariff was approved on September 6, 2016, and applications for the ARR were accepted until December 31, 2016.²⁸

More, the Department stated that if the Commission attempted to apply the VOS subdivision, Minn. Stat. § 216B.164, subd. 10, to the ARR-era gardens, then by subd. 10(l) they must be “paid the same rate per kilowatt-hour generated each year for the term of the contract” and

²⁵ Garden Operators pay an annual participation fee of \$500 per active garden beginning in February following the first full year of commercial operation to cover the cost of system licenses, maintenance of the online solar garden application and subscriber management system, and incremental staff to administer the program. Xcel 2022 Annual Report, March 31, 2023, at 13.

²⁶ Xcel Proposal, September 25, 2023, at 5-6.

²⁷ Department Comments, January 8, 2024, at 5.

²⁸ Commission Order, September 6, 2016, at Order Point 1.

that as such the “Commission’s determination that the ARR is the applicable retail rate in place at the time the energy is produced would conflict with statute, as would any modification to the ARR.”²⁹ The Department asserted that the most reasonable interpretation of statute is that the ARR is a placeholder rate until the VOS was established and that CSGs would have the option to switch to the VOS when it was approved.

Like the Department, JSA asserted that whether the CSG statute requires a shift is a “threshold question” in the proceeding.³⁰ JSA argued that in considering all provisions of the CSG statute, the Commission is vested with authority to not require a shift to the VOS and highlighted Minn. § 216B.1641, subd. 1(e), which states:

The commission may approve, disapprove, or modify a community solar garden program. Any plan approved by the commission must:

- (1) reasonably allow for the creation, financing, and accessibility of community solar gardens;
- (2) establish uniform standards, fees, and processes for the interconnection of community solar garden facilities that allow the utility to recover reasonable interconnection costs for each community solar garden;
- (3) not apply different requirements to utility and nonutility community solar garden facilities;
- (4) be consistent with the public interest;
- (5) identify the information that must be provided to potential subscribers to ensure fair disclosure of future costs and benefits of subscriptions;
- (6) include a program implementation schedule;
- (7) identify all proposed rules, fees, and charges; and
- (8) identify the means by which the program will be promoted.

JSA explained that if one were to interpret subd. 1(d)³¹ as a requirement to move the gardens to the VOS once the methodology was approved, then this would ignore the provisions set forth above in Subd. 1(e) and stated “it is absurd to conclude that the legislature intended for the guardrails of section 216B.1641, subd. 1(e) to apply only temporarily, or that they would

²⁹ Department Comments, January 8, 2024, at 5

³⁰ JSA Comments, January 8, 2024, at 4.

³¹ 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.

somehow not apply to issues with the bill credit”³² JSA concluded that the Commission has the authority to determine when to adopt the VOS bill credits but is not required to do so, consistent with its previous Orders from 2014-2016.

NG Renewables , US Solar and NextERa, and Solar Equity Advocates (SEA) also pointed to the safeguards in Subd. 1(e) and argued that the Commission is required to approve a program that allows the CSGs to be financeable.³³ As will be summarized in Section II.C, these parties asserted that Xcel’s proposal jeopardizes financing.

In its proposal, Xcel stated that the statute specifically authorizes the use of the VOS rate.³⁴ In reply comments, the Company argued that the Commission has authority from the Legislature to determine how bill credits are applied and stated that Minn. Stat. § 216B.1641, subd. 1(e) allows the Commission to “modify” the program provided that in doing so the modification is “consistent with the public interest.” Xcel acknowledged that “in determining what is ‘consistent with the public interest,’ the Commission may consider many pertinent, sometimes conflicting factors.”³⁵ Xcel stated in its initial filing that “the public interest in making this change is supported by the large cross-subsidy in place from our customers who are not subscribers to customers who are subscribers,”³⁶ and acknowledged other factors like subscriber shock in reply comments. Xcel also discussed the financing debate and the evolution of the record on this issue since 2016, as is covered in conjunction with the relevant developer arguments in Section II.C.

Fresh Energy did not point to statute but asserted the Commission has the authority to modify the program if it is in the public interest.³⁷

Commission Authority to Modify the Contract

Multiple parties argued that the Commission and Xcel cannot modify the terms of the standard contract without the consent of the subscribers. Xcel disputed this argument in reply comments.

US Solar and NextEra pointed to the Commission’s September 17, 2014 Order in which the Commission ordered Xcel to clarify in the tariff that CSG projects under the ARR should be credited at that bill credit for the duration of the contract, which is stated in the tariff as:

³² JSA Comments, January 8, 2024, at 7.

³³ NG Renewables Comments, January 8, 2024, at 9. SEA Comments, January 8, 2024, at 13. US Solar and NextEra Comments, January 8, 2024, at 6.

³⁴ Xcel Compliance Filing, September 25, 2023, at 7.

³⁵ Xcel Reply Comments, January 22, 2024, at 2.

³⁶ Xcel Compliance Filing, September 7, 2023, at 7.

³⁷ Fresh Energy Reply Comments, January 22, 2024, at 1-2.

The Bill Credit Type is either the “Standard” Bill Credit or “Enhanced” Bill Credit found at that sheet in the rate book. The Standard Bill Credit is based on the [ARR] Once a Standard or Enhanced Bill Credit applies, that Bill Credit Type applies for the term of the Contract.³⁸

US Solar and NextEra further explained that although statute grants the Commission authority to modify the program, it does not grant the Commission authority to modify contracts between Xcel, CSG developers, and subscribers, and that according to the Minn. Court of Appeals *In re Excelsior Energy, Inc.*, “any reasonable doubt about the existence of a power in the Commission should be resolved against the exercise of such power.” Rather, they emphasized that the contract states that it can only be modified “by a writing signed by both Parties.”³⁹ The parties stated that granting the proposal would “set the stage for the disruption of executed CSG program contracts that could trigger years of disputes and litigation.”⁴⁰

JSA argued that on the basis of the *Mobile-Sierra* Doctrine, the Commission can only modify the contract if it is in the public interest.⁴¹ JSA stated that courts have reaffirmed that a utility is bound by its contracted rates and have found this doctrine to be “refreshingly simple” and have stated:

The contract between the parties governs the legality of the filing. Rate filings consistent with contractual obligations are valid; rate filings inconsistent with contractual obligations are invalid.⁴²

JSA emphasized that there is nothing in statute that would allow Xcel to unilaterally alter the rates it bargained for here, and that Xcel did not bargain for the authority to do this in the contract. JSA explained further that the contracted rate can only be adjusted to protect the public interest, but that demonstrating this is “practically insurmountable” if a utility freely bargained for the contract.⁴³ As explained in Section II.C, JSA argued that there is no basis for accepting Xcel’s proposal as in the public interest.

The Department noted that the contract does specify “in the event of any conflict between the terms of this Contract and the Company’s electric tariff, the provisions of the tariff shall

³⁸ Xcel Rate Book, Section No. 9, Sheet No. 69.

³⁹ Xcel Rate Book, Section No. 9, Sheet No. 87.

⁴⁰ US Solar and NextEra Comments, January 8, 2024, at 2.

⁴¹ JSA Comments, January 8, 2024, at 12-13.

⁴² *Richmond Power & Light v. Federal Power Comm’n*, 481 F.2d 490, 493 (D.C. Cir. 1973).

⁴³ *Papago Tribal Utility Auth. v. Federal Energy Reg. Comm’n*, 723 F.2d 950, 945 (D.C. Cir. 1983).

control.”⁴⁴ However, they argued that “no reasonable CSG developer, operator, or subscriber would have believed that the provision would take effect in precisely this way.”⁴⁵

In the same vein, CEEM argued that Xcel’s proposal “is asking the Commission to reject established contract law and to unilaterally modify CSG contracts during their operative terms.”⁴⁶

Hundreds of public letters similarly stated that changing the terms of the contract is “unfair and illegal.”⁴⁷

On the other hand, Xcel argued the Commission has authority to modify the contract and highlighted that this discussion has occurred on the record before, notably when the Commission decided to remove the compounding effect in June 2023. Xcel first pointed to Minn. Stat. § 216B.1641, subd. 1(e), which as discussed above describes the standards the Commission should use in modifying the program. The Company then cited that Minn. Stat. § 216B.25⁴⁸ authorizes the Commission to alter or amend its prior orders. Further, Xcel explained that the tariffed Standard Contract is clear that it may be amended by the Commission and that the then-current version of the tariffed contract controls, as shown at tariff sheet 9-73:

The rates for sales and purchases of Subscribed Energy shall be changed annually or otherwise as provided by order of the MPUC. The Community Solar Garden Operator shall comply with all of the rules stated in the Company’s applicable electric tariff related to the Solar*Rewards Community Program and the tariffed version of this Contract, as the same may be revised from time to time, or as otherwise allowed by an amendment to this Contract approved, or deemed approved, by the Minnesota Public Utilities Commission. In the event of any conflict between the terms of this Contract and Company’s electric tariff, the provisions of the tariff shall control.

Xcel stated that the Commission’s June 27, 2023 Order removing the compounding effect is

⁴⁴ Xcel Rate Book, Section No. 9, Sheet No. 73.

⁴⁵ Department Comments, January 8, 2024, at 8.

⁴⁶ CEEM Comments, January 8, 2024, at 3.

⁴⁷ See for example Public Batch of 29 Comments, January 17, 2024.

⁴⁸ Minn. Stat. §216B.25 states: “FURTHER ACTION ON PREVIOUS ORDER. The commission may at any time, on its own motion or upon motion of an interested party, and upon notice to the public utility and after opportunity to be heard, rescind, alter, or amend any order fixing rates, tolls, charges, or schedules, or any other order made by the commission, and may reopen any case following the issuance of an order therein, for the taking of further evidence or for any other reason. Any order rescinding, altering, amending, or reopening a prior order shall have the same effect as an original order.”

“consistent” with the above,⁴⁹ as the Order states that the Commission has “refined certain aspects of the program due to unanticipated outcomes- the Commission has an obligation to continue to monitor the program and address issues as they arise.”⁵⁰

Xcel also addressed the discussion surrounding the Commission’s September 2014 Order directing that the ARR would apply to the 25-year term of the CSG contract. Xcel explained again that the Commission can weigh factors pertinent to the public interest standard, such as the cost to ratepayers and the potential shock to subscribers, and use its legislative authority to modify the program to determine if the modifications discussed here are in the public interest. Xcel also noted that at the time the September 2014 Order was issued, there were no CSGs in the state and the program was brand new. The Company explained further that the “information supplied to the Commission at that time by the CSG developers was that the ARR with the REC Adder ‘...would provide compensation for solar-garden generation at or near the level shown by the record to be *minimally needed to reasonably allow for the financing and development of solar gardens.*”⁵¹ Xcel stated that “this turned out to be false. Within a few months of launching the program over 400 MW of application were submitted.”⁵²

The OAG did not discuss the Commission authority in this area directly, but relatedly concluded in its review of the public comments that many subscribers believe that they “have a direct contractual relationship with Xcel, either in addition to or instead of the solar-garden operator.” The OAG described this misconception as “mistaken, but understandable” and an indicator of the lack of regulatory visibility into how the CSG program is marketed from operators to subscribers and what disclosures the operators provide.⁵³ The OAG attributed this dearth of clarity in part to the hands-off nature by which Xcel administers the legacy program.

Retroactive Ratemaking

NG Renewables raised concerns over retroactive ratemaking. They acknowledged that this issue arose previously with the removal of the compounding effect and highlighted the following relevant portion of the Order:

Contrary to the contention of several commenters, the modified ARR calculation approved for 2023 does not constitute retroactive ratemaking because the changes only apply prospectively to bill credits for energy that will be produced and purchased after Xcel files updated tariffs that incorporate the modifications approved by this order. Similarly, the plain language of the tariffed Standard

⁴⁹ Xcel Reply Comments, January 22, 2023, at 5.

⁵⁰ Commission Order, June 27, 2023, at 8.

⁵¹ Xcel Reply Comments, January 22, 2023, at 5, citing the Commission’s September 17, 2014 Order, at 9.

⁵² Xcel Reply Comments, January 22, 2023, at 5.

⁵³ OAG Comments, January 8, 2024, at 15.

Contract specifically notes that the rates for subscribed energy shall be changed annually or as provided by order of the Commission.⁵⁴

NG Renewables stated that while they do not necessarily agree with the above, the present proposal has important distinctions from the removal of the compounding effect. They argued that even if the Commission has taken the position that the contract allows the Commission to change the rates annually, “it would be illogical to extend these changes to the complete shift contemplated here.”⁵⁵ NG Renewables explained that the existing bill credit metric was used for the financing, developing, and subscribing of the ARR-era CSGs and would thus violate retroactive ratemaking principles.

Notice to Local Governments

The City of Minneapolis argued that Xcel failed to comply with Minnesota law by not notifying local governments of its proposal. They cited Minn. Stat. 216B.16, subd. 1, which states:

Unless the commission otherwise orders, no public utility shall change a rate which has been duly established under this chapter, except upon 60 days' notice to the commission. [...] The filing utility shall give written notice, as approved by the commission, of the proposed change to the governing body of each municipality and county in the area affected.

The City of Minneapolis noted that Xcel submitted the filing due to an Order from the Commission, but argued that this does not excuse Xcel from its obligation to provide notice. They expressed concerns that not all impacted local governments are aware of the proposed change.⁵⁶ JSA agreed Xcel was required to submit notice of the change.⁵⁷

The Suburban Rate Authority did not point to statute but stated that Xcel did not provide adequate notice to municipal subscribers.⁵⁸

C. Economic and Equity Considerations

The discussion on potential impacts is summarized by subscriber class, garden operators and developers, and ratepayers.

Subscriber Impact – Residential and Small General Service

Hundreds of residential subscribers weighed in on the potential impact of the change and

⁵⁴ Commission Order, June 27, 2023, at 9.

⁵⁵ NG Renewables Comments, January 8, 2024, at 7.

⁵⁶ City of Minneapolis Comments, January 8, 2024, at 2.

⁵⁷ JSA Comments, January 8, 2024, at 26.

⁵⁸ Suburban Rate Authority Reply Comments, January 22, 2024, at 2.

recommend the Commission deny the proposal. The OAG and Fresh Energy recommend leaving residential and small general service subscribers on the ARR. The Department, JSA, SEA, CEEM, and US Solar and NextEra oppose moving any subscriber.

In response to an IR from the OAG, Xcel estimated the impact on residential customers subscribers. Because Xcel cannot see the contracts, the Company used two approaches: (1) assuming the customer pays a fixed amount to the CSG operator and (2) assuming the customer receives 100% of the bill credit and pays 90% of it to the operator. In scenario 1, the customer receives \$389 less in annual bill credits, but Xcel does not account for the net amount because the subscriber fee is unknown. In scenario 2, the customer receives \$39 less in net bill credits.⁵⁹

The Commission received hundreds of letters from the public of the following form, with small edits in many cases:

Dear Public Utilities Commissioners,

I'm writing to ask you to reject the proposal in Docket #13-867 that would allow Xcel Energy to change the bill credit rate for community solar gardens from the Applicable Retail Rate to the Value of Solar rate.

The folks who signed onto these solar gardens entered into this agreement with Xcel Energy with the understanding that these rates were locked in for the full terms of their 25-year contract. This change would turn many Minnesotans' solar savings into a net loss. These folks, who signed these contracts thinking Xcel would have to continue to honor this rate, will see their bill credits lowered by 30%, meaning a cost of hundreds of dollars per year for folks who may not be able to afford it.

Allowing Xcel to make this change is bad for Minnesota. Not only is changing the terms of a signed contract unfair and illegal, but this will tarnish our state's reputation as a reliable state for solar investment and make it harder to grow our solar resources. If folks know that Xcel can unilaterally change the terms of their agreement to turn a consumer's solar investment from an asset to a liability, why would anyone want to sign on?

Xcel Energy is a corporation that has been enjoying yearly profits in the billions of dollars, all while overcharging for wind power, delaying interconnection for hundreds of solar projects, and failing to adequately plan for the infrastructure needed for distributed energy. While this rate hike would mean little for Xcel's bottom line, it would have a huge impact on the low- and moderate-income

⁵⁹ Xcel Reply Comments, January 22, 2024, Attachment A 1-2.

Minnesotans who are trying to do the right thing. Vote against this rate change to send a strong message to Minnesotans that this body exists for them, and not to help Xcel make more money.⁶⁰

Staff notes that many of the public letters filed in the docket have a misconception that Xcel pays for the bill credit, as is implied in the fourth paragraph above. Xcel uses the CSG participation fees to recover the administrative costs of the program, but otherwise the bill credits are paid for by NSP ratepayers, with the above-market portion being allocated directly to Minnesota.

After analyzing the many public letters filed to that point, the OAG concluded in its initial comments that the subscribers did not expect that the rate could be changed mid-subscription and highlighted that at least one residential subscriber stated they would not have entered into a contract if they were aware of this possibility.⁶¹ The OAG posited that the investment may have been marketed to subscribers as a way to hedge against Xcel's rate increases and stated that residential subscribers are "unlikely to examine regulatory filings or look at Xcel's tariff's to assess the risk that the rate might later be change—particularly if subscribers are not directed to this information."⁶² Due in part to this suggested lack of awareness and because the rate change would be more significant for residential and small general service customers, who both receive a higher ARR bill credit than large general service subscribers, the OAG recommends allowing residential and small general service customers to remain on the ARR while moving large general service customers to the 2017 VOS vintage or taking other steps to reduce ARR compensation, which will be summarized in Section III.⁶³ The OAG noted that the majority of the potential savings (\$36 million out of \$48.4 million, using 2023 values) would still occur even if residential and small general service customers remain on the ARR.

Like the OAG, Fresh Energy recommends allowing residential and small general service subscribers to stay on the ARR while transitioning large general service customers to the VOS with the use of an adder. Fresh Energy explained that residential subscribers are "less-resourced and sophisticated in terms of their CSG contracts and understanding changes to the program, and the change from the ARR to VOS would be a more substantial bill credit reduction for residential subscribers."⁶⁴ Fresh Energy also noted that this would preserve approximately 80% of the potential savings because Large General Service customers make up the bulk of the

⁶⁰ This letter was from Kathleen Lafferty. Filed January 3, 2024 in Batch 10 of 9 comments.

⁶¹ See, e.g., Comment of John Hansen (Nov. 21, 2023) ("In the beginning this appeared to be a good way to get to participate in a solar garden with fair return for the investment. However, if contract rates were going to be changed/adjusted, then additional thought and process would have gone into the decision.")

⁶² OAG Comments, January 8, 2024, at 14-15.

⁶³ OAG Comments, January 8, 2024, at 23.

⁶⁴ Fresh Energy Comments, January 8, 2024, at 9.

subscription capacity.

The Department, in opposition to the proposal, explained that residential and small general service subscribers will be most affected, as shown in Table 4 below.

Table 4: Bill Credit Rates (\$/kWh)⁶⁵

	ARR	VOS	Rate Change
	Enhanced CSG > 250 KW (2023)	2017 Vintage, Year 7 (2024)	
Residential	\$0.17252	\$0.11850	-\$0.05402
Small General Service	\$0.17969	\$0.11850	-\$0.06119
General Service	\$0.15186	\$0.11850	-\$0.03336

The Department raised concerns that the change would cause residential flight from the program, potentially producing stranded assets and discouraging new residential customer from subscribing to the program to backfill those leaving the program. The Department also posited it may make residential customers less likely to participate in the non-legacy program.⁶⁶

Subscriber Impact – Large General Service

The Department, JSA, SEA, and all public entities which weighed in pointed to the share of large general service customers which are public entities as a reason the proposal is not in the public interest. Xcel, the OAG, and Fresh Energy recommend moving large general service customers to the 2017 VOS. Fresh Energy also recommends the use of an adder to soften the transition.

The Department found that governments and public schools are 42% of the subscribed capacity, as shown in Table 5.

Table 5: Summary of CSG Subscribers Under the ARR⁶⁷

Subscriber Type	Subscribed Capacity (%)	Percentage of Total Bill Credits, September 2023
Government	25%	25%
Public Schools	17%	16%
Hospitals, clinics, churches, private schools	13%	13%
Residents	16%	17%
Private Business/Other	30%	28%
Total	100%	100%

⁶⁵ Department Comments, January 8, 2024, at 12 (Table 2).

⁶⁶ Department Comments, January 8, 2024, at 13.

⁶⁷ Department Comments, January 8, 2024, at 10 (Table 1).

The Department stated that the large number of public and non-profit subscribers are the type that the Legislature has prioritized in the recent legislation and are similar to the goals in the Solar for Schools and Solar on Public Buildings programs. The Department also raised concerns over the potential impact on budgets in 2024 due to Xcel's proposed implementation date of April 1, 2024. Staff notes that Xcel moved the proposed implementation date to April 1, 2025 in reply comments.

Many large general service subscribers discussed the potential negative financial impacts to them of the proposal:

- The City of Minneapolis would face a net cost on 65 of the 80 solar garden subscriptions for the next few years. For 50 of these 65 subscriptions, the 2017 VOS bill credit would never exceed the escalating subscription fee. The city stated they would likely be forced to raise taxes as a result.⁶⁸
- The City of St. Paul projected it would be an additional expense of \$215,000 in the first year and several million over the remainder of the contracts, which would cause reduced expenditures in the community.⁶⁹
- The Met Council stated their subscriptions account for 3% of Xcel's CSG portfolio and that if this proposal had been implemented in 2022, it would have reduced their bill credits by \$1,030,000.⁷⁰
- The City of St. Cloud stated their projected savings would decrease by approximately 70% over the remaining lifetime of their contracts. They projected this to be a decrease of \$20 million.⁷¹
- The City of Minnetonka stated their projected annual savings would decrease by \$140,000, which might cause future property taxes to rise.⁷²
- The City of Burnsville stated their anticipated total savings would decrease from \$4.5 million to \$500,000 and would have a disparate impact on communities of color and low-income residents.⁷³
- The City of Inver Grove Heights stated that had this proposal been implemented in 2023, they would have experienced a net loss of \$82,800 and may see net losses in future years.⁷⁴
- The University of Minnesota would see a projected annual decrease in bill credits of \$1.2

⁶⁸ City of Minneapolis Comments, January 8, 2024, at 3 and 5.

⁶⁹ City of St. Paul Comments, January 5, 2024, at 1.

⁷⁰ Met Council Comments, January 8, 2024, at 1.

⁷¹ City of St. Cloud Comments, January 8, 2024, at 1.

⁷² City of Minnetonka Comments, January 8, 2024, at 1.

⁷³ City of Burnsville Comments, January 8, 2024, at 1.

⁷⁴ City of Inver Grove Heights, January 8, 2024, at 1.

million, which they said could increase costs for students and taxpayers.⁷⁵

- Kwik Trip stated the termination penalties in their contracts are significant, giving them limited options other than remaining as a subscriber if the proposal is approved. They stated the proposal would cost them “substantial sums of money” and potentially dissuade them from participating in CSGs in the future.⁷⁶
- The Winona County Board of Commissioners stated their residents would lose about \$2 million in savings over the duration of the contracts and that they would have not signed up if the rate change had been proposed 6 years ago.⁷⁷
- Mankato Area Public Schools would see its projected annual savings reduced from \$174,150 to \$34,000.⁷⁸
- Winona Area Public Schools would see its projected annual savings of \$28,000 become a net cost of \$11,000 in 2024, and it would remain a net loss for the next 8 years.⁷⁹
- The Suburban Rate Authority stated that some member cities would “lose millions of dollars in projected savings” and in some cases “their projected remaining savings would decrease by over 90%.”⁸⁰

Like the Department, many cities reacted with alarm to the initial request to move the rate on April 1, 2024, which Staff is omitting due to Xcel’s proposed to move the implementation date to 2025.

JSA and SEA echoed the concerns of the public subscribers and similarly argued that the proposal is not in the public interest because it could cause local taxes to rise and/or municipal expenditures to fall. SEA argued that the proposal will harm all households served by these subscribers and will also harm the communities served by public interest subscribers and nonprofits.⁸¹ Likewise, JSA asserted that the proposal will be paid for by Xcel’s ratepayers through its impact on public budgets and services.⁸² Representative Hortman et al. stated it would cause “substantial budget disruption to subscribers” and punish them for being early movers in the clean energy transition.⁸³

⁷⁵ University of Minnesota Comments, January 9, 2024, at 1.

⁷⁶ Kwik Trip Comments, January 9, 2024, at 1.

⁷⁷ Winona County Board of Commissioners, December 12, 2023, at 1.

⁷⁸ Mankato Area Public Schools Board Comments, January 12, 2024, at 4.

⁷⁹ Winona Area Public Schools Board Comments, January 5, 2024, at 5.

⁸⁰ Suburban Rate Authority Reply Comments, January 22, 2023, at 2.

⁸¹ SEA Comments, January 8, 2024, at 6-7.

⁸² JSA Comments, January 8, 2024, at 23.

⁸³ Representative Hortman Et Al. Comments, January 23, 2024, at 3.

On the other hand, Fresh Energy stated that although they are sympathetic to the concerns of public subscribers, they believe that shifting the cost of municipal programs and budgets from all of Xcel's ratepayers to local taxpayers is a "preferable public interest outcome." They explained that "it is much fairer for taxpayers to pay for local services through their taxes than it is for *all* of Xcel's ratepayers, no matter where they live, to pay well above the value of CSG generation in order to fund public services in select jurisdictions that subscribed to ARR gardens."⁸⁴ More, Fresh Energy added that utility rates are far more regressive than taxes and noted that while bill credit rates will fall for subscribers, so too will their bills through lower CSG program costs.

Garden Operator and Developer Impact

All garden operators and developers oppose the proposal and argued it could jeopardize future financing and the ability to develop the non-legacy program or other projects in Minnesota. CEF, PureSky Solar, and Green Street Power Partners stated it could jeopardize the financing of their current gardens. Xcel did not contest said claims directly but offered analysis on the reasonableness of the financing, as previously discussed in the legal section.

As part of the SEA initial comments, CEF stated their 8 ARR gardens would likely become insolvent because they give their residential customers the option to opt-out easily, and they would expect at least 50% of them to cancel their subscription. CEF noted these residential subscribers would be paying more than if they did not have a CSG subscription.⁸⁵ The SEA comments further speculated that perhaps dozens or hundreds of other ARR gardens could become insolvent.

PureSky Community Solar, which operates 5 residential ARR gardens, explained that 90% of its customers have signed contracts with fixed subscription fees and that they would expect most to terminate their agreement early. PureSky stated that they may be able to renegotiate based on a new bill credit, but this would reduce revenue and have significant administrative costs, and could cause PureSky to breach its debt covenants.⁸⁶

Green Street Power Partners operates 4 ARR gardens and stated they provide subscribers an early termination provision. Green Street predicted that "if enough subscribers terminate their subscriptions [...], the debt service coverage ratios would subsequently fall below the minimum threshold, and all the outstanding debt on the applicable community solar garden may become due at the financing party's sole and absolute discretion."⁸⁷

⁸⁴ Fresh Energy Reply Comments, January 22, 2024, at 5.

⁸⁵ SEA Comments, January 8, 2024, at 6-7.

⁸⁶ JSA Comments, January 8, 2024, Attachment D, at 3-4.

⁸⁷ JSA Comments, January 8, 2024, Attachment E, at 3.

Regarding future financing, SEA predicted that if the proposal is approved, its members would face greater difficulty in recruiting low-to-moderate income (LMI) residential subscribers to the non-legacy program. SEA explained that members like CEF and Minneapolis Climate Action rely on building trust with their communities to recruit subscribers and that residents may, regardless of whether it is true, fear that rates in the new program could be subject to change as well.⁸⁸

National Grid similarly argued that newer projects could be “forced into higher-rate, more costly financing arrangements” and that this “could erode future construction of competitive generation, including any additional CSGs.”⁸⁹ US Solar/NextEra and JSA argued along the same line.

Program Costs and Ratepayer Impact

Parties discussed the growth in CSG program costs and the potential savings to ratepayers.

The OAG explained that they had begun expressing concern in 2015 that as structured, the program could “cause significant cost increases for nonparticipating customers” and had recommended the Commission “act immediately to limit the amount of non-participant harm.”⁹⁰ The OAG cited that today the CSG program is forecasted to cost \$329.3 million in 2024, comprising 32 percent of all fuel and purchased solar power costs for the year, and that approximately \$247 million will be above market and born directly by Minnesota ratepayers instead of being shared among the states in which Xcel operates, as is the case with other fuel purchased-power costs.⁹¹ They further found that the ARR-VOS premium is only 14.5% of the total projected 2024 cost and would still leave \$199 million in above-market costs to be recovered from Minnesota’s ratepayers.⁹² The OAG concluded that “costs have now risen to the point where they threaten significant economic harm to nonparticipating ratepayers, particularly Xcel’s most energy-burdened” and recommend the Commission “use all reasonable means available to reduce the impact of solar gardens on nonparticipating customers.”⁹³ They recommend moving general service subscribers to the ARR or taking other steps to lower the bill credit, as will be explained in Section III.

Like the OAG, Fresh Energy pointed to the growth in CSG costs, which increased by \$100 million

⁸⁸ SEA Comments, January 8, 2024, at 4.

⁸⁹ National Grid Comments, January 8, 2024 at 9.

⁹⁰ OAG Comments, January 8, 2022, at 6-7, citing their April 30, 2015 Reply Comments.

⁹¹ *Id.*, at 8, citing Docket No. E-002/AA-23-153, [Petition for Approval of 2024 Annual Fuel Forecast](#), pt. A, attach. 2 (May 1, 2023).

⁹² *Id.*, at 12.

⁹³ *Id.*

from 2022 to 2023 and are estimated to increase an additional \$50 million in 2024.⁹⁴ Fresh Energy made four primary arguments for why addressing ARR-era costs is in the public interest:

1. Addressing the cost of ARR-era CSG bill credits is the most effective way to address overall program costs because ARR CSGs make up 79% of CSG capacity and have a higher bill credit than the VOS.
2. The cost of ARR gardens is likely to keep increasing over the 25 years of each project due to the ARR's tie to retail rates, which have risen dramatically in recent years.
3. The ARR bill credit rate is not tied to the value from CSG solar projects, unlike the VOS.
4. The mix of subscribers to the ARR projects is heavily skewed to large customers, who account for 82% of the capacity and 80% of the costs.⁹⁵

Fresh Energy recommends moving general service customers to the 2017 VOS and using an adder, as will be explained in Section III.

Labor stated they “support Xcel Energy’s proposed change which amount to significant savings for Minnesota customers” and asserted that the “CSG program stands out as having a cost that continually exceeds the benefits—especially at the ARR rate.”⁹⁶

Senator Frentz et al. stated that while there would be an impact to developers and subscribers, “that impact is more than offset by the substantial, immediate, and ongoing financial relief that would be afforded to nonsubscribers” and highlighted that CSGs account for 32.2% of the forecasted 2024 FCA costs while producing just 4.3% of the energy.⁹⁷ They also noted recent cases in California and Hawaii where regulators have lowered compensation for solar power to reduce ratepayer costs and recommend the Commission do the same here.

Using the 2023 ARR values and 2022 FCA as a proxy, Xcel estimated that the average residential customer would save \$12.31 per year if all ARR subscribers were moved to the VOS, or \$9.21 per year if only general service customers were moved.⁹⁸

On the other hand, National Grid argued that additional regulatory uncertainty from the decision could increase Xcel’s cost of capital which in turn could reduce or reverse the ratepayer savings.⁹⁹ National Grid explained that ratepayers are paying for purchased power

⁹⁴ Fresh Energy Comments, January 8, 2024, at 2.

⁹⁵ *Id.*, at 3-8.

⁹⁶ IUOE Local 49 and NCSRC of Carpenters Comments, January 8, 2024, at 1.

⁹⁷ Senator Frentz et al. Comments, January 9, 2024, at 2.

⁹⁸ Xcel Reply Comments, January 22, 2024, at

⁹⁹ National Grid Comments, January 8, 2024, at 9.

from CSGs and the contracts should be treated like any other Power Purchase Agreement (PPA).

US Solar and NextEra stated that from 2015 to 2023 the ARR has increased at a lower rate than the Consumer Price Index (CPI) and therefore it has decreased in real dollar terms. They argued that the potential savings here are “*de minimis* benefit to non-subscribers” because it is a larger group and outweighed by the concentrated impact to subscribers.¹⁰⁰

SEA stated that Xcel’s estimates of net program costs are “deeply misleading.”¹⁰¹ They asserted that a fairer measure for determining program costs is to use the VOS as the avoided cost benchmark rather than Locational Marginal Prices (LMPs), and explained that if the program was evaluated this way, the net costs would be much lower, possibly less than half of the current estimates. They also noted an estimate of the 2024 VOS with the new federal social cost of carbon exceeds the current ARR levels, which would make the current bill structure a net benefit.

JSA contended that “the minor costs of the program” are outweighed by the financial savings to subscribers and spread of renewable energy, and that even if they were not, it would still not permit the Commission to undo contracts between Xcel and the operators.¹⁰² JSA also stated that the current level of the ARR is within the Year 9 range projected by the Commission in 2014 and as such adjusting it now would be “arbitrary and capricious.”¹⁰³ Staff notes that the forecast JSA cited is not actually for the ARR formula the Commission adopted, but instead relates to a different proposal akin to the VOS that includes factors like an environmental externality value and effective load carrying capacity (ELCC).¹⁰⁴ Staff did not find an equivalent Commission forecast of the formula used now, which would amount to forecasting retail electricity prices for 25 years.

As discussed previously, many of the large public subscribers argued this would negatively affect ratepayers through a large reduction in their potential savings. For example, the Local Government Coalition¹⁰⁵ argued it could lead to a loss of jobs, increased local taxes, reduced school services, and difficulty in meeting the state’s energy goals, which they asserted would

¹⁰⁰ US Solar and NextEra Comments, January 8, 2024, at 7-8.

¹⁰¹ SEA Comments, January 8, 2024 at 10.

¹⁰² JSA Comments, January 8, 2024, at 19.

¹⁰³ JSA Comments, January 8, 2024, at 20.

¹⁰⁴ See Staff Briefing Papers, February 11, 2014, at 61-62 and that paper’s Attachment B at 5-6.

¹⁰⁵ The Cities of Bayport, Chanhassen, Eden Prairie, Edina, Minneapolis, Minnetonka, North Mankato, Saint Paul, St. Cloud, and St. Louis Park along with Ramsey County.

outweigh any ratepayer benefit.¹⁰⁶

The Department asserted the proposal is “unreasonable” because even if the Commission did decide it had made a mistake in its prior Orders, the Department questioned “how would it compensate ratepayers for [historical] overpayment in the Fuel Clause Adjustment (FCA).”¹⁰⁷

D. Regulatory Effects and Environmental Impacts

Commenters debated to what extent the proposed change would affect the energy transition in Minnesota, including directly through the viability of these gardens and also through potential downstream regulatory consequences.

The Department “strongly urge[d] the Commission to reject Xcel’s proposal on the grounds that it will create regulatory uncertainty.”¹⁰⁸ The Department asserted that granting the proposal could “chill investment in new clean energy resources” and that “this chill may impact not only solar, but also private investment in electric vehicle charging stations, distributed storage resources, merchant wind farms, and other emerging clean technologies.”¹⁰⁹ More, the Department explained this could strand some existing gardens, which could have adverse carbon impacts, and noted that ARR solar is the plurality of solar in the state.

JSA, US Solar and NextEra, CEEM, National Grid Renewables, SEA, and Representative Hortman et al. all also asserted that moving forward with the proposal would have a “chilling effect” or “chill investment” regarding Minnesota’s solar industry.¹¹⁰ CEEM stated that this chilling effect “presents significant adverse environmental and economic risks to the public” through potential increased damages from climate change.¹¹¹ Representative Hortman et al. similarly argued that the proposal would discourage investment and make decarbonization by 2040 more difficult.¹¹²

As discussed under the developer impacts, the solar industry commenters all believe that the change would make it more difficult to obtain future financing for CSGs, which could harm the environmental transition. For example, SEA argued that solar developers and financiers would

¹⁰⁶ Local Government Coalition Reply Comments, January 22, 2024, at 2.

¹⁰⁷ Department Comments, January 8, 2024, at 6.

¹⁰⁸ Department Comments, January 8, 2024 at 6.

¹⁰⁹ *Id.*, at 7.

¹¹⁰ JSA Comments, January 8, 2024, at 24 and 25. US Solar and NextEra Comments, January 8, 2024, at 2 and 7. National Grid Renewables Comments, January 8, 2024, at 2. CEEM Comments, January 8, 2024, at 6. SEA Reply Comments, January 22, 2024, at 5. Representative Hortman et al. Comments, January 23, 2024, at 3.

¹¹¹ CEEM Comments, January 8, 2024, at 6.

¹¹² Representative Hortman et al. Comments, January 23, 2024, at 3.

consider this decision in their risk profile when making decisions to invest in Minnesota, and as a result, “mission-driven developers, like CEF and MCA, would have a much more difficult time obtaining tax equity partners and lenders to contribute to the development costs of CSGs” when financiers might prefer to invest in states that did not adjust the rates.¹¹³ They indicated this instability could make it more difficult for Minnesota to meet its 100 percent carbon-free by 2040 target. Similarly, US Solar and NextEra stated that “if the state is to achieve its aggressive goals, it cannot afford to inject an unprecedented degree of uncertainty and unpredictability in the regulatory framework governing renewable energy and decarbonization.”¹¹⁴

Fresh Energy disputed these concerns in reply comments. First, Fresh Energy noted because the Commission, Xcel, and stakeholders were operating with a limited amount of information and experience when the ARR with the REC enhancement was set, “it is reasonable to expect that ten years later the Commission would exercise its stated authority to modify the very first iteration of a program when faced with serious challenges, as it is today.”¹¹⁵ More, Fresh Energy emphasized that the Commission is not considering a dramatic change to an unknown structure, but rather the rate named in statute. They argued further that solar financiers are sophisticated actors that should understand the circumstances here that necessitate Commission action. To the extent that financiers worry whether this would happen in the future, Commission action on this matter would set the precedent that the Commission may step in to prevent significant customer harm. Fresh Energy also argued that the “litany of consequences” hypothesized by solar industry commenters and the Department “are speculative, unsupported by evidence, and not reasonable.”¹¹⁶ Fresh Energy concluded that the Commission would be “affirming a commonsense understanding that ‘if it seems too good to be true, it probably is,’ is not regulatory uncertainty, but rather good public interest regulation.”¹¹⁷

Senator Frentz et al. argued that higher energy costs “threaten our clean energy goals” and explained that “a consequence of higher electric prices is that fewer people can afford to switch to electric vehicles, fund building electric panel upgrades, purchase more efficient home heat pumps, or other clean technologies.”¹¹⁸

Xcel did not address these arguments directly but stated that the CSG program only affects the Company’s decarbonization insofar as they must pay a higher cost for it than alternative solar

¹¹³ SEA Comments, January 8, 2023, at 8.

¹¹⁴ US Solar and NextEra Comments, January 8, 2024, at 7.

¹¹⁵ Fresh Energy Reply Comments, January 22, 2024, at 2.

¹¹⁶ *Id.*, at 3.

¹¹⁷ *Id.*

¹¹⁸ Senator Frentz et al. Comments, January 8, 2024, at 1.

production:

The Company notes that under the Xcel Energy Integrated Resource Plan [...] CSGs do not provide any incremental solar energy. This is because the overall solar energy goal is set, and to the extent to which CSGs will not meet this goal other significant solar energy resources are then acquired at competitive market rates to fulfill the overall solar goal. Accordingly, even if there were no CSGs, the overall solar energy production for Xcel Energy in Minnesota would remain basically the same as it is today but would be at a markedly lower cost.¹¹⁹

III. MODIFICATIONS AND ALTERNATIVES

A. Transition Large General Service Customers and Use an Adder

As discussed previously, the OAG and Fresh Energy support leaving residential and small general service customers on the ARR because the bill credit impact of Xcel's proposal would be larger for them, those customers represent a small share of the ARR capacity, and they possess less sophistication regarding contracts than large general service customers. This proposal is opposed by the Department, JSA, SEA, US Solar/NextEra, and multiple large general service subscribers.

Fresh Energy also recommends that the Commission adopt a \$.01/kWh adder for the large general service customers moved to the VOS. Fresh Energy explained that the Commission has used adders on top of the VOS before, making it an established tool, and stated that the revised Year 7 of the 2017 VOS with the adder would be higher than the 2018-2022 ARR bill credit these customers received. Staff notes given Xcel's request to move implementation to 2025 in reply comments that Fresh Energy's proposal would now be to move parties to the Year 8 of the 2017 VOS, but the above point is still true because the Year 8 value is higher. Fresh Energy concluded:

We would argue that if financing these projects requires bill credit rates dramatically higher than the already-generous rate that was in place in 2018-2022, and/or requires bill credit rates rising faster than the VOS escalator, to the extent that a financier might cancel financing and not work in good faith with CSG operators and subscribers to accommodate a rate modification, then the financing of those projects is not "reasonable" under the language of the statute.¹²⁰

The Department opposes Fresh Energy and the OAG's proposals and stated that "general service customers are no less deserving of fair treatment..."¹²¹ The Department pointed to its analysis from its initial comments which showed that governments, public schools, and various nonprofits comprise 55% of the ARR capacity and compared the CSG program to the Solar for

¹¹⁹ Xcel Reply Comments, January 22, 2024, at 3.

¹²⁰ Fresh Energy Comments, January 8, 2024, at 11.

¹²¹ Department Reply Comments, January 22, 2024, at 6.

Schools and Solar on Public Buildings programs.¹²² They reiterated their regulatory and financing concerns discussed in the last section and stated they oppose any form of bill-credit change.¹²³

JSA argued that these proposals “begin from false premises, ignore the broad benefits and structure of the CSG program, and rest on a flawed understanding of this Commission’s authority.”¹²⁴ JSA explained that only 30% of the bill credits go to private businesses, but noted these credits can still benefit the public through lower prices, more jobs, or higher tax revenues. Like the Department, JSA contended as well that the credits to nonprofits and public entities have a broader public benefit. JSA also noted that statute “prohibits unreasonably preferential, unreasonably prejudicial or discriminatory rates”¹²⁵ and as such, “... their suggestions are largely untethered to Minnesota law.”¹²⁶

In the same vein, US Solar/NextEra stated the proposals are not legally permissible and asserted that they would violate the contract, for the same reasons outlined under Section II.B.¹²⁷

SEA similarly argued that the proposals do not protect public interest subscribers and would still induce regulatory uncertainty.¹²⁸ Winona Public Schools argued that the size of the adder is too little given the benefit that public subscribers have brought to the program.¹²⁹

Using 2023 ARR bill credits and a projection of 2023 production, Xcel estimated that moving large general service subscribers would save \$36.2 million per year and account for 23% of 2022 total CSG costs. Doing so with a \$.01/kWh adder would have savings of \$25.3 million per year and account for 16% of 2022 total CSG costs.¹³⁰

B. Require Operators to Allow Customers to Opt-Out

The OAG recommends that if bill credits for residential and small general service subscribers are

¹²² Minnesota Laws 2023, Ch.60, Art. 11, Sec. 2, Subd. 12 (the solar for schools program) and Art. 11, Sec. 2, Subd. 7 (the solar on public buildings program).

¹²³ Department Reply Comments, January 22, 2024, at 6.

¹²⁴ JSA Reply Comments, January 22, 2024, at 10.

¹²⁵ Minn. Stat. § 216B.1641

¹²⁶ JSA Reply Comments, January 22, 2024, at 12.

¹²⁷ US Solar and NextEra Reply Comments, January 22, 2024, at 2.

¹²⁸ SEA Reply Comments, January 22, 2024, at 5.

¹²⁹ Winona Public Schools Reply Comments, January 22, 2024, at 2.

¹³⁰ Xcel Reply Comments, January 22, 2024, at 11.

adjusted, that the Commission permit them to cancel their subscriptions without penalty unless the operator reduces the subscription fee such that the subscriber's net benefit is unchanged. If the subscriber made an upfront investment, the OAG recommends the operator be required to refund a percentage of the subscriber's initial investment that corresponds to the reduction in the bill credit, and if this is not agreed to by the operator, the subscriber should be allowed to cancel and receive the entire investment back. The OAG asserted that this would be fair and "the *minimum* protection that these customers deserve."¹³¹

In opposition, National Grid argued this would be a "double-penalty to ARR CSGs."¹³² They reasoned that not only would CSGs be moved to a lower rate, but it would also cause them to additionally lose subscribers. National Grid also posited that it would cause CSGs to go bankrupt through having to sell production at the much lower rate for unsubscribed energy, which would violate the statutory requirement for reasonable financing.

JSA emphasized that the OAG provides no explanation for where this authority would come from and stated, "... there is no basis in Minnesota for the Commission exercising a role" in the operator-subscriber relationship.¹³³ JSA contended that if the Commission concludes otherwise, there would be significant harm from the Commission encroaching on private contracts.

C. Adjust the ARR Formula

The OAG also referenced Fresh Energy's proposals to remove customer charges and halve demand charges in the ARR, which the Commission considered in addition to removal of the compounding effect at the May 11, 2023 agenda meeting. The OAG noted that per its June 27, 2023 Order, the Commission found that the record was not sufficiently developed to support these modifications, but argued the changes "make eminent sense" and that "it would be reasonable for the Commission to adopt them to bring the benefits of solar-garden subscriptions in line with the benefits of traditional net metering."¹³⁴ Fresh Energy explained in its March 30, 2023 comments that removing customer charges is reasonable because the subscription does not eliminate the need for the infrastructure recovered through customer charges, like the customer meter and service drop, and that halving demand charges is reasonable because it is unlikely that large general service subscriber's peak demand is fully covered through its subscription.¹³⁵

The Department, JSA, SEA, and US Solar/NextEra did not address these modifications directly but opposed them at the time they were considered and oppose any modification to the bill

¹³¹ OAG Comments, January 8, 2024, at 22.

¹³² National Grid Reply Comments, January 22, 2024, at 2.

¹³³ JSA Reply Comments, January 22, 2024, at 12-13.

¹³⁴ OAG Comments, January 22, 2024, at 19.

¹³⁵ Fresh Energy Comments, March 30, 2023, at 4-5.

credits in general, for the reasons explained previously.

The Met Council did not support any of the OAG's recommendations but recommends that, "consistent" with the OAG comments, the Commission could direct Xcel to convene stakeholder meetings on ideas to "modestly" reduce the ARR.¹³⁶

Using 2023 ARR bill credits and a projection of 2023 production, Xcel estimated removing customer charges and halving demand charges would save \$25.4 million per year and account for 16% of 2022 CSG costs.¹³⁷ Using this estimate with the 2022 FCA, they found it would save residential customers an average of \$6.46 annually.¹³⁸

D. Remove RECs

Solar developers of ARR gardens can sell the RECs to Xcel at a price of \$.02/kWh for gardens larger than 250 kW or \$.03/kWh for gardens 250 kW and small as part of the subscriber bill credit. The OAG recommends that the Commission consider eliminating RECs entirely or reducing the REC payments by some portion. They explained that these payments are responsible for much of the ARR-VOS differential, yet Xcel receives the RECs without paying further compensation under the VOS. The OAG stated that "this suggests that the base applicable retail rate would sufficiently compensate for the renewable attributes of garden energy without further enhancement."¹³⁹

The Department, JSA, SEA, and US Solar/NextEra did not address these modifications directly but oppose any modification to the bill credits in general, for the reasons explained previously.

Using 2023 ARR bill credits and a projection of 2023 production, Xcel estimated removing one cent of the RECs compensation would save \$13.1 million per year and account for 8% of 2022 CSG costs.¹⁴⁰ Using this estimate with the 2022 FCA, they found it would annually save residential customers an average of \$3.33 annually.

E. Freeze the ARR

Winona Public Schools proposed as a compromise that the Commission could freeze the ARR for large general service subscribers until the 2017 VOS rate exceeds the ARR credit.¹⁴¹ They explained this would cap payments and create predictability.

¹³⁶ Met Council Reply Comments, January 22, 2024, at 1.

¹³⁷ Xcel Reply Comments, January 22, 2024, at 11.

¹³⁸ *Id.*, at 14.

¹³⁹ OAG Comments, January 8, 2024, at 21.

¹⁴⁰ Xcel Reply Comments, January 22, 2024, at 11.

¹⁴¹ Winona Public Schools Reply Comments, January 22, 2024, at 2.

F. Fuel Clause Adjustment Carve-out

The Department explained that they “also recognize the ratepayer impact of the legacy CSG program” and proposes that a compromise could be implementing the carve-out for income-qualified ratepayers used in the non-legacy program.

G. Contested Case Proceeding

SEA stated that they believe there are disputed material facts including who is harmed and by how much. Pursuant to Minn. R. 7829.1400 subparts 3 and 9 and Minn. R. 7829.1000, they request the Commission grant a contested case or reject the proposal.¹⁴²

The Department opposes a contested case referral and asserted “there are no contested issues of fact.”¹⁴³ The Department noted that their analysis and the public comments filed in the docket have already detailed the harm of modifying the bill credits.

IV. STAFF ANALYSIS

A. Legal Considerations

Statute

Notwithstanding the Commission’s previous orders, Staff believes the most reasonable interpretation of Minn. Stat. § 216B.1641 and § 216B.164, subd. 10 is that the ARR-era gardens were to be moved to the VOS when the tariff was approved provided the Commission found the safeguards of section 216B.1641, subd. 1(e) to be satisfied. Alternatively, § 216B.164, subd. 10 could be interpreted to mean that the ARR-era gardens which were not in service (interconnected) on the date the VOS tariff was approved were to be moved to the VOS provided the Commission found the safeguards of section 216B.1641, subd. 1(e) to be satisfied.¹⁴⁴ In its April 7, 2014 Order, the Commission stated based on the record that the ARR plus RECs was the “minimum” level needed for financing, and in its September 6, 2016 Order stated it would use the ARR for gardens deemed complete by December 31, 2016, “so as not to undermine the viability of existing applications.”¹⁴⁵ However, Staff agrees with Xcel that subd. 1(e) empowers the Commission to modify the program if it is in the public interest and reasonably allows for the creation, financing, and accessibility of gardens, among other criteria.

Many developers and operators have argued the move would not satisfy the financing grounds. One difficulty the Commission has consistently faced in determining the appropriateness of bill

¹⁴² SEA Comments, January 8, 2024, at 12-13.

¹⁴³ Department Reply Comments, January 22, 2024, at 2.

¹⁴⁴ Although the CSG statute, 216B.1641, references the VOS rate from § 216B.164, subd. 10, Staff questions whether the entirety of the subdivision applies to CSG gardens.

¹⁴⁵ Commission Order, September 6, 2016, at 14 and Commission Order April 7, 2014, at 15.

credits and adders is the lack of insight into CSG project financing. Statute tasks the Commission with ensuring financing is reasonable, which gives the Commission some discretion in determining reasonableness as a policy outcome, but the Commission has lacked a record on which to base a complete assessment of the financing implications to CSGs of the rate options. Developers have had many opportunities to provide information on this issue, but the information is not very developed. In some cases, where public comments relay that their subscription fees will outpace the 2017 VOS, the cost of the power supplied appears to be much greater than the wholesale cost of solar. The Commission wished to maintain viability of gardens whose applications had been submitted in its September 6, 2016 Order, but one could argue, as Fresh Energy has, that if a particular garden is only viable today with a substantial public subsidy that other forms of solar do not require, then its financing is not reasonable.

Staff also notes that much was made on the record of the unanimity of commenters in agreeing that gardens should get to stay on the ARR leading up to the Commission's September 6, 2016 Order, but Xcel and the OAG both recommended different, lower ARR calculations in 2016 to use for these gardens.¹⁴⁶ In other words, there was not unanimous support to keep the ARR gardens on the formula used now.

If the Commission finds that it has authority to modify the rate for CSGs, it must still evaluate whether it is reasonable to do so.

Authority to Modify the Contract

The Commission has authority to modify the contract and has done so, such as when it removed the compounding effect. The Commission's Order at the time stated:

[T]he plain language of the tariffed Standard Contract specifically notes that the rates for subscribed energy shall be changed annually or as provided by the order of the Commission.¹⁴⁷

In the Order, the Commission further pointed to its authority to modify the program in Minn. Stat. § 216B.1641. Moreover, it appears to Staff that the interpretation that any amendment requires a signed agreement by both parties would grant all subscribers veto power over the Commission's statutory authority to modify the legacy program. That would be clearly inconsistent with Minnesota's utility system.

Regarding the arguments over the *Mobile-Sierra* doctrine, Staff notes that the Supreme Court has explained this as, "in wholesale markets, the party charging the rate and the party charged [are] often sophisticated businesses enjoying presumptively equal bargaining power, who could

¹⁴⁶ See OAG Comments, April 1, 2016, at 11. Xcel Comments, April 1, 2016, at 10-11.

¹⁴⁷ Commission Order, June 27, 2023, at 9.

be expected to negotiate a ‘just and reasonable’ rate as between the two of them.”¹⁴⁸ In that vein, JSA stated multiple times that Xcel bargained for these contracts and the rate.¹⁴⁹ Staff notes that Xcel is required by statute to purchase CSG production at the rate set by the Commission, and unlike in a PPA, did not bargain for the rates outside of its participation in the docket. Rather, Xcel negotiated contracts which state the rate may be changed by the Commission, as is being discussed here. Xcel has also objected to the calculation of the ARR since its inception and recommended the Commission modify it in both 2016 and 2023.¹⁵⁰ Therefore, Staff questions the applicability of the doctrine here. However, if it does apply, the conclusion that the rate can only be modified if it satisfies the high public interest standard does not appear to alter how the Commission would evaluate the proposal.

Retroactive Ratemaking

When the Commission removed the compounding effect, it stated the following in its Order:

Contrary to the contention of several commenters, the modified ARR calculation approved for 2023 does not constitute retroactive ratemaking because the changes only apply prospectively to bill credits for energy that will be produced and purchased after Xcel files updated tariffs that incorporate the modifications approved by this order.¹⁵¹

Similarly, any adopted change here would only apply prospectively. To National Grid’s concern that this potential shift is much larger, the magnitude of the change is not relevant to whether the change is retroactive.

Notice To Parties

Once again, Minn. Stat. § 216B.16, subd. 1 states:

Unless the commission otherwise orders, no public utility shall change a rate which has been duly established under this chapter, except upon 60 days' notice to the commission. [...] The filing utility shall give written notice, as approved by the commission, of the proposed change to the governing body of each municipality and county in the area affected.

Staff’s understanding is that this statute pertains to general rate case filings, and that it does not apply to CSG bill credits issued under Minn. Stat. § 216B.1641. Therefore, in Staff’s view

¹⁴⁸ Morgan Stanley Capital Grp. Inc. v. Public Util. Dist. No. 1 of Snohomish Cnty., 554 U.S. 527, 545 (2008) (quoting Verizon, 535 U.S. at 479). Originally sourced by Staff from https://www.eba-net.org/wp-content/uploads/2023/02/4-12-433-mobile_sierra.pdf at 447.

¹⁴⁹ See JSA Comments, January 8, 2024, at 13 and 16.

¹⁵⁰ See Xcel Compliance Filing, February 1, 2023. Xcel Comments, April 1, 2016, at 10-11.

¹⁵¹ Commission Order, June 27, 2023, at 9.

Xcel was not obligated to provide advance notice of the compliance filing. It also appears from the record that all viewpoints have been thoroughly represented in this proceeding.

B. Evaluating the Public Interest Standard

Ratepayer Impact

Staff believes that it may be helpful to better articulate the difference between the ARR and the VOS, and the impact to ratepayers between the two rates. The VOS is the Department's official methodology for determining the value of CSGs to ratepayers. The methodology incorporates estimates of the following factors:

- Avoided Fuel Cost
- Avoided Plant O&M - Fixed
- Avoided Plant O&M – Variable
- Avoided Gen Capacity Cost
- Avoided Reserve Capacity Cost
- Avoided Transmission Capacity Cost
- Avoided Distribution Capacity Cost
- Avoided Environmental Cost¹⁵²

In contrast, the ARR bill credit does not attempt to value the system benefits of CSGs but instead credits subscribers for factors like the recovery of infrastructure costs that the garden's existence does not necessarily mitigate or replace. The fact that the ARR is higher than the VOS is, arguably, an indication that the price paid for ARR gardens is greater than the value that they provide to society.

Given the difficulty of accurately capturing all CSG benefits, the VOS is imperfect, but it has been recognized by the Commission and parties as an effective tool for determining the point at which bill credits for CSGs cease to be a net cost to non-subscribing ratepayers. Staff provides the following examples from the historical record in the instant docket:

- The Department explained in its VOS methodology study:

While NEM (net metering) effectively values PV-generated electricity at the customer retail rate, a VOS tariff seeks to quantify the value of distributed PV electricity. If the VOS is set correctly, it will account for the real value of the PV-generated electricity, and the utility and its ratepayers would be indifferent to whether the electricity is supplied from customer-owned PV or from comparable conventional means. Thus, a VOS tariff eliminates the NEM cross-subsidization

¹⁵² <https://mn.gov/commerce-stat/pdfs/vos-methodology.pdf> at iii.

concerns.¹⁵³

- The Commission stated in its April 7, 2014 Order that “because the value-of-solar rate compensates subscribers for the value- and only the value- that their generation brings to Xcel’s system, it will address concerns that nonparticipating ratepayers are subsidizing the program.”¹⁵⁴
- JSA (MnSEIA and CCSA) wrote in comments filed on March 30, 2023 that, “unlike the ARR, the VOS cannot fairly be argued to impose unreasonable costs on non-participating ratepayers.”¹⁵⁵
- In comments filed on March 30, 2023, US Solar stated the VOS methodology is “expressly designed to be ratepayer cost-neutral.”¹⁵⁶
- In their comments in this proceeding, SEA¹⁵⁷ stated, “if the benchmark for the value that distributed solar brings to society, including Xcel non-subscribers, was set at the VOS, and then subtracted from the gross cost of the CSG program, we would have a more accurate representation of the net cost of the CSG program to Xcel non-subscribers.”¹⁵⁸
- In their comments in this proceeding, Fresh Energy stated, “the 2017 VOS that is proposed to be the new bill credit seeks to capture the system value of these projects (including environmental externalities) given the electric system conditions at the time these projects were installed.”¹⁵⁹

To put this in numerical terms, Staff illustrates the difference between the total compensation paid at the higher ARR rate and the VOS by subscriber class in Figure 1 below.

¹⁵³ Minnesota Department of Commerce, Division of Energy Resources, Minnesota Value of Solar: Methodology, at 1 (April 1, 2014).

¹⁵⁴ Commission Order, April 1, 2014, at 1.

¹⁵⁵ JSA Comments, March 30, 2023 at 5.

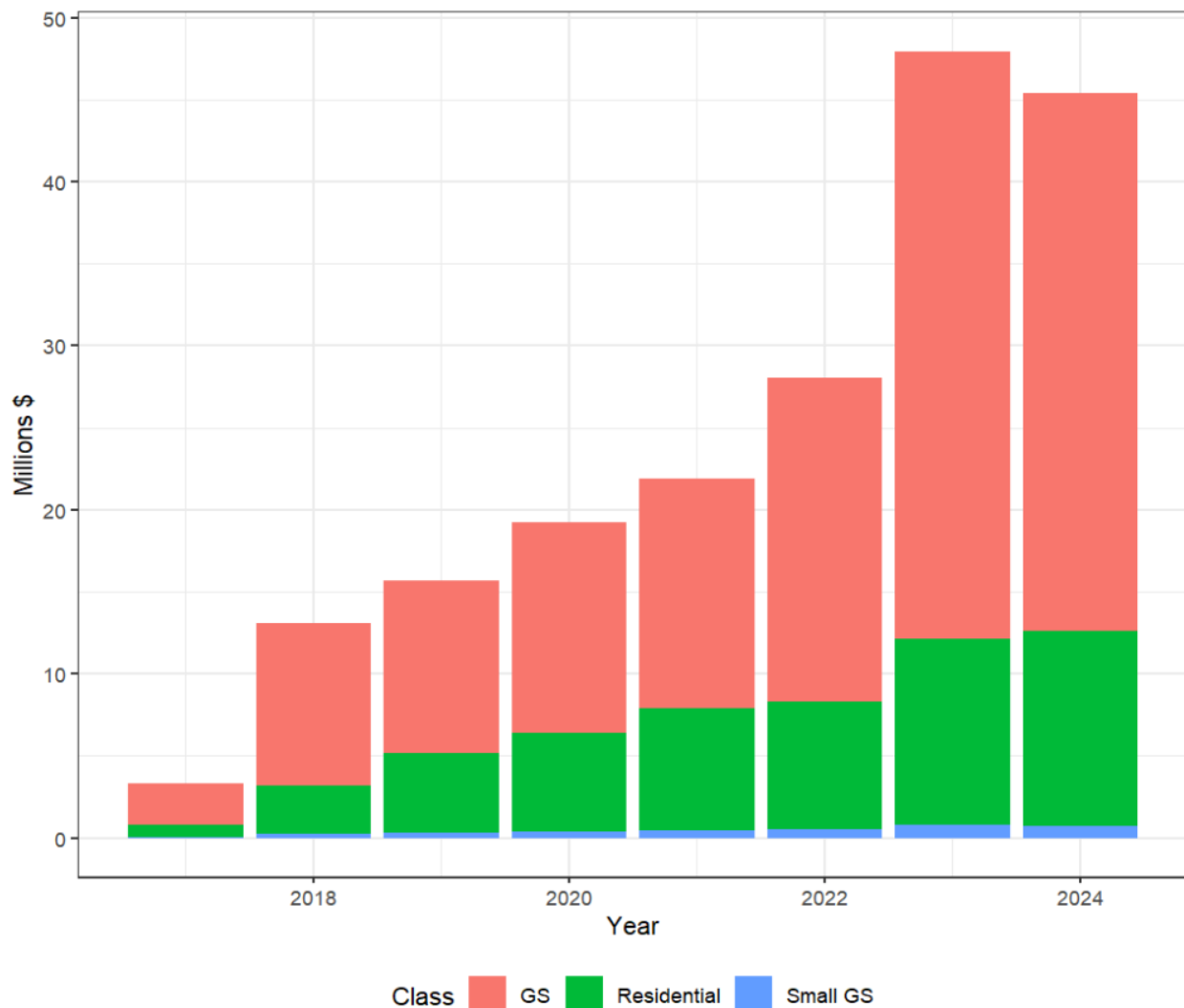
¹⁵⁶ US Solar Comments, March 30, 2023, at 7.

¹⁵⁷ The Solar Equity Advocates includes Cooperative Energy Futures, Minneapolis Climate Action, Institute for Local Self Reliance, Minnesota Interfaith Power and Light, Vote Solar, Solar United Neighbors, Saint Paul 350, Climate Generation, Sierra Club, and Community Power.

¹⁵⁸ SEA Comments, January 8, 2024, at 11.

¹⁵⁹ Fresh Energy Comments, January 8, 2024, at 5.

Figure 1: ARR and 2017 VOS Total Bill Credit Differential by Class (Millions \$)



Each bar represents the annual difference between the actual compensation paid to the ARR gardens and what would have been paid if they were originally placed on the 2017 VOS. For example, if in 2018 the ARR gardens were on the 2017 VOS, FCA expenditures would have been about \$13 million lower. As shown above, the cumulative difference between the ARR and the VOS, namely the amount paid in excess of CSGs' environmental, energy, and distribution system benefits as calculated in the VOS formula, has totaled approximately \$149 million since 2017. This will rise to about \$195 million through 2024 based on the proposed rates and using Xcel's estimate of 2023 production for 2024, or \$163 million in 2017 dollars. There is a .1% decrease in the proposed large general service ARR in 2024,¹⁶⁰ causing the annual differential

¹⁶⁰ The residential ARR increased 3.1% while the small and large general service ARR decreased by 1.8% and .1%, respectively. Xcel stated that changes to the sales true-up and costs attributed to the Company's riders decreased rates for the general service classes. Higher fuel costs and changes to the sales true-up increased rates for the

to fall, but in 2022 and 2023 the increases in the ARR greatly outpaced the 2.3% indexed increases in the VOS. Staff's calculations are included in Appendix B.

Regarding the ratepayer burden of the ARR-VOS differential, the Department stated the following:

[S]uppose that the Commission were to find that it erred as a matter of law in September 2014 when it ordered that the VOS was not in the public interest, and again in September 2016 when it ordered that garden applications after December 31, 2016 (but not before) be subject to the VOS? In that case, how would it compensate ratepayers for overpayment in the Fuel Clause Adjustment (FCA)? From whom would ratepayers recover?¹⁶¹

If the Commission determines that switching ARR-era gardens to the VOS is in the public interest, retroactive ratemaking prohibits the Commission from recouping from subscribers what was already charged to ratepayers in their fuel charges. However, Staff believes the inability to correct for overpayment in the past does not prohibit the Commission from adopting prospective changes in the future. Staff notes that the Commission took a similar action on a smaller scale with the removal of the compounding effect, as discussed above, which the Department supported.

The SEA comments also raised the issue of whether a revised VOS would show that the ARR-era gardens are a net benefit, as a revised VOS could include the updated social cost of carbon (SCC).¹⁶² Many of the ARR-era gardens would have been on the 2017 VOS if they were not approved for the ARR, and the 2017 VOS would not have a revised SCC applied later. The VOS vintages are set based on factors in the initial year and then tied to a fixed escalator. If the values were continually revised, the environmental compensation would disappear as the state decarbonizes.

Subscriber Impact

Staff recognizes that the equity questions surrounding potential changes to the contracts are difficult. As the OAG hypothesized, residential subscribers were likely unaware of the historical proceedings in this docket and likely have not looked at Xcel's tariffs to assess whether the rate might be changed. Many may also believe they have contracted with Xcel. In general, Staff does not believe the Commission has a well-developed record on how the program has historically been marketed.

residential class. Xcel Compliance Filing, February 1, 2024, at 2. The Commission also removed the compounding effect in June 2023, saving approximately \$5 million per year.

¹⁶¹ Department Comments, January 8, 2024, at 6.

¹⁶² Docket No. E-999/CI-14-643.

Even if it appears that most subscribers do not stand to lose money, but rather save less than they otherwise would, over the cumulative duration of an amended bill credit structure, some subscribers could have made a different investment and could incur a non-trivial opportunity cost, depending on their personal commitment to promoting clean energy or other reasons for buying solar energy. More, many subscribers appear to have signed a contract that places all risk on them by agreeing to subscription fees explicitly listed in the contract for 25 years without any corresponding enumeration of bill credit benefits.¹⁶³ Of course, the ARR was not known on an annual basis when contracts were signed, but these subscribers have taken a risk and are not guaranteed savings by developers. There were and are other risks too, such as technological development that affects the retail price of electricity or whether the legislature would have taken a different stance on decarbonization.

On whether maintaining the cross-subsidy to a public institution is in the public interest, Staff finds merit with Fresh Energy's statement that a more appropriate mechanism to fund public services is taxes, not utility bills. The Department compared the bill credits to the Renewable Development Account and programs like Solar for Schools, but Staff notes that one key difference is that the CSG bill credit can be spent on anything by the subscriber and need not be reinvested in clean energy as is the case with those programs. Indeed, public government comments made it clear that the credits support a wide variety of services unrelated to energy that do not necessarily benefit all of Xcel ratepayers, such as offsetting property tax increases. Further, while the Legislature clearly intended to create the CSG program as an alternative investment path for those who could not invest in rooftop solar, it is less clear that the Legislature intended the program to operate as a direct subsidy that could allow one subset of customers the chance to pay less for their energy at the cost of other customers. That said, Staff believes that should public subscribers and nonprofits be moved, the Commission may wish to take greater care with the transition and potentially use an adder to soften the impact as Fresh Energy suggests.

Regulatory Uncertainty and Financing

The decision to move all or some gardens to the VOS would likely increase uncertainty around similar future decisions the Commission makes and could have repercussions for the ability of some developers to secure future financing. As well, it may dissuade current subscribers from pursuing a subscription to the non-legacy program, which has a lower rate of compensation than the ARR. Garden operators also discussed a concrete threat to the solvency of at least 17 gardens, particularly if the residential customers are moved.¹⁶⁴

¹⁶³ See for example, City of Minneapolis Initial Comments ["subscribers are being asked to bear 100 percent of the burden"], US Solar and NextEra Reply Comments ["the Proposal merely redistributes those costs to CSG subscriber customers"], and the affidavits to JSA Initial Comments, where PureSky stated 90% of their subscribers have a fixed price subscription. Engie stated 56% of its subscribers have a fixed price and 44% have indexed fees.

¹⁶⁴ CEF's 8 gardens (all residential), PureSky's 5 gardens (all residential), and Green Street Power Partners' 4 gardens. See SEA initial comments and the attachments to JSA initial comments, January 8, 2024.

Staff believes that if the Commission decides to place some gardens on the VOS, regulatory certainty concerns would be partially mitigated by the fact that this is the rate contemplated for these gardens in statute, as Fresh Energy argued, instead of a move to an arbitrary level of compensation. The Commission would also not be interfering with a competitively set market rate. Consequently, and because Xcel can purchase utility-scale solar for about half the cost of the CSG program, Staff is not persuaded that a shift would have a long-term impact on the state's decarbonization.¹⁶⁵

C. Decision Option Guide and Staff Opinion

In Staff's opinion, the arguments in favor of complete preservation of the current bill credit structure prove unavailing when weighed against the structure's harm to non-participating ratepayers, the Commission's responsibility to maintain just and reasonable rates, and the directive to achieve a carbon free electric system by 2040 at a reasonable cost for ratepayers. Staff finds it difficult to understand the position of some commenters, which appears to be that there is no level of unanticipated above-market costs which would necessitate the Commission intervening in the ratepayer interest. There is inherently ambiguity about where such a threshold lies, but Staff agrees with the OAG, Fresh Energy, and Labor that now some form of Commission action is warranted. Staff also reflects on the fact that the ARR was established based on representations that it was the minimum rate needed to get the program off the ground, which turned out not to be the case. Even if the Commission makes changes in this proceeding, the CSG program will continue to incur millions in above-market costs to Minnesota non-subscribers, and subscribers will continue to receive the corresponding bill credits.

The Commission could move all ARR gardens to the 2017 VOS with **Decision Option 1**. The Commission could move only Large General Service subscribers with **Decision Option 2** and implement an adder with **Decision Option 3**.

The Commission could freeze 2024 bill credits until the 2017 VOS exceeds them with **Decision Option 4**. The 2017 VOS would exceed the 2024 ARRs in Year 18 for general service and Year 25 for residential and small general service.

Regarding the OAG's alternatives, Staff believes that adjusting the formula of the applicable retail rate makes sense economically,¹⁶⁶ but notes that here have been disputes about what should be reflected in the rate, as Staff discussed in briefing papers filed May 11, 2023.¹⁶⁷ In

¹⁶⁵ See Xcel Comments, December 19, 2022, at 4. ["The Company is required to purchase all energy that CSGs produce at the pre-determined Bill Credit rate, which is more than double the cost for solar energy that is competitively bid at market rate."]

¹⁶⁶ By virtue of their subscription, subscribers do not avoid infrastructure costs and therefore are not owed customer and demand charge revenue on a cost-causal basis, legal arguments aside.

¹⁶⁷ Briefing Papers, May 11, 2023, at 20.

2014, the Commission could have defined the applicable retail rate as “the retail rate applicable to CSGs” and instituted net metering, but did not, and the proposed rate here is not exactly the state’s net metering rate, which would exclude all of the demand charges and not include RECs.¹⁶⁸ The Commission could adopt these with **Decision Options 5A** and **5B**. The Commission could also contemplate initiating a rulemaking procedure to define the ARR as net metering.

The Commission can remove REC payments completely on April 1, 2025 with **Decision Option 5C** or transition more slowly at one cent per year with **Decision Option 5D**. Staff believes the OAG’s RECs proposal has significant merit if the Commission elects not to move any or all gardens to the VOS because:

- 1) They are not part of the applicable retail rate and are not required to be included in the bill credit by statute.
- 2) Even with the RECs removed, the compensation exceeds the VOS, meaning subscribers are still appropriately compensated for the environmental benefit.
- 3) It is consistent with how the Commission is administering the non-legacy program, where Xcel does not pay for the RECs.¹⁶⁹
- 4) Xcel found in the past that the market value of RECs is \$.0003 to \$.00035 per kWh while gardens are compensated at the rate of \$.02 or \$.03 per kWh.¹⁷⁰
- 5) A staggered transition of removing the RECs by one cent or .5 cent per year could lessen shock.
- 6) This could still save approximately \$26 million per year.

Staff notes though that removing the RECs would provide a ceiling on savings (\$26 million or so), rather than a rough floor by moving parties to the VOS (\$48 million or so depending on the modifications), because it does not address the degree by which the ARR grows faster than the VOS on average. It is limited by the \$.02 and \$.03 valuations of the RECs and the production of the gardens, which will slowly wane. If the Commission elects to move some parties to the VOS and keep some on the ARR, it could also contemplate removing RECs slowly for those who remain, or could freeze the ARR and remove the RECs.

The Commission could require operators to allow customers to opt-out of their contracts with **Decision Option 6**.

Decision Option 7 would require Xcel to convene stakeholder meetings for reductions in the ARR, and **Decision Option 8** would implement the FCA carve-out used in the non-legacy

¹⁶⁸ See Xcel’s annual filing in Year-09 for the calculation of the A50 rate.

¹⁶⁹ Commission Order, December 28, 2023, at 6.

¹⁷⁰ Commission Order, September 6, 2016, at 10.

program.¹⁷¹

The Commission could also refer the matter to a contested case (**Decision Option 9**). Staff believes if this route was pursued it would be ideal to gain more insight into the financing of the developers and the developer-subscriber contracts, if possible. This form of record development could also help fine-tune a potential adder to be used in conjunction with the 2017 VOS to maintain the solvency of existing gardens. The Commission could potentially accomplish this as well with the cooperation of the developers/operators and a commission investigation, which Staff also supports.

Finally, Staff provides Table 6 showing Xcel's estimates for the decreases in FCA expenditures with the relevant Decision Options:

Table 6: Estimated FCA Savings by Decision Option

Proposal	Approximate FCA Savings, in millions	Approximate Annual Residential Ratepayer Savings	Decision Option
Move all to the 2017 VOS	\$48.4	\$12.31	1
Move GS to the 2017 VOS	\$36.2	\$9.21	2
Move GS and use adder	\$25.4	\$6.45	2 and 3
Remove customer charges and halve demand	\$25.4	\$6.46	5 A and B
Remove all RECs	\$26.2	\$6.66	5 C or D

¹⁷¹ Commission Order, December 28, 2023 at Order Point 5.

DECISION OPTIONS

1. Approve the proposal to move all ARR-era gardens to the VOS as found in Xcel's September 25, 2023 compliance filing, with the modification found in Xcel's January 22, 2024 reply comments to transition them on April 1, 2025 with the Year 8 rate of the 2017 VOS vintage. (*Labor*)

OR

2. Modify Xcel's September 25, 2023 proposal to only move large general service subscribers and transition them to the Year 8 rate of the 2017 VOS vintage on April 1, 2025. (*Fresh Energy, OAG*)
3. Approve a \$.01/kWh adder for subscribers moved to the 2017 VOS. (*Fresh Energy*)

OR

4. Freeze the ARR and then transition:
 - A) All subscribers to the 2017 VOS rate when the 2017 VOS exceeds their class rate.

OR

- B) Large General Service subscribers to the 2017 VOS rate when the 2017 VOS exceeds their class rate. (*Winona Public Schools*)

OR

5. For implementation with the 2025 ARR, modify the ARR bill credit by:
 - A) Removing customer charges (*OAG*).
 - B) Halving demand charges. (*OAG*)
 - C) Removing all REC payments (*OAG*)
 - D) Reduce REC payments by \$.01/kWh per year (*Staff option*)

AND

6. Require garden operators to allow affected residential and small general service customers to opt-out or be refunded the net amount affected if the subscription fee was paid upfront. (*OAG, DO 6 could be paired with 1, 4A, or 5A-D.*)

OR

7. Direct Xcel to convene stakeholder meetings on alternative proposals to reduce the ARR.
(*Met Council*)

AND

8. Implement the FCA carve-out for income-qualified ratepayers used in the non-legacy program for the ARR garden costs. (*Department. DO 8 could be selected with any other DO.*)
9. Refer the proposal to the OAH for a contested case proceeding. (*SEA. Could be chosen with DO 8*)

Staff notes that there is not a Decision Option to require Xcel to submit the necessary tariff changes because Xcel is already required to submit the tariff updates on February 1, 2025 for the 2025 ARR bill credits.

Appendix A: Full list of Commenters

Mankato Clinic 11/13/2023	City of Winona 12/18/2023
Rocori Public schools 11/13/2023	Elizabeth Lane-Getaz 12/19/2023
Sibley County 11/21/2023	Buff Grace 12/19/2023
John Hansen 11/21/2023	Amy Grace 12/19/2023
Mike Fey 11/27/2023	Lois Braun 12/20/2023
Trinity Lutheran church 11/30/2023	A Sorum 12/21/2023
City of Sauk Rapids 11/30/2023	T. Ihlenfeldt 12/21/2023
Simona Fischer 12/4/2023	B. Paulson 12/21/2023
Ruth Lindh 12/4/2023	Lois Norrgard 12/26/2023
Dave Schacht 12/4/2023	Dan Swenson-Klatt 12/26/2023
Erik Larson 12/4/2023	Amy Schneider 12/26/2023
Timothy Jean Vick 12/4/2023	Lori DeRoo 12/26/2023
Katharine Winston 12/4/2023	Nora Moore 12/26/2023
Robert Gubrud 12/4/2023	Zuleyka Marquez 12/26/2023
Elizabeth Jarrett Andrew 12/4/2023	Dawn Bloom 12/26/2023
Ken Pearson and Kate Poole 12/4/2023	Sarah Sivright 12/27/2023
Scott Slipy 12/4/2023	Judy Harper 12/27/2023
Connie and Gary DeGrote 12/4/2023	Steve Orth 12/27/2023
Richard DeBeau and Doris Welke 12/4/2023	Dan Dauner 12/28/2023
Galen Spinler 12/4/2023	Winona County Board of Commissioners 1/2/2024
Ian Young 12/5/2023	Big Lake Schools 1/2/2024
Connor Klausing 12/5/2023	Margit Johnson 1/3/2024
Susan Gray and Paul Waytz 12/5/2023	Francis Fabrizio 1/3/2024
John and Laura Healey 12/5/2023	Michael Shoop 1/3/2024
Colleen and Ed Vitek 12/5/2023	Debby Evans 1/3/2024
Sean Hart 12/5/2023	Donna Clark 1/3/2024
Greg Kramer and Anna Leininger 12/5/2023	Christine Popowski 1/3/2024
Erik Larson and A Bergquist 12/5/2023	Jennifer Baumgardner Barnes 1/3/2024
Thomas Harries 12/5/2023	Laurie Burns 1/3/2024
Joel and Julie Rose 12/5/2023	Christine Pulver 1/3/2024
David Schacht 12/5/2023	Kathy Quick 1/3/2024
Gerald and Rita Janish 12/5/2023	Vernon Rice 1/3/2024
Maggie O Connor 12/5/2023	Allen Gibas 1/3/2024
Steve Beuning 12/6/2023	DeeAnn Edlund 1/3/2024
St. Cloud surgical Center 12/12/2023	Jane Gfrerer 1/3/2024
Mel Turcanik 12/12/2023	Timothy Bardell 1/3/2024
Osacar Avine 12/14/2023	Jeffrey and Mrs. Mary Frush 1/3/2024
Lee Samelson 12/14/2023	Kristin Maier 1/3/2024
Richard Aadalen 12/14/2023	Mike Hirabayashi 1/3/2024
Bogott Family 12/14/2023	Sam Benson 1/3/2024
Cardinal Pointe 12/15/2023	

David Ingold 1/3/2024
Lorraine Morgan 1/3/2024
Sam Blackwell 1/3/2024
Kay Slama 1/3/2024
John Karvel 1/3/2024
Kay Slama 1/3/2024
Mark Sanstead 1/3/2024
Richard VandenDolder 1/3/2024
Hope Hutchison 1/3/2024
David Hegdahl 1/3/2024
Donna Goodlaxson 1/3/2024
Ann Pannier 1/3/2024
Kathleen Lafferty 1/3/2024
Mark Padellford 1/3/2024
Marian Borida 1/3/2024
Kathy Bradley 1/3/2024
Russell Pannier 1/3/2024
Michael White 1/3/2024
Elizabeth Hinz 1/3/2024
Michael Stoick 1/3/2024
City of Maple Grove 1/3/2024
Patricia Norton 1/3/2024
Nan Stevenson 1/3/2024
Dee Borton 1/3/2024
James May 1/3/2024
Vicki Lambert 1/3/2024
Heather Hackett 1/3/2024
Faith Williamson 1/3/2024
Cora Preston 1/3/2024
Claudia Oxley 1/3/2024
Joseph Ward 1/3/2024
Catherina Solheim 1/3/2024
Judith Mackenzie 1/3/2024
Olaf Hall-Holt 1/3/2024
Mary Pieper 1/3/2024
David Pasiuk 1/3/2024
Alena Steward 1/3/2024
Mary Tholkes 1/3/2024
Morgan Byrne 1/3/2024
Geraldyn Leannah 1/3/2024
Rita Erickson 1/3/2024
Kathryn Milun 1/3/2024
Kate Schreck 1/3/2024

Judy Moreira 1/3/2024
Lydia Caros 1/3/2024
Halla Dontje Lindell 1/3/2024
Katherine Kienbaum 1/3/2024
Kathleen Stoddart 1/3/2024
Jean Cleary 1/3/2024
Kristin Vatter 1/3/2024
Keith Miller 1/3/2024
Rebecca Larson 1/3/2024
Peder Otterson 1/3/2024
Ellen O'Connor 1/3/2024
Marillene Allen 1/3/2024
Riv Shapiro 1/3/2024
Emily Wallace 1/3/2024
Jorie Miller 1/3/2024
Dave Long 1/3/2024
Clayton Dumcum 1/3/2024
Deborah Fineman 1/3/2024
Frank Schilder 1/3/2024
Alan Stevenson 1/3/2024
Bill Kaemmerer 1/3/2024
Donna Daniell 1/3/2024
Dennis Thompson 1/3/2024
Julie Cox 1/3/2024
Donna Green 1/3/2024
Liz Kochis 1/3/2024
Theresa Flynn 1/3/2024
Catherine Iliff 1/3/2024
Emily Seay Allen 1/3/2024
Vernita Kennen 1/3/2024
Janet Triplett 1/3/2024
James Hawkins 1/3/2024
Wallace Wadd 1/3/2024
Robert Lehner 1/3/2024
Cheryl Olseth 1/3/2024
Justin Sabia-Tanis 1/3/2024
Miranda Bryan 1/3/2024
City of Spring Lake 1/3/2024
David Rost 1/3/2024
kathleen dunn 1/3/2024
Doug Gurian-Sherman 1/3/2024
Paula Brust 1/3/2024
Mike Ferguson 1/3/2024

Gina Peltier 1/3/2024
Jean Diekmann 1/3/2024
George Moore 1/3/2024
Lee Schaefer 1/3/2024
Paul Densmore 1/3/2024
Gretchen Larson 1/3/2024
Penny Cragun 1/3/2024
Alison Waite 1/3/2024
Jean Giebenhain 1/3/2024
Jim Tjepkema 1/3/2024
Ellen Hadley 1/3/2024
Jane McBride 1/3/2024
Lawrence Wiesner 1/3/2024
Emily Meyer 1/3/2024
Julian Sellers 1/3/2024
Brad Snyder 1/3/2024
Andrea Heier 1/3/2024
Ann Galbraith Miller 1/3/2024
James Everest 1/3/2024
Juli Rasmussen 1/3/2024
Christopher Erickson 1/3/2024
Jay Manolis 1/3/2024
Sherri Knuth 1/3/2024
Ryan Jagim 1/3/2024
Susan Jameson 1/3/2024
City of St Clair 1/3/2024
Barbara Nordstrom-Loeb 1/3/2024
Jane Wyllie 1/3/2024
Adam Fitzpatrick 1/3/2024
Kerri Meyer 1/3/2024
Elizabeth Falk-Thompson 1/3/2024
Patricia Miller 1/3/2024
John Sippola 1/3/2024
Jessica Rosenberg 1/3/2024
Paige Westra 1/3/2024
Paula Bidle 1/3/2024
Ivy Booth 1/3/2024
Ray Wiedmeyer 1/3/2024
James Herther 1/3/2024
John Salmen 1/3/2024
Christie Manning 1/3/2024
Gail Loverud 1/3/2024
Mary Breen 1/3/2024
Elizabeth Dailey 1/3/2024
Maria Bavier 1/3/2024
Jaime Gjerdingen 1/3/2024
Katherine Wojtan 1/3/2024
Dorothy Hammer 1/3/2024
Tracey Deutsch 1/3/2024
Suzanne Swanson 1/3/2024
Lyn Dauffenbach 1/3/2024
Mary Ann Lundquist 1/3/2024
Harmon Abrahamson 1/3/2024
Gayle Jentz 1/3/2024
John and Jean Flemin 1/3/2024g
Steve and Christine Clemens 1/3/2024
Saoncyrae Neville 1/3/2024
James Jasper 1/3/2024
Anna Ebbers 1/3/2024
Tom Arneson 1/3/2024
Jean Greenwood 1/3/2024
Dean Borgeson 1/3/2024
Mary Winnett 1/3/2024
Suzan Koch 1/3/2024
Bob Nesheim 1/3/2024
Lawrence Sroufe 1/3/2024
Randall Smith 1/3/2024
Ann Jensen 1/3/2024
Joseph Johnson II 1/3/2024
Carla Hansen 1/3/2024
Julie Jacobs 1/3/2024
Larry Jacobson 1/3/2024
James Bradford III 1/3/2024
Wayne Sandbulte 1/3/2024
Karen Seay 1/3/2024
Raj Sethuraju 1/3/2024
Paulette Brieese 1/3/2024
Barbara Pilling 1/3/2024
Mike Menzel 1/3/2024
Sheila Maybanks 1/3/2024
Gloria Peck 1/3/2024
Cheryl Mullin 1/3/2024
Greg Murphy 1/3/2024
Sophia Hoiseth 1/3/2024
Mary Steiner 1/3/2024
Diana Cumming 1/3/2024

Sarah Sebright 1/3/2024
Bonita LaDuca 1/3/2024
Dawn Bove 1/3/2024
Vedavathi Bellamkonda-Athmaram
1/3/2024
Jose Koch 1/3/2024
Karen Alexander 1/3/2024
George Kinney 1/3/2024
Elizabeth Maupin 1/3/2024
Molly Blaszkowski 1/3/2024
Michael Elliott 1/3/2024
Meg Gerlach 1/3/2024
John Schmid 1/3/2024
Mark Windisch 1/3/2024
Lorenz Glaser 1/3/2024
Todd Pierson 1/3/2024
Mary Fratto 1/3/2024
Julie Nester 1/3/2024
Emma Stout 1/3/2024
Bill Bruhler 1/3/2024
Alan Bray 1/3/2024
Don Schuld 1/3/2024
Alan Bray 1/3/2024
Susan Dragsten 1/3/2024
John Steinworth 1/3/2024
Matt Rohn 1/3/2024
John Steinworth 1/3/2024
Kim Wolston 1/3/2024
Shodo Spring 1/3/2024
Gretchen Griffin 1/3/2024
Wesley Sisson 1/3/2024
Geoffrey Saign 1/3/2024
Gwin Pratt 1/3/2024
Daniel Dahn 1/3/2024
Michael Blandford 1/3/2024
Catherine Murphy 1/3/2024
Scott Berndt 1/3/2024
Daniel Lupton 1/3/2024
Judy Hawkinson 1/3/2024
Karen Van Schyndel 1/3/2024
Hannah Mitchell 1/3/2024
H Ande 1/3/2024
Johnathan Stegall 1/3/2024

Kristine Oberg 1/3/2024
Linda Ganske 1/3/2024
Thomas Lucy 1/3/2024
Matthew Floding 1/3/2024
Mercedes Yarbrough 1/3/2024
Phillip Romine 1/3/2024
Sandra Muellner 1/3/2024
Stephanie Harris 1/3/2024
Aaron Kerr 1/3/2024
David Franske 1/3/2024
James Franske 1/3/2024
Jean Greenwood 1/3/2024
Diane Krueger 1/3/2024
Ian Hedberg 1/3/2024
Joan Pasiuk 1/3/2024
Drew Harper 1/3/2024
David Kranz 1/3/2024
H Ande 1/3/2024
Johnathan Stegall 1/3/2024
Kristine Oberg 1/3/2024
Linda Ganske 1/3/2024
Thomas Lucy 1/3/2024
Matthew Floding 1/3/2024
Mercedes Yarbrough 1/3/2024
Phillip Romine 1/3/2024
Sandra Muellner 1/3/2024
Stephanie Harris 1/3/2024
Tim Wulling 1/4/2024
Susan & Mike Mullin 1/4/2024
Lauren Kofsky 1/4/2024
Gary Olson 1/4/2024
Karen Smith Sellers 1/4/2024
Lee Swenson 1/4/2024
Jean Ross 1/4/2024
Karen Nielsen 1/4/2024
Cynthia Launer 1/4/2024
Allan Bostelmann 1/4/2024
Harriet McCleary 1/4/2024
William Adamski 1/4/2024
Jane Dow 1/4/2024
Shannon Markley 1/4/2024
Ginger Sisco 1/4/2024
Dan La Vigne 1/4/2024

Ben Weiss 1/4/2024	Jay Lieberman 1/4/2024
Judith Gregg 1/4/2024	Shari Hansen 1/4/2024
Rebecca Cramer 1/4/2024	Lisa Burke 1/4/2024
Kris Hoffwomyn 1/4/2024	Nicholai Jost-Epp 1/4/2024
Debra Avenido 1/4/2024	Winona Public Schools 1/5/2024
Paige Westra 1/4/2024	St. Paul 1/5/2024
Kristen Anderson 1/4/2024	Jenna Roberts 1/5/2024
Beverly Antonio 1/4/2024	Michelle Shaw 1/5/2024
Lori DeRoo 1/4/2024	Michael Krause 1/5/2024
Holly Buchanan 1/4/2024	Manfred Haeusler 1/5/2024
Lori DeRoo 1/4/2024	Jimmy Levine 1/5/2024
Katherine Albright 1/4/2024	Joseph Meltzer 1/5/2024
Eileen Levin 1/4/2024	Allison Jensen 1/5/2024
Susan Wear 1/4/2024	John Ostfield 1/5/2024
Andrea Kuenning 1/4/2024	Satish Desai 1/5/2024
Janet Pope 1/4/2024	Nina Samuels and Earl Schwartz 1/5/2024
Paul Schollmeier 1/4/2024	Donald Youngberg 1/5/2024
Peg Challgren 1/4/2024	Keval Kaur Khalsa 1/5/2024
Joyce Prudden 1/4/2024	M S Ratner 1/5/2024
Pam Roiger 1/4/2024	Laura Millberg 1/5/2024
Melissae Bletsian 1/4/2024	Barbara Block 1/5/2024
Dawn Bloom 1/4/2024	Nicole Guthrie 1/5/2024
Kathy Steinhauer 1/4/2024	Genevieve Parker 1/5/2024
Nancy Dennis 1/4/2024	Cay Fingerholz 1/5/2024
Betty Schilling 1/4/2024	Anita Hill 1/5/2024
Megan Flood 1/4/2024	Bob Jalonen 1/5/2024
Marilyn Frank 1/4/2024	Lauren Lindelof 1/5/2024
Anna Newton 1/4/2024	Dawn Georgieff 1/5/2024
Siana Goodwin 1/4/2024	Scott Schubert 1/5/2024
Craig Rymer 1/4/2024	John Cuningham 1/5/2024
Kirsten Maiko 1/4/2024	Drew Johnson 1/5/2024
Roberta Haskin 1/4/2024	Michael Munion 1/5/2024
Patrick Holt 1/4/2024	Brian PaStarr 1/5/2024
John Krenn 1/4/2024	Patricia Hoffman 1/5/2024
Lisa Nilles 1/4/2024	Michael Schwartz 1/5/2024
Kevin Walker 1/4/2024	Denise Marlowe 1/5/2024
David O Fallon 1/4/2024	Mary Malotky 1/5/2024
Diane Larson 1/4/2024	Jerry Blume 1/5/2024
Linda Rost 1/4/2024	Cheryl Persigehl 1/5/2024
Laurie Windisch 1/4/2024	Paul Brooks 1/5/2024
Tom Brown 1/4/2024	Thomas Lindquist 1/5/2024
Jeffrey Snyder 1/4/2024	Diane Peterson 1/5/2024
Katy Wortel 1/4/2024	Michael Walker 1/5/2024

Terri Burnor 1/5/2024	Cynthia Launer 1/5/2024
Nic Baker 1/5/2024	Richard Magnus 1/5/2024
Howard White 1/5/2024	Shelli Smith 1/5/2024
Shirley Sailors 1/5/2024	Mitch Multer 1/5/2024
Mary Ahler 1/5/2024	Tim Bethke 1/5/2024
Ashley Brookins 1/5/2024	Bernard Miller 1/5/2024
Matthew Hausman 1/5/2024	Larry Wolf 1/5/2024
Ann Ontjes 1/5/2024	Janine Schug 1/5/2024
Susan Sisola 1/5/2024	Thomas Griffin 1/5/2024
David Newton 1/5/2024	City of St. Cloud 1/8/2024
Becky Dale 1/5/2024	City of Northfield 1/8/2024
Vernita Kennen 1/5/2024	City of Burnsville 1/8/2024
Maggie Yauk 1/5/2024	John Howard 1/8/2024
Brian Buxton 1/5/2024	Met Council 1/8/2024
Norm Floden 1/5/2024	City of Oakdale 1/8/2024
Brenda Kemmerick 1/5/2024	City of Inner Grove Heights 1/8/2024
Kelly Muellman 1/5/2024	Gary and Connie DeGrote 1/8/2024
Elaine Samuelson 1/5/2024	Rachel Hertel 1/8/2024
Lorraine Delehanty 1/5/2024	Dennis Yockers 1/8/2024
Amalia Prohofsky 1/5/2024	Darlene Broughton 1/8/2024
Beth Pearlman 1/5/2024	Davida Alperin 1/8/2024
Johan Baumeister 1/5/2024	Arlene Schatz 1/8/2024
Carol Bechte 1/5/2024	Karen Barstad 1/8/2024
Eric Pasternack 1/5/2024	Sharon Schmidt 1/8/2024
Paul Magee 1/5/2024	Monica Lofgren 1/8/2024
Neil Moses-Zirkes 1/5/2024	Beatrice Magee 1/8/2024
Jeffrey Skochil 1/5/2024	Geoffrey Marshall 1/8/2024
Mari Forbush 1/5/2024	Alan Kagan 1/8/2024
Beth Peck 1/5/2024	Aaron Silver 1/8/2024
JoAnn Pasternack 1/5/2024	Megan Hadley 1/8/2024
Jonathan Ehrlich 1/5/2024	Lee Silverstein 1/8/2024
Gregg Eichenfield 1/5/2024	Kathy Hollander 1/8/2024
Yoga Prakasa 1/5/2024	Constance Adams 1/8/2024
David Harris 1/5/2024	Mary Engen 1/8/2024
Amy Sheldon 1/5/2024	Susan Nixon 1/8/2024
Jeanne Barr 1/5/2024	VickiJo Lambert 1/8/2024
Allison Mcginnis 1/5/2024	Jacob Langness 1/8/2024
Stuart Kaufman 1/5/2024	IUOE Local 49 and NCSRC of Carpenters 1/8/2024
Mary Weber 1/5/2024	CEEM 1/8/2024
Leslie Martin 1/5/2024	OAG RUD 1/8/2024
Steven Foldes 1/5/2024	Fresh Energy 1/8/2024
Laura Honan 1/5/2024	JSA 1/8/2024
Sharon Benmaman 1/5/2024	

US Solar/NextEra 1/8/2024	S Hoffman 1/11/2024
National Grid Renewables 1/8/2024	S Delattre 1/11/2024
SEA 1/8/2024	S Downing 1/11/2024
Shodo Spring 1/9/2024	Murray County Medical Center 1/11/2024
Christine Popowski 1/9/2024	Dan Kohler 1/11/2024
Tess Dornfeld 1/9/2024	Eva Hanson 1/11/2024
Ampion 1/9/2024	Joan Smiley 1/11/2024
Kiwk Trip 1/9/2024	Mary Theresa Downing 1/11/2024
Brian Millberg 1/9/2024	Nancy Dennis 1/11/2024
Gregg Lindberg 1/9/2024	Mankato Area Public School Board 1/12/2024
Tim Fremouw 1/9/2024	Kay Slama 1/12/2024
Allan Campbell 1/9/2024	Wilbur Ince 1/17/2024
Gretchen Musicant 1/9/2024	Margaret Dukes 1/17/2024
Joel Gordon 1/9/2024	Mary Ann Vande Vusse 1/17/2024
Kathyrn Lozada 1/9/2024	Lyn Ckark Pegg 1/17/2024
Brett Thompson 1/9/2024	Lane Ayres 1/17/2024
Katherine DuGarm 1/9/2024	Katherine Schafer 1/17/2024
Catherine Early 1/9/2024	Christine Popowski 1/17/2024
Sarah Rathlisberger 1/9/2024	Abbigale Helke 1/17/2024
Michael Kemper 1/9/2024	Peg Challgren 1/17/2024
Jacob Grossman 1/9/2024	Jean Ross 1/17/2024
Nancy Kipp 1/9/2024	Sheri Nelson 1/17/2024
Elizabeth Croteau-Kallestad 1/9/2024	Mary Kosuth 1/17/2024
Susan Nixon 1/9/2024	Gretchen Musicant 1/17/2024
Constance Adams 1/9/2024	Peter Molenaar 1/17/2024
Craig Cox 1/9/2024	Susan Delattre 1/17/2024
David Vaughan 1/9/2024	Anne Gerrietts 1/17/2024
Alana Howey 1/9/2024	Megan Sheridan 1/17/2024
William Thomas 1/9/2024	Erik Roth 1/17/2024
Jonathan Riehle 1/9/2024	Alexander Davis 1/17/2024
Brian Millberg 1/9/2024	Sharon Combs 1/17/2024
Sherry Hood 1/9/2024	Jane Benjamin 1/17/2024
Brad Little 1/9/2024	Peter Eichten 1/17/2024
Martha Winslow 1/9/2024	Anne Walch 1/17/2024
Alice Madden 1/9/2024	Phillip Green 1/17/2024
Gladys Jones 1/9/2024	Kathy Mork 1/17/2024
Mark Scofield 1/9/2024	Virginia Templeton 1/17/2024
Andy Willette 1/9/2024	DeeAnn Stenlund 1/17/2024
Alice Bowron 1/9/2024	Ivan Zender 1/17/2024
Department 1/9/2024	Jeffrey James Riege 1/17/2024
Brian Millberg 1/9/2024	Bryn Shank 1/17/2024
University of Minnesota 1/9/2024	James Bradford III 1/17/2024
C Carau 1/11/2024	

Mark Young 1/17/2024	Dave Crawford 1/17/2024
Paula Thomsen 1/17/2024	John Allen 1/17/2024
Mary Ludington 1/17/2024	Mary Shamrock 1/17/2024
Bethany Ringdal 1/17/2024	Wendy Gorski 1/17/2024
Winston Cavert 1/17/2024	Rachel Chinitz 1/17/2024
Mankato Area Public School 1/17/2024	Doris Rubenstein 1/17/2024
Kay Slama 1/17/2024	Carol Masters 1/17/2024
Bill Elwood 1/17/2024	Dan Jenney 1/17/2024
Eric Hanninen 1/17/2024	Jean Hammink 1/17/2024
Dawn Georgieff 1/17/2024	Kate Wolfe-Jenson 1/17/2024
Scott Lagaard 1/17/2024	Lisa Kane 1/17/2024
Jessica Intermill 1/17/2024	Andrew Cholakian 1/17/2024
Jacqueline Colby 1/17/2024	Bonnie Beckel 1/17/2024
JL Angell 1/17/2024	Cheryl M 1/17/2024
Erica Venberg 1/17/2024	Christie Manning 1/17/2024
Janet LaBrie 1/17/2024	Dawn Doering 1/17/2024
Ron Leurquin 1/17/2024	Jeff Stromgren 1/17/2024
Cecily Harris 1/17/2024	Karen Lunde 1/17/2024
Mary Kosuth 1/17/2024	Katie Winkelman 1/17/2024
Rev. Jennifer Crow 1/17/2024	Lois Hamilton 1/17/2024
Liesl Wiborg 1/17/2024	Nan Corliss 1/17/2024
Sarah Gorham 1/17/2024	Seth Leavitt 1/17/2024
Susan Daughtry 1/17/2024	Roger Wilkowske 1/18/2024
John Wozniak 1/17/2024	Valerie Watson 1/18/2024
David Warner 1/17/2024	Ellen Rozek 1/18/2024
Laura Dillom 1/17/2024	Robert Kean 1/18/2024
Marcia Gustafson 1/17/2024	Ron Larson 1/18/2024
Cheryl Ritenbaugh 1/17/2024	William Adamski 1/18/2024
Sue Nankivell 1/17/2024	Joshua Lewis 1/18/2024
Lee Morgan 1/17/2024	Harold "Hersh" Berman 1/18/2024
David Wiester 1/17/2024	David Franske 1/18/2024
Elizabeth Andrew 1/17/2024	Linda Crain 1/18/2024
Ray Goebel 1/17/2024	Carlos Eduarte 1/18/2024
Beth Cutting 1/17/2024	Katharine S. Winston 1/18/2024
Lisa Friedman 1/17/2024	Michael J. Blandford 1/18/2024
Linda Countryman 1/17/2024	Andrei & Wendy Sivanich 1/18/2024
Kari Stoick 1/17/2024	Travis Dahlke 1/18/2024
Jeff Klepfer 1/17/2024	Chris Burda 1/19/2024
David Albrecht 1/17/2024	Dana Jackson 1/19/2024
Kay Helm 1/17/2024	Hana Tanberg 1/19/2024
Marcy Leussler 1/17/2024	Mike Brothers 1/19/2024
David Leppik 1/17/2024	Katie Fournier 1/19/2024
Patricia Scott 1/17/2024	Olivia Olson 1/22/2024

Janet Skidmore 1/22/2024
Donna Sandon 1/22/2024
William Elwood 1/22/2024
Dean Borgeson 1/22/2024
Dwight Wagenius 1/22/2024
Paula Bidle 1/22/2024
Anne Valaas-Turner 1/22/2024
Anna Larsson 1/22/2024
George Moore 1/22/2024
Amy Grace 1/22/2024
David Leppik 1/22/2024
Charles Moore 1/22/2024
Martin Malecha 1/22/2024
Jessica Intermill 1/22/2024
Theresa Zeman 1/22/2024
Jerry Blume 1/22/2024
Mary Zaudtke 1/22/2024
Eleanor Haase 1/22/2024
Juventino Meza 1/22/2024
Mike Rollin 1/22/2024
Karen Hulstrand 1/22/2024
Mike Kneer 1/22/2024
Hana Tanberg 1/22/2024
Xcel 1/22/2024
Fresh Energy 1/22/2024
SEA 1/22/2024
JSA 1/22/2024
US Solar/NextEra 1/22/2024
Met Council 1/22/2024

Department 1/22/2024
Local Government Coalition 1/22/2024
Suburban Rate Authority 1/22/2024
Melissa Hortmand and Representatives
1/23/2024
Murray County Board of Commissioners
1/23/2024
City of Rogers 1/23/2024
Amy Drayer 1/25/2024
Cary Libman 1/29/2024
Emily Wallace 1/30/2024
City of Chanhassen 1/31/2024
City of Winona 12/18/2023
Elizabeth Lane-Getaz 12/19/2023
Buff Grace 12/19/2023
Amy Grace 12/19/2023
Lois Braun 12/20/2023
A Sorum 12/21/2023
T. Ihlenfeldt 12/21/2023
B. Paulson 12/21/2023
Lois Norrgard 12/26/2023
Dan Swenson-Klatt 12/26/2023
Amy Schneider 12/26/2023
Lori DeRoo 12/26/2023
Nora Moore 12/26/2023
Zuleyka Marquez 12/26/2023
Dawn Bloom 12/26/2023
Sarah Sivright 12/27/2023

Appendix B: ARR-VOS Differential Estimation

Year	Class	2017 VOS	ARR	Total ARR production (kWh)	Class Capacity Share	Estimated Class Differential (\$) ¹⁷²	Total Annual Differential	2017 CPI Deflator
2017	GS	.1033	.12296	151149943	.84	2496150	3319131	1
2017	Residential	.1033	.1531	151149943	.1	752726		
2017	Small GS	.1033	.14798	151149943	.01	67533		
2018	GS	.1057	.12515	587116238	.87	9934887	12996874	.964
2018	Residential	.1057	.15539	587116238	.1	2917380		
2018	Small GS	.1057	.14844	587116238	.01	250933		
2019	GS	.1081	.12405	787065382	.84	10545101	15719899	.938
2019	Residential	.1081	.15583	787065382	.13	4883661		
2019	Small GS	.1081	.14509	787065382	.01	291135		
2020	GS	.1106	.1255	1038729421	.83	12845966	19266768	.924
2020	Residential	.1106	.1554	1038729421	.13	6049560		
2020	Small GS	.1106	.14634	1038729421	.01	371241		
2021	GS	.1132	.1277	1172080000	.825	14021007	21904182	.862
2021	Residential	.1132	.1586	1172080000	.14	7449740		
2021	Small GS	.1132	.15018	1172080000	.01	433435		
2022	GS	.1158	.13717	1123200000	.82	19682282	28017100	.81
2022	Residential	.1158	.1594	1123200000	.16	7835443		
2022	Small GS	.1158	.16026	1123200000	.01	499374		
2023	GS	.1185	.15186	1309860000	.82	35831482	47954367	.789
2023	Residential	.1185	.17252	1309860000	.16	11321381		
2023	Small GS	.1185	.17969	1309860000	.01	801503		
2024	GS	.1212	.1517	1309860000	.82	32759598	45364905	.77
2024	Residential	.1212	.17789	1309860000	.16	11880954		
2024	Small GS	.1212	.1765	1309860000	.01	724352		

Production data for pre-2023 is from the CSG annual reports. If the amount of CSG production from ARR gardens was not explicitly given, the share of total ARR production from ARR gardens was estimated using the subscription metrics table in the filing. Rates are from the February 1st ARR compliance filings and the 2017 VOS schedule in Xcel's ratebook. The subscriber share of production is updated with either the annual or monthly/quarterly. Staff used Xcel's estimated production for 2023 and again for 2024, as found in their January 22, 2024 reply comments. Staff calculated annual CPI deflators using the CPI Index.

¹⁷² The total production multiplied by the share and then multiplied by the ARR-VOS differential for the class.

The 2023 ARR may only be in effect for 9 months, potentially causing a slight overestimation. For simplicity and because Staff does not know at this point if the 2024 ARR will go into effect on April 1, 2024 (depending on whether a party objects to the filing), all values are treated as in effect on an annual basis.