STATE OF MINNESOTA
BEFORE THE PUBLIC UTILITIES COMMISSION

Katie Sieben	Chair
Joseph Sullivan	Vice-Chair
Valerie Means	Commissioner
Matt Schuerger	Commissioner
John Tuma	Commissioner

In the Matter of the Petition of Northern States Power Company for Approval of its Proposed Community Solar Garden Program	DOCKET NO. E-002/M-13-867
	COMMENTS OF THE OFFICE OF THE ATTORNEY GENERAL

INTRODUCTION

The Office of the Attorney General—Residential Utilities Division (OAG) submits the following Comments in response to the September 25, 2023 proposal of Xcel Energy (Xcel or the Company) to lower payments to some of the earliest subscribers to its solar-garden program by as much as 34 percent.[1]

The Minnesota Legislature required Xcel to propose a solar-garden program in 2013. The program exploded and became, as of 2016, "one of the nation's largest community solar programs."[2] As the solar-garden program's subscribers and megawatts increased, so too did its costs, which Xcel predicts will grow to over $300 million annually in 2024. These costs are borne by all Xcel ratepayers whether or not they subscribe to a solar garden—and the burden on nonsubscribers is significant. Xcel estimates that solar gardens have increased the average residential customer's bill by almost $4 per month, or $44 per year. The lion's share of the financial benefits of solar gardens, meanwhile, flow to large commercial subscribers.

[1] *See* Compliance Filing on Proposal for Switching ARR-Era Community Solar Gardens to Appropriate VOS Rate at 4 tbl.3 (Sept. 25, 2023) [hereinafter "Xcel Proposal"].
[2] Xcel's 2022 Annual Report on the Solar-Garden Program at 6 (Mar. 31, 2023) [hereinafter "2022 Annual Report"].

Xcel's proposal attempts to address ballooning solar-garden program costs not by limiting the program's size—indeed, state law would arguably forbid this[3]—or by reducing the financial benefits available to new subscribers. Instead, the Company's proposal would cut costs by reducing payments to customers who joined the program in its infancy, many of whom signed 25-year contracts with solar-garden operators expecting that they would receive the same payment for the full term of their contract. For the reasons discussed in these Comments, Xcel's current proposal is not in the public interest, and the Commission should make changes before approving it. Most importantly, the Commission should ensure that the most vulnerable subscribers—including residents and small businesses—are exempted from the change or allowed to cancel subscriptions that no longer benefit them.

BACKGROUND

Community solar gardens are a form of "virtual" net metering.[4] These shared solar generating facilities remove the need for customers to install solar panels at their homes or businesses to be able to benefit from net metering. Instead, customers without the ability or desire to put solar panels on their roof can acquire a beneficial interest in, or "subscribe" to, part of the output of a shared solar facility and receive bill credits from their utility for the energy production attributable to their subscription.[5]

Net-metered generation, whether onsite or shared, can offset customer use in different ways and at different rates depending on state regulatory policies. In the traditional arrangement, rooftop

[3] *See* Minn. Stat. § 216B.1641, subd. 1(a) (2023) ("There shall be no limitation on the number or cumulative generating capacity of community solar garden facilities other than . . . limitations provided in law or regulations.").
[4] *See* John Farrell, *States Supporting Virtual Net Metering*, Inst. for Local Self-Reliance, https://ilsr.org/rule/net-metering/updated-states-supporting-virtual-net-metering/ (last updated 2016) (listing Xcel solar-garden program). "Net metering," also called net energy metering or NEM, refers to a billing mechanism by which the owner of a solar energy system is compensated by his or her utility company for the electricity produced. *See* Solar Energy Indus. Ass'n, Net Metering, https://www.seia.org/initiatives/net-metering (last visited Jan. 5, 2023).
[5] *See generally* Minn. Stat. § 216B.1641 (2023) (Minnesota's solar-garden statute).

solar panels located "behind the meter" directly serve the customer's load, causing the customer's metered energy consumption to slow, or even to go negative as excess power flows onto the grid.[6] When generation is behind a customer's meter, the utility only sees the customer's "net" energy consumption and thus bills the customer for that net consumption, if any, in a given month. In this way, the customer is effectively compensated at his or her full retail energy rate for each kilowatt–hour of offsetting generation.[7] The appropriate compensation rate for solar-garden energy is at the heart of Xcel's proposal in this case.

Another common net-metering arrangement called "buy-all sell-all" uses two meters to facilitate two transactions: customers buy all the electricity they use from their utility through one meter and sell all their production to the utility through another.[8] Under buy-all sell-all arrangements, which include solar gardens, the compensation rate that the utility pays for the customer's energy production can be more than, less than, or equal to the rate the customer pays the utility for a kilowatt–hour of electricity.[9]

With all forms of net metering, the utility passes along the cost of the net-metered energy to ratepayers as a purchased-power cost. For this reason, and because of the relatively high cost of net-metered energy, net-metering policies have been criticized for subsidizing owners of solar facilities at ratepayers' expense.[10] These subsidies were relatively small when net metering was

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[6] *See* Spencer Fields, *What Is Net Metering and How Does It Work?*, EnergySage, https://www.energysage.com/solar/net-metering/ (last updated Mar. 23, 2023).

[7] *See Ctr. for Biological Diversity v. Pub Utils. Comm'n*, No. A167721, slip op. at 4 (Cal. Ct. App. Dec. 20, 2023), https://www.courts.ca.gov/opinions/documents/A167721.PDF ("By offsetting exported power against imported power, NEM 1.0 functionally required utilities to purchase excess power generated by residential solar power systems at the price paid by their customers for electricity.").

[8] *See* Fields, *supra* note 6.

[9] Xcel's proposal in this case would adjust certain solar-garden subscribers' compensation rate from one that is higher than a subscriber's retail rate to one that is generally lower.

[10] *See Ctr. for Biological Diversity*, slip op. at 4 (stating that, even prior to the enactment of California's first net-metering law, "the proposed NEM tariff was criticized as 'provid[ing] an electric ratepayer subsidy to purchasers of expensive residential photovoltaic systems.'").

in its infancy. As net-metering programs grew, however, so did the associated subsidies, leading some jurisdictions to reduce the compensation rates and take other steps to mitigate nonparticipant impacts.[11]

I. THE ORIGINAL PAYMENT STRUCTURE OF XCEL'S SOLAR-GARDEN PROGRAM DRIVES HIGH DEVELOPER INTEREST, RESULTING IN A LARGE INITIAL COHORT OF GARDENS RECEIVING THE LUCRATIVE "APPLICABLE RETAIL RATE."

The default rate at which solar-garden subscribers are compensated under Minnesota's solar-garden statute is the "applicable retail rate."[12] The statute does not define "applicable retail rate," but the Commission has defined it as the full retail rate for a subscriber's customer class, including customer charges, demand charges, and riders.[13]

The inclusion of non-energy-related rate components like customer and demand charges in the applicable retail rate means that the rate is more lucrative than behind-the-meter generation, which allows the customer to avoid energy-based charges but does not offset fixed customer charges and offsets some but not all demand charges. Two additional factors make the applicable retail rate especially beneficial for subscribers. First, because it tracks whatever the subscriber's retail rate is, the applicable retail rate automatically rises as Xcel increases a customer's rates, offsetting those increases much as behind-the-meter generation would. Second, operators of solar gardens subject to the applicable retail rate may elect to sell Xcel the renewable energy credits that

[11] *See generally id.* *See also* Jeff St. John, *California Slashes Payments to New Rooftop-Solar Customers*, Canary Media, https://www.canarymedia.com/articles/solar/california-slashes-payments-to-new-rooftop-solar-customers (Dec. 15, 2022) (discussing California PUC decision that reduced compensation for net-metered solar by an average of 75 percent for future participants); Jeff St. John, *California Makes It Harder for Schools, Farms and Rental Housing to Go Solar*, Canary Media, https://www.canarymedia.com/articles/solar/california-makes-it-harder-for-schools-farms-and-rental-housing-to-go-solar (Nov. 17, 2023) (discussing California PUC decision that reduced compensation for new virtual-net-metering projects beginning in 2024).

[12] Minn. Stat. § 216B.1641(d) (2020).

[13] Order Rejecting Xcel's Solar-Garden Tariff Filing and Requiring the Company to File a Revised Solar-Garden Plan at 15 (Apr. 7, 2014).

a garden generates at Commission-specified rates tied to garden size.[14] This payment for renewable energy is incorporated into subscriber bill credits, further increasing the cost of the solar-garden program to ratepayers.

The solar-garden statute provides for an alternative bill-credit rate that has come to be called the "value-of-solar rate."[15] Unlike the applicable retail rate, the value-of-solar rate does not directly track Xcel's rate increases. Instead, it attempts to reflect the aggregate benefits that distributed solar generation provides to the utility, its customers, and society.[16] This means that the value-of-solar rate compensates subscribers for, among other things, the fact that solar gardens do not directly emit carbon and other air pollutants.

The statute directs the Minnesota Department of Commerce to define the methodology for determining a utility's value-of-solar rate, and the Commission to review and approve the methodology,[17] which the Commission did by order dated April 1, 2014.[18] Xcel updates the value-of-solar rate yearly to reflect changing avoided-cost assumptions. While the rate changes from year to year, it has generally been much lower than the applicable retail rate.

Xcel's solar-garden program launched in December 2014. Although the Commission had approved a value-of-solar methodology that April, Xcel opposed implementing a value-of-solar

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[14] *See id.* (providing for optional compensation of three cents per kilowatt–hour for gardens with a capacity of 250 kilowatts or less and two cents per kilowatt–hour for larger gardens). A renewable-energy credit or certificate is "a market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable electricity generation." U.S. EPA, Renewable Energy Certificates (RECs), https://epa.gov/green-power-markets/renewable-energy-certificates-recs (last updated Feb. 5, 2023).

[15] Minn. Stat. § 216B.1641, subd. 1(d) (2020) (providing that a public utility must purchase solar-garden energy "at the rate calculated under section 216B.164, subdivision 10"—the value-of-solar rate—once the Commission has approved that rate).

[16] *See* Minn. Stat. § 216B.164, subd. 10(a) (2023) (providing for a bill-credit rate to compensate owners of distributed solar generation for "the value to the utility, its customers, and society for operating distributed solar photovoltaic resources interconnected to the utility system and operated by customers primarily for meeting their own energy needs").

[17] *Id.*, subd. 10(e).

[18] *See generally In the Matter of Establishing a Distributed Solar Value Methodology Under Minn. Stat. § 216B.164, Subd. 10 (e) and (f)*, Docket No. E-999/M-14-65.

rate for the program.[19] Ultimately, the Commission would not order Xcel to use the value-of-solar rate for the program until September 2016, effective with developer applications filed after December 31, 2016.[20] Due to high developer interest in the applicable retail rate, a large number of solar-garden applications were submitted before 2017. This initial cohort of solar gardens subject to the applicable retail rate makes up 684 megawatts of garden capacity,[21] or more than 81 percent of the gardens that were in operation as of the end of 2022.[22]

II. TWO MONTHS INTO THE PROGRAM, XCEL WARNS THAT RATEPAYER IMPACTS COULD TOP $50 MILLION ANNUALLY JUST FROM PROJECTS PROPOSED AS OF THAT DATE.

Early developer interest in Xcel's solar-garden program was extremely high. By February 2015, two months after the program had launched, Xcel was raising concerns about its potential size and impacts based on developer applications to date. Xcel reported receiving more than 430 megawatts' worth of applications since December 2014, including multiple sites with aggregate, "co-located" solar-garden capacity greater than 10 megawatts.[23] The Company estimated that if all then-proposed solar gardens came online, it would increase fuel costs for Minnesota customers by over $50 million, or more than six percent.[24]

The OAG, too, expressed concern in early 2015 that the solar-garden program as currently structured could cause significant cost increases for nonparticipating customers. To avoid inequitable rate increases for nonparticipants, the OAG recommended that the Commission "reevaluate whether the current bill credit rate is set at the appropriate level and by use of the appropriate methodology."[25] The OAG also recognized that simply switching from the applicable

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[19] *See* Motion to Show Cause at 4 (May 1, 2014).
[20] Order Approving Value-of-Solar Rate for Xcel's Solar-Garden Program, Clarifying Program Parameters, and Requiring Further Filings at 4 (Sept. 6, 2016).
[21] 2022 Annual Report at 18 & tbl.5.
[22] Compliance Filing – 2023 Applicable Retail Rate at 2 (Feb. 1, 2023) [hereinafter "2023 ARR Filing"].
[23] Xcel Comments at 1–2 (Feb. 10, 2015).
[24] *Id.* at 5.
[25] OAG Reply Comments at 5 (Apr. 30, 2015).

retail rate to the value-of-solar rate would likely not be enough to control nonparticipant impacts if program capacity were allowed to grow untrammeled. The OAG therefore recommended that the Commission "act immediately to limit the amount of non-participant harm caused by the CSG program that will be permitted in a calendar year, based on average bills for each customer class."[26] The OAG recommended that the Commission specify a maximum annual bill impact for the program and direct Xcel to stop processing solar-garden applications for the year once that limit was reached.[27]

In August 2015, the Commission adopted an agreement between Xcel and solar-garden developers that restricted garden co-location.[28] It did not, however, adopt the OAG's recommendations for limiting nonparticipant impacts.

III. EARLY FEARS ABOUT SOLAR GARDENS' IMPACT ARE REALIZED AS THE PROGRAM'S 2022 COST NEARS $200 MILLION. XCEL FORECASTS A 2024 IMPACT WELL OVER $300 MILLION.

In 2022, Xcel's ratepayers paid over $184 million in bill-credit costs for the solar garden program.[29] The energy produced by solar gardens accounted for about 3.4 percent of all energy consumed by the utility's Minnesota customers, while the program's cost—the $184 million in subscriber bill credits—represented 17 percent of all fuel and purchased power costs that year.[30] As a result, Xcel estimates that solar gardens have increased the average residential customer's bill by almost $4 per month, or $44 per year.[31] Meanwhile, the vast majority, 84 percent, of bill-credit payments go to commercial and industrial subscribers, with residential subscribers receiving only about 16 percent of bill-credit dollars.[32]

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[26] *Id.* at 22.
[27] *Id.* at 22–23.
[28] Order Adopting Partial Settlement as Modified at 13 (Aug. 6, 2015).
[29] Docket No. E-002/AA-21-295, Xcel Annual True-Up Report at 11 (Mar. 1, 2023).
[30] 2022 Annual Report at 15.
[31] *Id.*
[32] *Id.* at 17.

Xcel expects the program's costs and impacts to further increase in 2024. The Company forecasts that solar gardens will generate 2,312 gigawatt–hours of energy in 2024[33] at a total cost to ratepayers of $329.3 million,[34] or *32 percent* of all fuel and purchased power costs for the year.[35] Approximately $247 million of the forecasted cost of solar gardens is "above market,"[36] meaning that the cost exceeds that of wholesale energy in dollars per unit of energy generated. Since the solar-garden program is a Minnesota-only program, these above-market costs are borne entirely by Minnesota ratepayers rather than shared among the states in which Xcel operates, as is done for ordinary fuel and purchased-power costs.

IV. IN 2023, THE COMMISSION CORRECTS AN ERROR IN THE APPLICABLE-RETAIL-RATE FORMULA AND ORDERS XCEL TO FILE A PROPOSAL FOR TRANSITIONING SUBSCRIBERS OFF THE RATE ENTIRELY.

In February 2023 Xcel filed its annual recalculation of the applicable retail rate. Figure 1 shows the applicable-retail-rate bill credits by customer class for 2023.

Figure 1 - Applicable Retail Rates for 2023[37]

Customer Class	Bill Credit Type	Bill Credit Rate per kWh (AC) for Energy Delivered to Company
Residential Service	Standard	$0.15252
	Enhanced – Solar Gardens > 250 KW (AC)	$0.17252
	Enhanced – Solar Gardens ≤ 250 KW (AC)	$0.18252
Small General Service	Standard	$0.15969
	Enhanced – Solar Gardens > 250 KW (AC)	$0.17969
	Enhanced – Solar Gardens ≤ 250 KW (AC)	$0.18969
General Service	Standard	$0.13186
	Enhanced – Solar Gardens > 250 KW (AC)	$0.15186
	Enhanced – Solar Gardens ≤ 250 KW (AC)	$0.16186

[33] Docket No. E-002/AA-23-153, Petition for Approval of 2024 Annual Fuel Forecast, pt. A, attach. 2 (May 1, 2023).
[34] *See id.*, pt. A, attach. 1, at 1.
[35] *See id.* (showing total forecasted 2024 fuel and purchased power costs of $1,030.3 million).
[36] *Id.* at 13 tbl.3.
[37] Minnesota Electric Rate Book, Section No. 9, sheet 64.1. The "enhanced" rates shown in Figure 1 are those that include compensation for the renewable energy credits associated with garden production.

Xcel stated that these compensation rates represent significant increases compared to 2022—10.5 percent for residential subscribers, 14.4 percent for small commercial subscribers, and 13.3 percent for large commercial subscribers.[38] The Company identified three primary factors causing the applicable-retail-rate increases: (1) increases in the costs Xcel recovers through riders, (2) increased fuel costs including natural gas costs and transmission congestion costs, and (3) the $247 million interim rate increase Xcel received in Docket No. 21-630.[39]

Xcel's filing illustrates a key feature of the applicable retail rate. Because the rate is defined as a subscriber's full retail rate, it rises annually to the extent that Xcel has raised electric rates since the last recalculation (whether that increase is to base rates, any of the Company's various riders, or both). This feature of the applicable retail rate makes it a very effective hedge against energy-price inflation for subscribers. But it also means that nonsubscribers must bear not only the rate increases that Xcel imposes on them directly but also solar-garden subscribers' rate increases, indirectly, through increases in bill-credit costs.

Xcel attributed some of the 2023 applicable-retail-rate increase to a glitch in the compensation formula whereby above-market solar-garden costs increase the rate in the following year's calculation.[40] It proposed a solution to remove this "compounding effect" from the applicable-retail-rate calculation. The Commission adopted Xcel's proposal to remove the compounding effect from the applicable retail rate, which is expected to save $4.6 million annually.[41] The Commission rejected claims by solar developers that this change constituted

[38] 2023 ARR Filing at 1.
[39] *Id.* at 2.
[40] *Id.* at 3 (stating that the formula "compensates subscribers for adding costs to others").
[41] Order Adopting 2023 ARR and Requiring Additional Filing at 3, 8 (June 27, 2023) [hereinafter "June 2023 Order"].

retroactive ratemaking. And the Commission further directed Xcel to develop and file a proposal for transitioning gardens under the applicable retail rate to the appropriate value-of-solar rate.[42]

V. XCEL PROPOSES MOVING EXISTING SUBSCRIBERS FROM THE APPLICABLE RETAIL RATE TO THE VALUE-OF-SOLAR RATE IN APRIL 2024.

On September 25, 2023, Xcel filed a proposal for transitioning applicable-retail-rate bill credits to the value-of-solar rate. Xcel proposed to start applying the earliest "vintage" of the value-of-solar rate to applicable-retail-rate subscriptions in April 2024.[43]

A value-of-solar "vintage" is a 25-year schedule of bill-credit rates that applies to a solar garden based on the year in which its developer applied to the program. Figure 2 below depicts the value-of-solar rate schedule that applies to developer applications deemed complete in 2017, a.k.a. the "2017 value-of-solar vintage":

Figure 2 – 2017 Value-of-Solar Vintage Rate Schedule[44]

Year Number	2017 VOS Vintage Year Bill Credit Rate ($/kWh)		Year Number	2017 VOS Vintage Year Bill Credit Rate ($/kWh)
Year 1	$0.1033		Year 14	$0.1391
Year 2	$0.1057		Year 15	$0.1424
Year 3	$0.1081		Year 16	$0.1457
Year 4	$0.1106		Year 17	$0.1490
Year 5	$0.1132		Year 18	$0.1525
Year 6	$0.1158		Year 19	$0.1560
Year 7	$0.1185		Year 20	$0.1597
Year 8	$0.1212		Year 21	$0.1634
Year 9	$0.1241		Year 22	$0.1672
Year 10	$0.1269		Year 23	$0.1710
Year 11	$0.1299		Year 24	$0.1750
Year 12	$0.1329		Year 25	$0.1791
Year 13	$0.1360			

As the figure shows, the value-of-solar rate for a garden increases slightly each year to account for inflation. The "Year 1" rate applies to all garden production that occurs in the calendar

[42] *Id.* at 10.
[43] *See* Xcel Proposal at 2.
[44] Minnesota Electric Rate Book, Section No. 9, sheet 64.101.

year a garden first begins commercial operation; the "Year 2" rate applies to production throughout the second calendar year of operation, and so on.[45] For example, if a developer submitted a complete application in 2017, and the garden began commercial operation in 2018, the bill credit rate for all energy generated in 2018 would be the 2017-vintage Year 1 rate, or $0.1033 per kilowatt–hour. Under its proposal, Xcel would start crediting applicable-retail-rate subscriber bills under the 2017 value-of-solar vintage in April 2024, starting with the Year 7 rate.

Most of the 2017-vintage value-of-solar rates are considerably less lucrative than the 2023 applicable retail rate. For a residential subscriber, the 2023 applicable retail rate ranges from $0.15252 to $0.18252 per kilowatt–hour produced.[46] By contrast, a subscriber to a garden subject to the 2017 value-of-solar vintage would not receive a bill credit exceeding $0.15 until Year 18 and would never receive a bill credit equaling or exceeding $0.18 over the garden's 25-year life.[47] For a large commercial subscriber, the 2023 applicable retail rate ranges from $0.13186 to $0.16186 per kilowatt–hour produced. By contrast, a subscriber to a garden under the 2017 value-of-solar vintage would not receive a bill credit exceeding $0.13 until Year 12 or a bill credit exceeding $0.16 until Year 21.

The applicable retail rate pays subscribers a premium as compared to the value-of-solar rate.[48] But that premium, while significant, is responsible for a relatively small percentage of solar gardens' overall impact. As noted earlier, Xcel forecasts the total impact of the solar-garden program to be $329 million in 2024, including $247 million that exceeds the "market" energy rate. The Company estimates that moving all subscribers currently receiving the applicable retail rate

[45] *See id.*, sheet 64.1a.
[46] *See* Figure 1, *supra*.
[47] *See* Figure 2, *supra*.
[48] *But see* Clean Energy Advocates' Reply Comments at 4 (Dec. 7, 2023) (advocating for value-of-solar rate of $0.1996 per kilowatt–hour).

to the value-of-solar rate would reduce these costs by approximately $48 million annually.[49] This figure represents just 14.5 percent of the program's projected $329 million cost in 2024. Moreover, if this savings were realized there would still remain $199 million in above-market costs to be recovered from Minnesota ratepayers.

ANALYSIS

Xcel's solar-garden program is expensive. The program's cost is a function both of the rates prescribed for the program and of the cumulative generation under the program. Those costs have now risen to the point where they threaten significant economic harm to nonparticipating ratepayers, particularly Xcel's most energy-burdened residential customers. The Commission should use all reasonable means available to reduce the impact of solar gardens on nonparticipating customers. That said, migrating existing residential and small commercial subscribers to a much lower compensation rate than the one that induced them to sign up for the program, without adequate protections, would not be fair or otherwise in the public interest.

The following sections, the OAG describes the problems with Xcel's proposal and outlines actions that the Commission could reasonably take to reduce nonsubscriber impacts. These actions include exempting residential and small commercial subscribers from a transition to the value-of-solar rate; modifying the applicable retail rate to reduce its impact without cancelling it entirely; and allowing residential and small commercial subscribers to get out of subscriptions that no longer benefit them due to a substantial change in their bill-credit rate.

[49] Xcel's 2023 ARR Filing estimates an annual impact of $63 million. In discovery, Xcel revised its estimate down to $48.4 million. *See* Xcel Response to OAG IR No. 201 at 2, attached.

I. XCEL'S PROPOSAL RISKS HARMING RESIDENTIAL AND SMALL COMMERCIAL SUBSCRIBERS WHO COMMITTED TO LONG-TERM CONTRACTS.

Because of the way the solar-garden program was designed, information about how the program is marketed to subscribers, and how subscriptions are structured, is out of Xcel's hands. Third-party developers build, own, and operate gardens and recruit subscribers directly. Xcel receives the gardens' output and pays for it through subscriber bill credits but otherwise has no direct contact with subscribers or oversight of the relationship between subscribers and garden operators. As a result, the Commission does not have detailed information about how the solar-garden program was explained to subscribers or about the terms and conditions of subscriber contracts. The record does not show, for example, the length of subscriber contracts, whether subscribers have made upfront payments, or whether subscribers have any recourse in the event that a change in the bill-credit rate causes them economic harm.

Xcel lacks this information because of its hands-off approach to administering the program. From the outset, Xcel claimed not to have model contracts between solar garden operators and subscribers; did not propose to require developers to submit contracts for review; did not propose to review, or have the Commission review, materials used by developers to promote gardens to customers; and did not propose a standardized system for estimating garden production.[50] A decade on, despite having proposed to substantially reduce bill credits for existing subscribers, the Company admits that it does not know how the change to bill credits will impact subscribers and rejects any responsibility for notifying these customers of the change or answering their questions about the reduction.[51]

[50] OAG Supplemental Comments at 9–10 (Dec. 3, 2013).
[51] *See* Xcel Response to OAG IR No. 206, attached:

(Footnote Continued on Next Page)

It not reasonable to, on the one hand, disclaim responsibility for meaningful oversight of the solar-garden program and, on the other, take away a substantial portion of the benefit that customers may have been promised when they signed up for the program. A subscriber might reasonably assume, unless informed otherwise, that the bill-credit rate she signed up for is the rate she will receive for the duration of her subscription. Residential customers, in particular, are unlikely to examine regulatory filings or look at Xcel's tariffs to assess the risk that the rate might later be changed—particularly if subscribers are not directed to this information. Instead, such consumers might reasonably rely on how the program was explained to them by garden operators. From the public comments filed to date, it is apparent that subscribers did not expect a rate reduction of the magnitude that Xcel is proposing.

II. BASED ON PUBLIC COMMENTS, IT IS EVIDENT THAT SUBSCRIBERS DID NOT EXPECT THE APPLICABLE RETAIL RATE TO BE CANCELED MID-SUBSCRIPTION.

The vast majority of residential subscribers commenting on Xcel's proposal express disappointment that Xcel plans to renege on its commitments.[52] The following excerpt exemplifies the general sentiment among subscribers:

> 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.[53]

> Question:
> Assuming Xcel's proposal is approved, does Xcel have a plan for notifying ARR-era CSG subscribers of the change to their subscription rates or for answering customer questions about why their bill-credit rate was suddenly reduced?
>
> Response:
> No. We believe it is the responsibility of the garden operators to notify customers of the change. We are not privy to the details of the agreements between garden operators and customers and do not know how each specific customer will be impacted.

[52] *See, e.g.*, public comment batches filed 12/4/23, 12/5/23, and 12/26/23.
[53] Comment of Amy Schneider (Dec. 22, 2023).

The above commenter and others[54] appear to believe that subscribers have a direct contractual relationship with Xcel, either in addition to or instead of the solar-garden operator. This mistaken, but understandable, belief by some subscribers underscores the lack of visibility into how the solar-garden program has been marketed to subscribers, how it is understood by subscribers, or what disclosures have been provided by solar-garden operators.

At least one residential subscriber stated that he would not have invested in the solar-garden program if he had known that the bill-credit rate could or would be changed.[55] The possibility of a rate change is, of course, very relevant to the decision to commit to a 25-year solar-garden subscription, particularly if a customer is making a large upfront investment with the expectation of offsetting payments in the future.[56] And, because the applicable retail rate is designed specifically to offset the customer's full retail rate,[57] it was likely marketed to customers as a hedge against Xcel's rate increases, leaving them with a reasonable belief that the credit would track the rates they pay Xcel for the full term of their subscription.

Many subscribers wrote to emphasize the impact that the bill-credit change would have on them personally. Tom Ihlenfeldt writes,

> While our primary interest in supporting solar was not to save money on monthly electric bills, we were pleased that our subscription was priced to break even. . . . The end result [of Xcel's proposal] in our household is we will pay hundreds of dollars more each year for electricity.[58]

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[54] *See, e.g.*, Comment of Steve Orth (Dec. 26, 2023) ("It was, and still is, our understanding that Xcel committed to the rate we mutually agreed upon for 25 years."); Comment of Candace Wilkinson (Dec. 7, 2023) ("I signed a CONTRACT with Xcel that guaranteed to pay me for the solar energy my portion of the farm's production."); Comment of Elizabeth Jarrett Andrew (Nov. 30, 2023) ("I've signed an agreement with Xcel Energy to receive compensation for my investment in solar energy.").

[55] *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.").

[56] *Cf.* Comment of Erik Larson and Amy Bergquist (Nov. 30, 2023) ("We paid the full cost of our subscription up front on the expectation that we would be reimbursed for solar production at the Applicable Retail Rate.").

[57] *See supra* p. 4.

[58] Comment of Tom Ihlenfeldt (Dec. 20, 2023).

Simona Fischer writes that the proposed change would convert her subscription from a net benefit to a net cost of over $400 per year.[59]

Ken Pearson and Kate Poole write,

> Our investment in CEF's Ramp A community solar project was made in reliance on Xcel honoring the terms of its 25-year contract with the Ramp A community solar garden. . . .
>
> . . . The cost to my wife and I of Xcel's proposed change would be in the hundreds of dollars per month, which would dramatically reduce, if not eliminate, the savings we bargained for when we invested in the Ramp A community solar garden.[60]

And Steve Orth writes,

> Our family has been unemployed for ~9 months in 2023 and we are trying to recover financially from this in 2024 but this [proposal] would reduce our credits by ~30% and cost us an additional $400–$500 per year.[61]

In addition to many comments from residential subscribers, the record also includes letters from public entities such as cities,[62] counties,[63] and school districts[64] that signed up for solar-garden subscriptions under the applicable retail rate. These entities express concern over the impact to their constituents if Xcel's proposal is approved.

The public comments filed in the docket suggest that most subscribers believed that they were signing an agreement that locked in the applicable retail rate for a 25-year term—and that they are only now learning that the benefit they thought they were getting may be illusory. Whatever the legality of changing tariffed bill credits for existing subscriptions, it is clear that many subscribers simply did not anticipate this possibility and that it would be a disruptive change for many of them.

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[59] Comment of Simona Fischer (Dec. 1, 2023).
[60] Comment of Ken Pearson and Kate Poole (Dec. 3, 2023).
[61] Comment of Steve Orth (Dec. 26, 2023).
[62] *See, e.g.*, Comment of City of Sauk Rapids (Nov. 27, 2023).
[63] *See, e.g.*, Letter of Winona County Board of Commissioners (Dec. 12, 2023).
[64] *See, e.g.*, Comment of Brent Neisinger o/b/o Rocori Public Schools (Nov. 8, 2023); Comment of Angie Manuel o/b/o Big Lake Schools (Dec. 28, 2023).

III. IF THE COMMISSION CANCELS OR SUBSTANTIALLY REDUCES THE APPLICABLE RETAIL RATE, IT SHOULD MINIMIZE IMPACTS TO VULNERABLE SUBSCRIBERS.

Consistent with its hands-off approach to administering the solar-garden program, Xcel has no plan for notifying customers that their bill credits will be reduced[65] and has not even considered any measures to mitigate impacts to vulnerable subscribers, such as a staged or gradual transition to the value-of-solar rate.[66] The Commission should not cancel or substantially reduce the applicable retail rate without protecting residential and small commercial subscribers. Below, the OAG offers some potential options for consideration. These options include exempting residential and small commercial subscribers from any transition to the value-of-solar rate; modifying the applicable retail rate to reduce its impact without cancelling it entirely; and, if the Commission does substantially reduce bill credits for residential and small commercial subscribers, allowing these subscribers to get out of subscriptions that no longer benefit them.

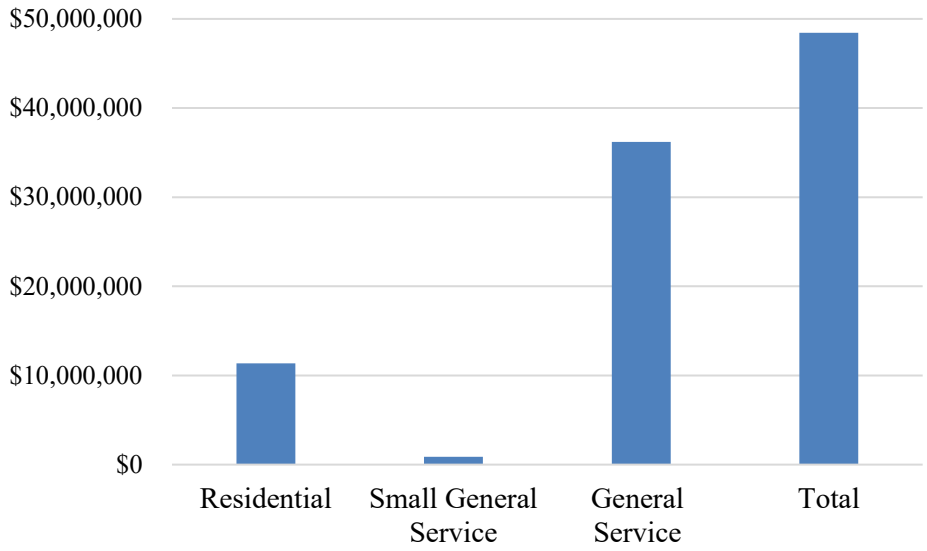
A. The Commission Should Exempt Residential and Small Commercial Subscribers from a Transition to the Value-of-Solar Rate.

The most straightforward way to protect vulnerable subscribers would be to exempt residential and small commercial subscribers from any major change. Customers in these classes do not have the time and resources that large commercial subscribers do to evaluate the financial, legal, and regulatory risks of investing in community solar. Nor are they well positioned to verify the accuracy of solar-garden developers' claims about future benefits or to parse distinctions between contractual obligations and tariffed rates. Moreover, residential and small business subscriptions make up a small minority—about 25 percent—of the total ratepayer savings that would be gained by transitioning from the applicable retail rate to the 2017 value-of-solar rate.

[65] Xcel Response to OAG IR No. 206, attached.
[66] Xcel Response to OAG IR Nos. 205 and 207, attached.

Figure 3, below, shows how Xcel expects the three main customer classes to contribute to the total savings that the Company estimates would result from moving applicable-retail-rate subscriptions to the 2017 value-of-solar vintage.

Figure 3 – Estimated Annual Bill-Credit Savings by Class[67]



As the figure shows, residential and small-business ("small general service") subscriptions together make up a little more than $12 million of the $48.4 million in savings that Xcel anticipates. The Commission could still achieve annual savings of more than $36 million by exempting these classes from a transition to the value-of-solar rate. Regardless of what customer classes the Commission applies the change to, it should consider mitigating the impact of the change to avoid rate shock by, for example, phasing in the reduction over a period of years.

B. The Commission Could Make Changes to the Applicable Retail Rate to Reduce Its Impact on Nonsubscribers.

Second, the Commission could consider making more modest changes to the applicable retail rate without cancelling the rate entirely. The Commission has already made one such change:

[67] Xcel Response to OAG IR No. 201 at 2 tbl.2, attached.

in its June 27, 2023 *Order Adopting 2023 ARR and Requiring Additional Filing*, the Commission modified the applicable-retail-rate formula by removing a circular component that unnecessarily inflated the rate by incorporating above-market bill-credit costs into the calculation of avoided fuel costs.[68] The change is expected to reduce annual program costs by $4.6 million for 2023 alone.[69] The Commission specifically found that this change to the applicable retail rate did not constitute retroactive ratemaking because the change would apply prospectively.[70]

Removing the compounding effect in the calculation of the applicable retail rate was an important step to improve the fairness of the rate, but there are others that could be implemented. These measures include removing customer charges from the calculation of the applicable retail rate, reducing the demand-charge costs reflected in the rate, and adjusting the payment for renewable energy credits.

1. The Commission could eliminate the customer-charge component and reduce the demand-charge component of the applicable retail rate.

Fresh Energy previously advanced proposals to remove customer charges from the applicable-retail-rate formula and to reduce demand-charge compensation by half.[71] The Commission found in its June 2023 order that the record was not sufficiently developed to support modifying the applicable retail rate in these ways. Fresh Energy's proposed changes to the applicable-retail-rate calculation make eminent sense, and 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.

[68] *See* June 2023 Order at 8–9.
[69] *Id.* at 3.
[70] *Id.* at 9.
[71] *See* Fresh Energy Comments at 3–4 (Mar. 30, 2023).

Solar gardens are a form of net metering. In traditional net metering, when a customer has behind-the-meter generation, it offsets the customer's energy consumption but does not absolve the customer from paying the minimum monthly "customer" charge. The current applicable-retail-rate formula, however, does so by including customer-charge revenues in the rate's calculation. With regard to demand charges, traditional behind-the-meter generation only offsets demand charges to the extent that the generation's peak production coincides with the timing of a customer's peak demand. In contrast, by fully incorporating demand-charge revenues for the general-service class, the current applicable retail rate allows a large commercial customer to avoid as much as *120 percent* of its peak-demand costs by subscribing to a solar garden.[72]

For these reasons, the current applicable retail rate is a more lucrative arrangement than traditional net-metered generation. This premium is not required by the solar-garden statute. On the contrary, it is reasonable to infer that the Legislature intended for the applicable retail rate to mimic traditional net metering, not to provide solar-garden subscribers a windfall compared to the benefits of behind-the-meter generation. Therefore, the Commission would be justified in implementing Fresh Energy's recommended changes to the applicable retail rate.

2. The Commission could adjust the renewable-energy component of the applicable retail rate.

Another way in which the Commission could mitigate nonsubscriber impacts without cancelling the applicable retail rate is to reduce or eliminate the portion of the rate designed to compensate for renewable energy credits (RECs).

Solar developers whose gardens are subject to the applicable retail rate can, at their option, sell the associated RECs to Xcel at a price of two cents (for gardens larger than 250 kW) or three

[72] *See* 2023 ARR Filing, attach. B (incorporating demand-charge revenues into rate calculation); Minn. Stat. § 216B.1641, subd. 1(b) (allowing subscriptions to be sized to offset as much as 120 percent of a subscriber's average annual electricity consumption).

cents (for gardens 250 kW and smaller), as part of the subscriber bill credit.[73] The Commission could modify these REC payments to reduce the burden on nonparticipating ratepayers.

The Commission could modify REC payments in two ways. First, the Commission could eliminate REC payments entirely. These payments are responsible for much of the difference between the applicable retail rate and the value-of-solar rate. Yet, under the lower value-of-solar rate, Xcel is entitled to receive RECs without paying further compensation for them.[74] This suggests that the base applicable retail rate would sufficiently compensate for the renewable attributes of garden energy without further enhancement. Alternatively, the Commission could merely reduce REC payments—by one cent, two cents (effectively eliminating the payment for gardens larger than 250 kW), or some other amount that the Commission determines is reasonable.

Whether the Commission opts to reduce or eliminate REC payments, the most reasonable way of implementing the change would likely be to reduce the payment over time to avoid rate shock. In this way, the Commission could slow the applicable retail rate's escalation without a sudden adjustment that could cause subscribers financial harm.

C. If the Commission Makes a Substantial Change to Bill Credits for Residential or Small Commercial Subscribers, It Should Ensure that These Subscribers Can Cancel Subscriptions that No Longer Benefit Them.

Finally, if the Commission makes changes that substantially reduce bill credits for existing residential or small commercial subscribers (including transitioning to a value-of-solar rate or removing or reducing REC payments), an additional protection will be necessary: The Commission should require that these subscribers be allowed to cancel their subscriptions without

[73] *See* Figure 1, *supra* (showing standard and "enhanced" applicable retail rates).
[74] *See* Minn. Stat. § 216B.164, subd. 10(i) ("Renewable energy credits for solar energy credited under this subdivision belong to the electric utility providing the credit.").

penalty unless the garden operator reduces the subscription fee such that the subscriber continues to realize the same net benefit as before the change.

Cases where the subscriber paid for his or her subscription up front will require a different approach. When a subscriber has made an upfront investment, the Commission should require the garden operator to refund a percentage of the subscriber's initial investment that corresponds to the per-kilowatt–hour reduction in the subscriber's bill credit. For example, if a subscriber invested $10,000 up front and her bill credit is reduced by ten percent, the garden operator would be required to refund $1,000 to the subscriber. Absent the operator agreeing to do this, the subscriber should be allowed to cancel her subscription without penalty and receive her entire initial investment back, less the bill credits she received prior to cancelling.[75]

Allowing vulnerable subscribers to get out of contractual arrangements that no longer benefit them is only fair, particularly when the benefit is disappearing for reasons beyond their control that they could not have foreseen. To be clear, this is the *minimum* protection that these customers deserve. Even a reduction in bill credits that does not reduce the net benefit to zero or below may be a hardship for many customers, and for this reason, the OAG recommends that the Commission exempt residential and small business subscribers entirely from any major change to the applicable retail rate. If, however, the Commission does require a substantial change, such as transitioning to the value-of-solar rate or modifying REC payments, for these subscriber classes, it will be essential that the Commission allow these customers to get out of subscriptions that no longer benefit them due to the change.

[75] *Cf.* OAG Supplemental Comments at 13 (Dec. 3, 2013) ("To ensure that consumers can recover payments for their subscriptions, the Commission could mandate that subscribers be allowed to both transfer their subscriptions to other consumers or cancel their subscriptions at any time and receive full refunds for any payment that has not been already recovered through a bill credit.").

CONCLUSION

Xcel's solar-garden program is expensive, and every reasonable effort should be made to limit the program's impact on nonparticipating ratepayers. But pulling the rug out from under residents and small businesses who signed up early to support solar generation in their communities would go too far.

Some customers likely invested large sums up front based on representations that they would receive consistent payments over the full term of their subscription. For customers who pay a monthly fee to subscribe, the amount of this fee is unknown, as is the impact of Xcel's proposal on the net benefit these customers realize through their subscription. This benefit may disappear entirely or even turn into a net cost if Xcel's proposal is approved.

For these reasons, and for all the reasons explained in these Comments, the Commission should not approve Xcel's proposal as filed. Instead, the Commission should exempt residential and small commercial subscribers from any major changes to the applicable retail rate. And if the Commission does cancel the rate for these subscribers, or reduces it substantially, the Commission should require solar-garden operators to restructure subscriptions so that customers receive the same net benefit as they did before the bill-credit change. In the alternative, and at a minimum, operators should be required to let these customers out of their subscriptions without penalty and refund any upfront payment that the customer has not already recouped through bill credits.

Dated: January 8, 2024

Respectfully submitted,

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ATTORNEYS FOR OFFICE OF
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Xcel Energy		Information Request No.	201
Docket No.:	E-002/M-13-867		
Response To:	State of Minnesota Office of the Attorney General		
Requestor:	Peter Scholtz		
Date Received:	October 31, 2023		

Question:
Reference: September 25, 2023 filing at 4.

Xcel estimates that $63 million less would be paid out per year under its proposal to transition ARR-era solar gardens to the VOS. Provide a breakout of the $63 million figure by customer class—in other words, how much of the $63 million savings is attributable to reducing the bill credit rate for residential subscriptions, for small general service subscriptions, and for general service subscriptions, respectively?

Response:
To calculate the estimated bill credit savings, the Company started with the AC Monthly Production Allocation (kWh) from Attachment B of the Quarterly Compliance Filing filed July 28, 2023 in this docket. Then we multiplied the monthly amount by twelve to get an annual amount. Then we multiplied the annual amount by the difference between the ARR and VOS rates in Table 3 of the August 23, 2023 Compliance Proposal.

Table 1: Original Calculation

	Residential	**Small General Service**	**General Service (Commercial & Other)**	**Total**
AC Monthly Production Allocation (kWh)	22,619,735	1,520,427	116,864,877	141,005,039
AC Annual Production Allocation (kWh)	271,436,820	18,245,124	1,402,378,524	1,692,060,468
Rate Change ($/kWh)	($0.05402)	($0.06119)	($0.03336)	
Estimated Bill Credit Savings	($14,662,973)	($1,116,416)	($46,783,119)	**($62,562,508)**

While working on this response, the Company realized that the production volume used above can vary significantly from quarter to quarter. We present here an alternate calculation that uses the amount of ARR-era CSG installed capacity to estimate the

annual production volume. First, we multiply the amount of installed capacity of ARR-era CSGs – 684 MW –by the actual first year annual energy production amount reported in our last VOS annual report[1] – 1,915 kWh per kW-AC – to calculate the annual ARR-era CSG production kWh.

ARR-era CSG Installed Capacity (kW)	684,000
Annual Energy Production (kWh per kW-AC)	1,915
ARR-era CSG Annual Production (kWh)	1,309,860,000

We then used the AC Monthly Production Allocation (kWh) from Attachment B of the Quarterly Compliance Filing filed July 28, 2023 to allocate the total annual production to class. Then, as in the original calculation, we multiplied the class production volumes by the difference between the ARR and VOS rates in Table 3 of the August 23, 2023 Compliance Proposal to calculate an estimated bill credit savings of $48 million.

Table 2: Alternate Calculation

	Residential	**Small General Service**	**General Service (Commercial & Other)**	**Total**
Annual Production (kWh)	210,125,016	14,123,939	1,085,611,045	1,309,860,000
Rate Change ($/kWh)	($0.05402)	($0.06119)	($0.03336)	
Estimated Bill Credit Savings	($11,350,919)	($864,241)	($36,215,808)	**($48,430,968)**

Preparer: Martha Hoschmiller
Title: Principal Pricing Analyst
Department: NSPM Regulatory
Telephone: 612-330-5973
Date: November 10, 2023

[1] 2024 VOS CALCULATION, Table 5. VOS Data Table (September 1, 2023)

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Xcel Energy		Information Request No.	205
Docket No.:	E-002/M-13-867		
Response To:	State of Minnesota Office of the Attorney General		
Requestor:	Peter Scholtz		
Date Received:	October 31, 2023		

Question:
Did the Company consider a staged or stepped transition from ARR to VOS rather than doing it all at once?

Response:
No. We structured our compliance proposal to be simple, administratively practical, and to keep manual processes to a minimum with a goal of reducing implementation time, cost, and information technology resources.

Preparer:	Nick Paluck
Title:	Manager, Regulatory Analysis
Department:	NSPM Regulatory
Telephone:	612-330-2905
Date:	November 10, 2023

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Xcel Energy		Information Request No.	206
Docket No.:	E-002/M-13-867		
Response To:	State of Minnesota Office of the Attorney General		
Requestor:	Peter Scholtz		
Date Received:	October 31, 2023		

Question:
Assuming Xcel's proposal is approved, does Xcel have a plan for notifying ARR-era CSG subscribers of the change to their subscription rates or for answering customer questions about why their bill-credit rate was suddenly reduced?

Response:
No. We believe it is the responsibility of the garden operators to notify customers of the change. We are not privy to the details of the agreements between garden operators and customers and do not know how each specific customer will be impacted.

Preparer:	Nick Paluck
Title:	Manage, Regulatory Analysis
Department:	NSPM Regulatory
Telephone:	612-330-2905
Date:	November 10, 2023

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Xcel Energy		Information Request No.	207
Docket No.:	E-002/M-13-867		
Response To:	State of Minnesota Office of the Attorney General		
Requestor:	Peter Scholtz		
Date Received:	October 31, 2023		

Question:
Has Xcel considered any other protections for ARR-era CSG subscribers, particularly residential subscribers, who relied on the ARR when they signed up?

Response:
No. We structured our compliance proposal to be simple, administratively practical, and to keep manual processes to a minimum with a goal of reducing implementation time, cost, and information technology resources.

Preparer:	Nick Paluck
Title:	Manager, Regulatory Analysis
Department:	NSPM Regulatory
Telephone:	612-330-2905
Date:	November 10, 2023