

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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In the Matter of the Petition of Northern States
Power Company, dba Xcel Energy, for
Approval of Its Proposed Community Solar
Garden Program

ISSUE DATE: April 7, 2014

DOCKET NO. E-002/M-13-867

ORDER REJECTING XCEL'S
SOLAR-GARDEN TARIFF FILING
AND REQUIRING THE COMPANY
TO FILE A REVISED
SOLAR-GARDEN PLAN

PROCEDURAL HISTORY

On September 30, 2013, Northern States Power Company, d/b/a Xcel Energy (Xcel or the Company), filed a petition for approval of its proposed community-solar-garden program under Minn. Stat. § 216B.1641.

Between October 4 and December 3, 2013, the Commission received comments on Xcel's proposal from the following stakeholders:

Government Entities:

- The Minnesota Department of Commerce (the Department)
- The Office of the Attorney General – Antitrust and Utilities Division (the OAG)
- The City of Minneapolis

Nonprofit Organizations:

- Fresh Energy
- The Institute for Local Self-Reliance
- The Interstate Renewable Energy Council, Inc. (IREC)
- The Izaak Walton League of America – Midwest Office
- Minnesota Interfaith Power and Light
- The Minnesota Renewable Energy Society (MRES)
- The Sierra Club, Minnesota North Star Chapter

Solar Industry Representatives:

- The Minnesota Solar Energy Industry Association (MnSEIA)
- AEG Group, LLC
- Ecos Energy LLC
- Geronimo Energy
- JJR Power LLC
- MN Community Solar, LLC
- Nextronex, Inc.
- Provectus Energy Development, LLC
- Renewable Energy Services, LLC
- Sundial Solar
- SunEdison, LLC
- TruNorth Solar
- A Work of Art Solar Sales

These commenters raised numerous issues with Xcel's proposal, including, among others, (1) whether Xcel should limit solar-garden development during an initial learning period, (2) whether Xcel's proposed program fees are reasonable, (3) what rate Xcel should pay for solar-garden energy and the associated renewable-energy credits, and (4) whether Xcel should incorporate additional consumer-protection measures into the program.

On December 17, 2013, Xcel, the Department, the OAG, and several other parties filed reply comments.

The Commission also received nearly 200 public comments on Xcel's proposal. The majority of these commenters urged the Commission to require Xcel to modify its solar-garden program to remove barriers to the rapid and widespread adoption of solar gardens.

On February 18, 2014, the Commission heard oral arguments on the Company's proposal.

On February 20 and 27, 2014, the Commission met to deliberate.

FINDINGS AND CONCLUSIONS

I. Summary of Commission Action

In this order, the Commission rejects Xcel's solar-garden tariff filing and requires the Company to file a revised solar-garden plan, including an amended tariff and standard contract. The Commission will require Xcel to incorporate the following elements into its revised plan, among other changes:

- Impose no limits on the installed capacity of solar gardens and process developer applications on a first-ready, first-served basis;
- Credit solar-garden subscribers' bills at the full retail rate for their portion of the garden's production, rolling surplus credits over from month to month and purchasing any remaining credits at the end of February;
- Purchase unsubscribed energy from the solar-garden operator at Xcel's avoided-cost rate for solar gardens 40 kilowatts or larger and at Xcel's average retail utility energy rate for solar gardens smaller than 40 kilowatts; and
- Allow a solar-garden operator, at its option, to retain the renewable-energy credits associated with the garden's production or to sell the credits to Xcel at a Commission-specified rate.

Finally, the Commission directs Xcel, within 30 days of the Commission’s order approving a value-of-solar methodology in Docket No. E-999/M-14-65, to file a value-of-solar tariff for solar gardens or, alternatively, to file a calculation of the value-of-solar rate for solar gardens and show cause why the rate should not be implemented for solar gardens.

II. Background

In 2013, the Minnesota Legislature enacted several statutory provisions designed to promote the growth of solar energy.¹ The Commission’s focus in this docket is the community-solar-garden program. However, because that program is closely intertwined with the other 2013 solar-energy initiatives, this order briefly discusses them to provide context for the Commission’s decisions on Xcel’s solar-garden proposal.

A. The Solar Energy Standard

The Solar Energy Standard requires public utilities to generate or procure sufficient electricity from solar sources so that by the end of 2020, at least 1.5 percent of a utility’s retail electricity sales in Minnesota are generated by solar energy.² Xcel will likely meet a significant portion of its obligation by procuring renewable-energy credits (RECs) representing solar energy generated by non-utility sources, including homeowners, solar gardens, and independent power producers.

B. Community Solar Gardens

The solar-garden statute, Minn. Stat. § 216B.1641, establishes the framework for a program under which utility customers subscribe to a solar generating facility (known as a “community solar garden,” or simply “solar garden”) and receive a bill credit from the utility for a portion of the electricity generated by the facility. A solar garden may be owned by a public utility or by a third-party operator who contracts to sell the garden’s output to the utility.³

The statute places no limit on a solar-garden program’s overall size, but it contains a number of provisions limiting individual garden size and subscribership. A solar garden may have a nameplate capacity of no more than one megawatt (MW). A garden must have a minimum of five subscribers, each with a subscription representing at least 200 watts of the garden’s capacity but no more than 40 percent of the garden’s output.⁴

Each subscription must also be sized to supply no more than 120 percent of a subscriber’s average annual consumption when combined with other distributed-generation resources serving the subscriber’s premises. And subscribers must reside in the county where the garden is located or in a contiguous county.⁵

¹ 2013 Minn. Laws, ch. 85.

² Minn. Stat. § 216B.1691, subd. 2f(a).

³ Minn. Stat. § 216B.1641(a)–(b).

⁴ *Id.*

⁵ Minn. Stat. § 216B.1641(b)–(c).

A public utility must purchase all energy generated by a solar garden at the rate calculated under the value-of-solar statute, or, until a value-of-solar rate has been approved by the Commission, the applicable retail rate.⁶

C. The Value-of-Solar Statute

The value-of-solar statute, Minn. Stat. § 216B.164, subd. 10, allows a public utility to seek Commission approval of an alternative tariff that compensates customers via bill credits for the value to the utility, its customers, and society from operating distributed solar photovoltaic resources.⁷ The alternative tariff's rates replace the net-metering rates under Minn. Stat. § 216B.164, subs. 3 and 3a, for distributed solar-generation facilities that interconnect after the tariff's effective date.⁸ Payment of the value-of-solar rate entitles a utility to the RECs associated with the energy purchased.⁹

The statute requires the Department to establish, and the Commission to approve, a methodology for utilities to use in calculating their utility-specific value-of-solar tariff rates.¹⁰ This methodology must, at a minimum, account for the value of solar energy and its delivery, generation capacity, transmission capacity, transmission and distribution line losses, and environmental value.¹¹

The Commission issued an order approving the Department's value-of-solar methodology, as modified, on April 1, 2014.¹² The next step will be for Xcel to calculate a value-of-solar rate for its system using the Department's methodology and to file a value-of-solar tariff for the Commission's review. The statute does not provide a timeframe for Xcel's tariff filing.

1. Solar*Rewards and Made in Minnesota Incentives

In addition to compensation from Xcel for the energy they produce, solar gardens are eligible for production-based incentives under the new Solar*Rewards and Made in Minnesota incentive programs.¹³

Under the Solar*Rewards program, Xcel provides a per-kilowatt-hour (kWh) payment to customers who own a solar energy system with a capacity of 20 kilowatts (kW) or less.¹⁴ Xcel

⁶ Minn. Stat. § 216B.1641(d).

⁷ Minn. Stat. § 216B.164, subd. 10(a).

⁸ Minn. Stat. § 216B.164, subd. 10(b).

⁹ Minn. Stat. § 216B.164, subd. 10(i).

¹⁰ Minn. Stat. § 216B.164, subd. 10(e).

¹¹ Minn. Stat. § 216B.164, subd. 10(f).

¹² Docket. No. E-999/M-14-65.

¹³ Minn. Stat. § 216B.1641(d).

¹⁴ Minn. Stat. § 116C.7792.

receives the RECs associated with the energy for which it provides an incentive payment under the Solar*Rewards program.¹⁵

Under the Made in Minnesota program, the Commissioner of Commerce provides a per-kWh payment to owners of certified Minnesota-made solar photovoltaic modules with a capacity of 40 kW or less.¹⁶ RECs associated with energy provided to a public utility for which an incentive payment is made under this program belong to the utility.¹⁷

D. Solar-Garden Program Criteria and Approval Process

The solar-garden statute requires Xcel to file with the Commission by September 30, 2013, a plan to operate a community-solar-garden program. Other public utilities are not required to file a plan but may elect to do so.

The Commission may approve, disapprove, or modify a solar-garden plan. To be approved, the plan must

- reasonably allow for the creation, financing, and accessibility of community solar gardens;
- 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;
- not apply different requirements to utility and nonutility community solar garden facilities;
- be consistent with the public interest;
- identify the information that must be provided to potential subscribers to ensure fair disclosure of future costs and benefits of subscriptions;
- include a program implementation schedule;
- identify all proposed rules, fees, and charges; and
- identify the means by which the program will be promoted.¹⁸

Once the Commission has approved its solar-garden plan, Xcel has 90 days to launch the program.¹⁹ Xcel must begin crediting subscribers' bills within 180 days of the plan's approval.²⁰

E. Xcel's Filing

Xcel's solar-garden plan filing includes a petition outlining the major components of the program, including

¹⁵ *In the Matter of Xcel Energy's Proposed New Solar*Rewards Program*, Docket No. E-002/M-13-1015, Department's Analysis and Decision at 16 (Feb. 24, 2014).

¹⁶ Minn. Stat. §§ 216C.411–.415.

¹⁷ Minn. Stat. § 216C.414, subd. 5.

¹⁸ Minn. Stat. § 216B.1641(e).

¹⁹ Minn. Stat. § 216B.1641(a).

²⁰ Minn. Stat. § 216B.1641(g).

- The operator application process;
- Proposed deposits and fees;
- Interconnection procedures;
- Compensation rates for subscribed and unsubscribed energy;
- The bill-credit process; and
- Subscriber protections.

The Commission discusses the details of each program component in the relevant sections below.

Xcel will implement the program through two key documents—a solar-garden tariff and a standard contract to be executed by Xcel and each solar-garden operator. The tariff sets forth the rate Xcel will pay for garden energy, the bill-credit process, and basic terms and conditions that reflect the statutory limits on solar-garden size and subscribership. The standard contract contains much more detailed terms and conditions by which Xcel and the solar-garden operator will be bound. Xcel intends to file the standard contract as an attachment to the tariff.

III. Commission Analysis and Action

A. Application Process

Xcel plans to develop an online application system for prospective garden operators and to begin accepting operator applications within 90 days of Commission approval of its plan. The Company proposes an initial two-year learning period during which it will approve up to 20 MW of total solar-garden capacity. To smooth the influx of applications, Xcel proposes to open its application system at the beginning of each quarter and to close the system once it has received 2.5 MW of solar-garden proposals. Xcel proposes to process applications on a first-come, first-served basis.

1. Positions of the Parties

a. Program Capacity Limit

All commenters other than Xcel opposed the 20 MW capacity limit. A number of commenters argued that the limit was contrary to the statute’s directive that there be “no limitation on the number or cumulative generating capacity of community solar garden facilities” other than those provided for by law or regulations.²¹ Many commenters expressed concern that the program not be hampered by unnecessary restrictions, stressing their desire to see as many projects as possible approved before the federal Investment Tax Credit for solar developers expires in 2016. Finally, several commenters opposed the 2.5 MW quarterly application cycle on the ground that it would encourage hastily prepared applications.

b. Application Readiness

The Department recommended that Xcel process applications on a “first-ready, first-served” basis to encourage well-thought-out proposals. Under the Department’s approach, developers would need to have approvals for financing and insurance and a reasonable level of subscribership before

²¹ Minn. Stat. § 216B.1641(a).

their applications would be deemed “ready.” The Department also recommended that Xcel publish on its website information on the total number of applications and their size to allow developers to assess the potential wait time.

Most commenters agreed generally with the Department’s first-ready, first-served approach, but several suggested refinements. MN Community Solar found the financing requirement problematic, stating that having a utility contract in place is usually a prerequisite for financing. Fresh Energy and IREC proposed that an application be deemed “ready” when the garden has at least five subscribers, the application fee and deposit are paid, and there is proof of site control. Finally, MnSEIA supported creating a solar-garden working group, one of whose tasks could be to define additional project-readiness criteria.

c. Timeline for Approval

Several commenters requested that Xcel provide more information about its schedule for processing applications or suggested specific deadlines for application acceptance and approval. MN Community Solar recommended that Xcel determine whether an application is complete within 30 days of its submission, and, along with TruNorth and MnSEIA, it recommended that Xcel approve or deny an application within 60 days of finding it complete.

d. Xcel-Owned Solar Gardens

The Department and others expressed concern that Xcel would have an unfair advantage in the application process if it decided to develop its own solar gardens. These commenters recommended that the Commission require Xcel to seek Commission approval before developing any Company-owned solar gardens. Xcel responded that it has no intention of initiating or operating a utility-owned community solar garden at this time. Xcel agreed that if it were to pursue garden ownership, it would submit a proposal for ensuring nondiscriminatory treatment for all applicants.

2. Commission Action

The Commission concurs with the majority of the commenters that Xcel’s proposal to limit application processing to 2.5 MW per quarter for the first two years of the solar-garden program is contrary to the public interest. A capacity limit holds the potential to delay the growth of solar gardens and limit opportunities for subscribers to participate in the program. Allowing maximum garden development in the early years of the program is particularly critical to allow developers to take advantage of the federal Investment Tax Credit before it expires.

The Commission will require Xcel instead to process all applications on a “first-ready, first-served” basis. The Commission concludes that an application should be deemed “ready” if it meets the following criteria:

- The project meets the definition of completeness in Xcel’s solar-garden tariff;
- The project has obtained or arranged appropriate insurance or has entered into an insurance-broker agreement;
- There is evidence of site control and a point of interconnection;
- There is evidence of projected subscription at the time of construction; and

- The project proposal complies with all applicable material terms of the tariff and standard contract and with any additional considerations that Xcel, solar-garden developers, the Department, the OAG, and interested parties participating in the solar-garden working group have agreed to include in the plan.

This “first-ready, first-served” approach will result in higher-quality applications by focusing applicants on the statutory criteria, as well as practical requirements such as site control that ensure that the developer is serious about proceeding with the project. This approach will also put small projects on a more even footing with larger projects that would tend to quickly fill up the 2.5-MW quarterly allotment.

The Commission will require Xcel to determine whether an application is complete within 30 days of its submission and to approve or reject the application within 60 days of finding it complete. The Commission recognizes that Xcel is concerned about keeping up with a large influx of applications. However, the Commission concludes that a 30-day period to determine completeness followed by another 60 days to either approve or reject an application is a reasonable schedule that fairly balances the interests of developers and the utility. These timeframes may be extended by agreement between Xcel and the applicant.

To aid developers in the application process, the Commission will also require Xcel to make information on the total number of pending and approved applications and their size available on the Company’s website.

Finally, if Xcel in the future decides to offer its own solar gardens, the Commission will require the Company to submit a proposal for Commission approval including a detailed explanation of processes and procedures to ensure that third-party and utility solar gardens are treated in a nondiscriminatory fashion. This requirement will serve the public interest by advancing the solar-garden statute’s directive that the plan approved by the Commission “not apply different requirements to utility and nonutility community solar garden facilities.”²²

B. Deposits and Fees

Xcel initially proposed the following schedule of solar-garden deposits and fees:

Xcel’s Initial Proposed Solar-Garden Fees

Fee	Amount	Period	Purpose
Application	\$1,200, nonrefundable	One time	To offset the initial cost of processing applications
Participation	\$300, nonrefundable	Annual	To offset ongoing administrative costs
Deposit	\$100/kW, refundable	One time	To protect subscribers from poorly planned projects
Escrow	\$100/kW, refundable	One time	To incent developers to build expeditiously and withdraw questionable projects
Metering	Single phase: \$5.50 Three phase: \$8.00	Monthly	To offset metering costs

²² Minn. Stat. § 216B.1641(e)(3).

Xcel proposed to refund the deposit without interest if a project is operational within 18 months from the date of the solar-garden application. If the developer misses the 18-month deadline, the deposit would be forfeited and credited to Xcel's ratepayers through the Renewable Energy Standard (RES) Rider.

Xcel proposed to refund the escrow fee within 90 days of the start of commercial operation or upon written notice that the operator does not intend to pursue completion of the garden. Xcel did not propose that the escrow fee be subject to forfeit.

1. Positions of the Parties

a. Program Fees Generally

Most of the commenters argued that Xcel's proposed fees were both too numerous and too large. Their primary concern was that excessive fees would present an upfront obstacle to garden development, especially for smaller developers.

Fresh Energy suggested that some of the fee-related burden on small developers could be lifted by scaling application and participation fees with the size of a solar-garden project. However, Xcel responded that the administrative cost of processing applications does not vary in direct proportion to the size of the garden project.

The Department and several other commenters stated that Xcel requires a lower application fee (\$500) and participation fee (\$0) for its community-solar program in Colorado and argued that Xcel had not adequately explained why its fees differ between the two states. Xcel responded that a comparison between the Colorado and Minnesota programs is not apt because Xcel recovers the costs of administering the Colorado program through that state's Renewable Energy Standard Adjustment fund. There is not a similar funding source available in Minnesota.

b. Deposit and Escrow Fees

A number of commenters, including Fresh Energy, IREC, and MN Community Solar, argued that the deposit and escrow fees were duplicative of each other and would prevent small developers from participating. These commenters were also united in calling for Xcel to pay interest on refunds. They concluded that a single, refundable deposit without a forfeiture provision would provide developers with sufficient incentive to proceed with solid projects and to abandon questionable projects.

In response to these comments, Xcel agreed to drop its proposal for an escrow fee and to pay interest on the refunded deposit. However, Xcel maintained its 18-month deposit-forfeiture proposal, arguing that the possibility of forfeiting the deposit would encourage garden operators to build the garden within the program timelines.

2. Commission Action

Xcel will incur significant costs in developing the solar-garden application and subscriber-management system, processing applications, and administering bill credits. It is fair that the bulk of these program costs be borne by solar-garden developers and subscribers and not ratepayers generally. The Commission finds that Xcel's proposed application, participation, and metering fees are reasonably calculated to cover the program costs and will therefore approve them at the

levels Xcel proposes. The fee structure may need to be adjusted in the future as Xcel gains experience with solar gardens and the true costs of administering the program become clearer.

The Commission concurs with Fresh Energy, IREC, and MN Community Solar that separate deposit and escrow fees are unnecessary and may overburden garden developers, especially smaller developers. A single refundable deposit should be sufficient to protect subscribers from poorly planned projects. The Commission will require Xcel to amend its solar-garden plan to remove the escrow requirement and require only that garden operators make a single deposit of \$100 per kilowatt.

The Commission also concurs with these commenters that a forfeiture provision is not necessary to protect subscriber interests and would complicate the financing of solar gardens. The Commission will require Xcel to refund the deposit to an operator either within 30 days of the garden's completion or within 30 days of the date the operator informs Xcel that it will no longer pursue completion of the project.

C. Solar-Garden Capacity Limit

The solar-garden statute limits a garden's nameplate capacity to 1 MW or less.²³ Solar panels produce power in direct current (DC), which is converted to alternating current (AC) by a device known as an inverter before being fed onto the grid. However, the statute does not specify whether the 1-MW limit should be measured in DC or AC.

Xcel's tariff and standard contract state the 1-MW limit in DC. Xcel argued that, because solar panels produce power in DC, the use of DC is consistent with the solar-garden statute's requirement that a garden's "nameplate" capacity be no more than 1 MW.²⁴

The Department and several other commenters recommended that the contract and tariff state garden capacity in AC for consistency with the net-metering statute, which defines "capacity" as "the number of megawatts alternating current (AC) at the point of interconnection between a distributed generation facility and a utility's electric system."²⁵ Commenters also stated that the practical effect of defining solar-garden capacity in DC would be to significantly reduce a garden's maximum allowable capacity because the DC-to-AC conversion process results in a significant capacity loss.

The Commission concurs with the Department and other commenters that solar-garden capacity should be defined in AC. This is consistent with the net-metering statute and avoids an unnecessary limitation on solar-garden size. Xcel is correct that solar panels produce power in DC, but the garden as a whole produces AC power, since the panels' output must be converted to AC before entering the grid. It therefore makes sense to define garden capacity in AC. The Commission will order Xcel to amend the tariff and contract to define the maximum solar-garden capacity as 1 MW AC.

²³ Minn. Stat. § 216B.1641(b).

²⁴ Minn. Stat. § 216B.1641(b).

²⁵ Minn. Stat. § 216B.164, subd. 2a(c).

D. Interconnection Procedures

1. Specific Timelines and Costs

Xcel stated that it will require solar gardens to interconnect to its transmission system using the process outlined in the Company's tariff governing the interconnection of distributed resources.

a. Positions of the Parties

Several commenters, including Fresh Energy, IREC, and TruNorth, were concerned that Xcel's interconnection procedures not unduly delay the implementation of solar gardens and requested more information on specific interconnection timelines. However, other commenters, including SunEdison and Geronimo Energy, stated that Xcel's existing interconnection process has worked well in the past.

The Department recommended that the Commission require Xcel to complete engineering studies based on the timeframes set in the Commission's September 28, 2004 order establishing interconnection standards for distributed-generation facilities.²⁶

Generation System Size	Engineering Study Completion
< 20 kW	20 working days
20 kW – 250 kW	30 working days
250 kW – 1 MW	40 working days

The Department also recommended that Xcel's failure to meet these timeframes should extend a solar-garden operator's deadline for achieving commercial operation on a day-for-day basis. Fresh Energy and IREC agreed with the Department that Xcel should extend the commercial-operation deadline in case of delays outside a developer's control, including but not limited to interconnection delays.

b. Commission Action

The Commission finds that Xcel's plan meets the statutory requirement to "establish uniform standards, fees, and processes for the interconnection of community solar garden facilities."²⁷ Xcel's distributed-resource interconnection tariff sets forth the process and estimated costs to interconnect solar gardens to the grid. The Commission can revisit this issue at a future time if the parties' initial experience with the solar-garden program demonstrates the need to do so.

As recommended by the Department, the Commission will require Xcel to complete engineering studies and interconnection cost estimates for solar-garden applicants within the timeframes set forth in the Commission's September 28, 2004 order. If Xcel fails to meet these timeframes for a particular garden, the garden operator's deadline for achieving commercial operation will be extended on a day-for-day basis. These requirements will help ensure that solar gardens are able to interconnect expeditiously and that operators are not penalized for a delay caused by Xcel.

²⁶ Docket No. E-999/CI-01-1023.

²⁷ Minn. Stat. § 216B.1641(e)(2).

2. Distribution-System Information

The Department, Fresh Energy, and IREC recommended that the Commission require Xcel to provide solar-garden developers with information on its distribution system upon request. Fresh Energy and IREC suggested that Xcel could provide this information either in a preapplication report or by providing maps showing distribution circuits and areas of transmission constraints. They state that this information would facilitate optimal siting and speedy interconnections.

Xcel responded that its interconnection tariff provides a process to identify a distributed-generation project's potential eligibility for a Distribution Facility Credit (DFC). Customers may request an initial screen of the project to determine if the project is located on a distribution feeder that has potential for a DFC. If that potential exists, Xcel will determine the DFC as part of its annual distribution capacity study. Xcel opposed any further requirement to furnish distribution-system information on grounds that it could compromise grid security.

The Commission recognizes the desirability to developers of having as much information as possible about Xcel's distribution system. However, the Commission concurs with Xcel that the existing process provides a workable way to evaluate the system's ability to host proposed projects and that requiring Xcel to make more grid information available could pose a security risk. Further, the power grid is a dynamic system, and any information provided at an early stage of a project's development would quickly become outdated. For these reasons, the Commission declines to require Xcel to provide solar-garden developers with additional information on its distribution system at this time.

3. Definition of "Community Solar Garden Site"

The solar-garden contract defines "Community Solar Garden Site" as "the parcel of real property on which the PV System will be constructed and located," including any easements, rights of way, and other real-estate interests reasonably necessary to construct, operate, and maintain the garden.

SunEdison argued that a solar-garden site should be defined based on a point of interconnection rather than a single parcel of land. SunEdison stated that defining "garden site" based on point of interconnection would allow multiple facilities to be installed in close proximity to each other, maximizing land use; reducing system costs, interconnection fees, and service costs; and allowing more customers to participate in solar gardens.

The Commission concurs with SunEdison that allowing a solar garden to include multiple parcels of land would benefit developers, subscribers, and likely Xcel. Where a prospective garden operator controls multiple adjacent parcels of land, or even multiple closely situated parcels, the operator should be able to install solar panels on multiple parcels, connect them to grid through a single interconnection point, and take advantage of the resulting economies of scale. The Commission will require Xcel to expand the definition of "community solar garden site" in the solar-garden contract to allow a garden site based on a point of interconnection.

E. Bill-Credit Rate

Until the Commission approves a value-of-solar rate, Xcel must purchase energy generated by solar gardens at the "applicable retail rate."²⁸ Xcel proposes to purchase garden energy at its

²⁸ Minn. Stat. § 216B.1641(d).

“average retail utility energy rate,” which is the rate the Company pays its net-metered customers with a capacity of less than 40 kW for the energy they supply to the grid.²⁹ This rate is calculated by taking the total annual revenue from electricity sales to a customer class, subtracting the revenue from fixed charges, and dividing by the annual kWh sales to the class.³⁰

Xcel calculates an “average retail utility energy rate” for two retail customer classes: demand-metered and non-demand-metered. The rates vary by peak and off-peak season. As of January 2014, Xcel’s average retail utility energy rates stood as follows:

Average Retail Utility Energy Rates

	Oct.–May	Jun.–Sep.
Retail Non-Demand-Metered Service	\$0.10575/kWh	\$0.11334/kWh
Retail Demand-Metered Service	\$0.06266/kWh	\$0.06593/kWh

Xcel updates these rates every year. However, for purposes of the solar-garden program, Xcel proposes to fix the rate as of the date the garden contract is executed.

Once the Commission approves a value-of-solar rate, Xcel will purchase garden energy at that rate and will receive the associated RECs.³¹ In the interim, Xcel proposes that it purchase both the solar-garden energy and RECs at the average retail utility energy rate. Xcel intends to use the RECs to help meet its obligations under the Solar Energy Standard.

1. Positions of the Parties

a. “Applicable Retail Rate”

The parties broadly agreed that the average retail utility energy rate proposed by Xcel did not qualify as an “applicable retail rate” and that it was too low to reasonably allow for the creation, financing, and accessibility of community solar gardens. Many commenters were particularly concerned that a fixed rate would devalue solar-garden energy over time due to inflation and suggested applying an escalation factor to prevent this.

Beyond these shared criticisms of Xcel’s proposal, however, commenters differed on how to calculate the “applicable retail rate.” One group of commenters, including MN Community Solar, MnSEIA, and MRES, focused on finding an applicable retail rate that would reasonably allow for the creation and financing of solar gardens.

There was general agreement among these commenters that an applicable retail rate of roughly 15 to 20 cents per kWh would be necessary to allow solar-garden developers to obtain financing. Using the value-of-solar statute as a guide, these commenters used “adders”—per-kWh values representing the capacity, environmental, and locational benefits of solar, among other benefits—to construct an applicable retail rate that they believed would support solar-garden development.

²⁹ See Minn. Stat. § 216B.164, subd. 3(d); see also Xcel’s Net Energy Billing Service tariff, Minnesota Electric Rate Book at Section 9, Sheet 2 (rate code A50).

³⁰ Minn. R. 7835.0100, subp. 2a.

³¹ Minn. Stat. § 216B.164, subd. 10(i).

A second group of commenters, including the Department, Fresh Energy, IREC, and SunEdison, argued that the applicable retail rate should correspond closely to a subscriber's full retail rate. These commenters stated that the statutory term "applicable retail rate" denotes the retail rate paid by a particular customer class. They also stated that the "average retail utility energy rate" is a power-purchase rate, not a retail rate.

The Department recommended that the Commission define "applicable retail rate" as the sum of the previous year's class revenues, including customer, energy, and demand charges and rider revenues, divided by class kWh sales. The primary difference between Xcel's average retail utility energy rate and the Department's proposed applicable retail rate is that the Department's rate includes customer-charge revenues and—for demand-metered customers—demand-charge revenues. The result of the Department's formula is an applicable retail rate of approximately 12 cents per kWh for non-demand-metered customers and approximately 9 cents per kWh for demand-metered customers.

Xcel stated that it proposed using the existing average retail utility energy rate because that rate appeared to provide the fastest path to plan approval. The Company does not believe that the proposed rate presents a barrier to the financing of solar gardens. It pointed out that incentive programs, such as Made in Minnesota and Solar*Rewards, already exist to help defray the cost of solar investments.

b. Payment for RECs

All commenters agreed that solar RECs have value and that the Company should not receive the RECs associated with garden-generated energy without paying some compensation beyond the applicable retail rate.

The Department stated that, while Xcel will receive the RECs associated with energy it purchases at the value-of-solar rate, Xcel currently does not automatically receive RECs from net-metered customers without paying an additional premium, such as a Made in Minnesota or Solar*Rewards incentive. The Department concluded that Xcel should not automatically receive the RECs associated with energy purchased from solar gardens until the Company begins paying the value-of-solar rate.

Other commenters, including Fresh Energy, IREC, and SunEdison, stressed the need for Xcel to provide enough compensation for RECs to ensure that solar-garden energy prices are high enough to spur the creation and financing of solar gardens. They offered various proposals for valuing RECs and for facilitating their sale to Xcel.

SunEdison suggested three possible market proxies to determine a REC value: (1) the existing Minnesota Solar*Rewards incentive program, (2) Xcel's Colorado Solar*Rewards program, and (3) Xcel's Colorado Community Solar*Rewards program. Based on its analysis of these programs, SunEdison proposed an initial REC-compensation rate of \$0.06 per kWh hour for large facilities and \$0.09 per kWh for small facilities. Under SunEdison's proposal, this rate would step down over time as installed solar-garden capacity increases, ultimately settling at \$0.02 per kWh for large facilities and \$0.05 per kWh for small facilities.

Xcel believes that the intent behind the solar-garden statute is that the RECs associated with solar-garden energy belong to the utility purchasing the energy. Xcel also argued that it will not be receiving the RECs for free because the average retail utility energy rate will represent a significant premium over the Company's avoided cost.

2. Commission Action

The Commission concludes that the statutory "applicable retail rate" is a solar-garden subscriber's full retail rate. Xcel's proposed "average retail utility energy rate" is not an applicable retail rate but rather a power-purchase rate for excess generation from net-metered facilities. Nor can the Commission accept any of the various solar-industry proposals to calculate a new "applicable retail rate" for solar gardens based on specific adders, since "applicable retail rate" denotes an existing rate applicable to a particular customer.

Therefore, in the absence of an approved value-of-solar rate, the Commission will require Xcel to credit each subscriber's portion of the solar-garden production at the applicable retail rate, which 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.

The Commission's analysis does not end with the applicable retail rate. The solar-garden statute mandates that any plan approved by the Commission reasonably allow for the creation, financing, and accessibility of solar gardens.³² The record in this case demonstrates that the full retail rate, approximately \$0.12 per kWh, is too low to reasonably allow for the creation and financing of community solar gardens. Rather, developers' uncontroverted statements indicate that a rate of approximately \$0.15 per kWh is the conservative minimum needed to secure financing and make solar gardens attractive to subscribers.

For these reasons, the Commission will allow the garden operator or developer to transfer the solar RECs to Xcel at a compensation rate of \$0.02 per kWh for solar gardens with a capacity greater than 250 kW and \$0.03 for solar gardens with a capacity of 250 kW or less. No solar REC value will be paid if the solar garden has received or intends to accept a Made in Minnesota benefit or a Solar*Rewards benefit, since these incentive programs require that the RECs be transferred to Xcel.

The Commission does not intend that this solar REC compensation rate would reflect a market rate or have any precedential effect beyond the specific facts of this case. Rather, the REC payment will simply bring the total compensation in line with what solar developers in this docket have said is the minimum rate they would need to reasonably finance solar gardens. If the solar-garden operator believes it can offer subscribers a better value proposition by retaining the RECs and selling them on the market, it is free to do so.

To ensure that solar-garden energy is not devalued over time by inflation, the applicable retail rate and solar REC value will be reviewed annually and adjusted accordingly. At such time as the Commission may issue an order approving a value-of-solar rate for solar gardens, the applicable retail rate and the solar REC value will expire according to the schedule set forth in that order.

³² Minn. Stat. § 216B.1641(e)(1).

F. Bill-Credit Process

Per the solar-garden statute, Xcel will require garden operators to size each subscription so that, when combined with other distributed generation resources serving a subscriber, it represents no more than 120 percent of the subscriber's average annual consumption of electricity, based on the annual estimated generation of the photovoltaic system as determined by PVWatts.³³ Xcel proposes that "average annual consumption of electricity" be calculated based on a subscriber's usage over the past 24 months.

Xcel will compensate solar-garden subscribers, through monthly bill credits, for the energy attributable to their subscriptions. Credits that exceed a subscriber's total bill for a given month will roll over to the next billing cycle. Xcel proposes that any credits remaining at the end of February be forfeited and that subscribers begin March with a zero balance.

1. Positions of the Parties

All of the stakeholders commenting on this issue opposed Xcel's proposal to require the annual forfeiture of surplus credits. Xcel's proposal mirrors the value-of-solar statute, which requires that positive credit balances be "eliminated" yearly at the end of February. However, the Department and others argued that bill-credit forfeiture conflicts with the solar-garden statute's requirement that Xcel "purchase . . . all energy generated" by a solar garden.³⁴ The Department in particular was concerned that yearly forfeiture of excess credits would penalize subscribers who significantly reduce their energy use over time through conservation measures or otherwise.

In reply comments, Xcel continued to support bill-credit forfeiture to maintain consistency with the value-of-solar statute. Xcel stated that the 120-percent rule should prevent most subscribers from having bill credits that exceed their electricity bill, since customer bills include not only energy charges but also taxes and fees.

2. Commission Action

The Commission concurs with the Department that bill-credit forfeiture is inconsistent with the statute's requirement that Xcel purchase all energy generated by solar gardens. The Commission also agrees that the possibility of forfeiture would tend to discourage conservation by incentivizing customers to consume an amount of electricity roughly equivalent to their subscription size. For these reasons, the Commission will require Xcel to carry all bill credits forward for at least a 12-month cycle, to purchase all outstanding credits reflected on the statement for the billing period that includes the last day of February, and to restart the bill-credit cycle in the next billing period with a zero balance.

The Commission will approve Xcel's proposal for sizing subscriptions based on a subscriber's average annual consumption of electricity over the prior 24 months. By using two full years of consumption data, this proposal complies with the statutory requirement that subscriptions be sized based on a subscriber's "average annual" consumption. The Commission will require Xcel to include in its plan a process for sizing the subscription of a customer who does not have 24 prior

³³ PVWatts is a solar-energy-production calculator developed by the U.S. Department of Energy's National Renewable Energy Laboratory.

³⁴ Minn. Stat. § 216B.1641(d).

months of consumption data, including a description of the calculation used to estimate annual electric energy consumption.

G. Unsubscribed Energy

The solar-garden statute is silent as to how payment is to be made for unsubscribed energy. Xcel initially proposed to pay nothing for any unsubscribed portion of a solar garden's production on the theory that this would encourage operators to keep the gardens fully subscribed. Under its proposal, Xcel would pass on the cost savings from this uncompensated energy to ratepayers by a reduction in the Fuel Clause Adjustment Rider.

1. Positions of the Parties

All parties who commented on this issue opposed Xcel's proposal to accept solar-garden energy without compensation, maintaining that it was inconsistent with the statute's directive that a utility "purchase . . . all energy" from solar gardens. Fresh Energy argued that the proposal would penalize garden operators for temporary drops in subscription levels due to subscribers' moving away, catastrophic events, or other events outside an operator's control. Additionally, other commenters argued that a certain amount of undersubscription would be necessary to ensure that subscribers receive the promised amount of production.

While the commenters agreed that Xcel should pay the garden operator for unsubscribed production, they differed on the exact amount. SunEdison and MRES argued that Xcel should pay at the applicable retail rate. Other commenters, including Fresh Energy, IREC, and MnSEIA supported a rate lower than the bill-credit rate in order to incentivize operators to keep gardens as close to fully subscribed as possible.

The Department recommended that the rate for unsubscribed energy be set at Xcel's avoided-cost rate for qualifying facilities larger than 40 kW and the average retail utility energy rate for gardens smaller than 40 kW. This recommendation mirrors the net-metering compensation rates in Minn. Stat. § 216B.164, subd. 3.

2. Commission Action

The Commission concurs with the parties that Xcel must pay for all energy fed onto the grid by solar gardens. The solar-garden statute provides that Xcel must purchase "all energy." Further, as a practical matter, some unsubscribed energy will be unavoidable, and not requiring payment would add to investor uncertainty and make financing projects more difficult.

The solar-garden statute provides that Xcel must purchase all energy at the "applicable retail rate" until the Commission has approved a value-of-solar rate. The Commission concurs with the Department that, with respect to unsubscribed energy purchased from garden operators, the "applicable retail rate" is the rate that applies to distributed-generation facilities under Minn. Stat. § 216B.164, subd. 3. Accordingly, the Commission will require Xcel to purchase unsubscribed energy from solar-garden operator at (1) Xcel's avoided-cost rate for solar gardens larger than 40 kW capacity and (2) Xcel's average retail energy rate for solar gardens smaller than 40 kW.

H. Subscriber Protections

1. Required Disclosures

Xcel's proposed solar-garden contract requires operators to provide the following information to prospective subscribers: (1) a warranty of production over the life of a subscription and the compensation to be paid for any underperformance, (2) the future costs and benefits of subscription, (3) a copy of the contract between Xcel and the garden operator, (4) proof of insurance, (5) proof of a long-term maintenance plan, and (6) a statement that Xcel makes no representations concerning the taxable consequences to the subscriber of bill credits or other issues related to participating in the solar garden.

a. Positions of the Parties

The OAG was concerned that subscribers could be misled regarding the potential costs and benefits of solar gardens. Although subscription costs are not known at this time, the OAG believes that subscribers may be required to make upfront payments of thousands of dollars. Recovery of these payments could take years or decades. The OAG cautioned that developers may market solar gardens as an investment in an effort to persuade consumers to pay more than they otherwise would if they were subscribing simply to support renewable energy.

In addition to Xcel's proposed disclosure requirements, the OAG recommended that the Commission require solar-garden developers to file proposed subscriber contracts, marketing materials, and financial-projection methodologies with the Commission before providing them to subscribers. The OAG also suggested that the Commission develop standards for estimating production and return on investment to ensure that consumers receive accurate, consistent information.

The Department agreed that some garden operators might be overly optimistic in their projections of a garden's production. It recommended that operators be required to obtain a site-specific solar production study as part of their application and make it available to all potential subscribers.

The solar developers and renewable-energy advocates who commented on this issue believed that Xcel's plan generally requires appropriate disclosures and protections for solar-garden subscribers. Several of them, however, opposed the requirement that garden operators provide production warranties to subscribers and compensation for any underperformance.

Fresh Energy and IREC cautioned that some production risk factors, such as grid-failure events or atypically cloudy weather, are not within operator control and recommended that the Commission carefully consider any production-warranty requirement so as not to create unintended barriers to solar-garden development. Several solar developers recommended that, instead of requiring a warranty of production for solar gardens, Xcel instead require garden operators to provide subscribers with the solar-panel manufacturer's warranty.

b. Commission Action

A solar-garden plan approved by the Commission must "identify the information that must be provided to potential subscribers to ensure fair disclosure of future costs and benefits of subscriptions"; "identify all proposed rules, fees, and charges"; and "be consistent with the public

interest.”³⁵ At the same time, the plan must reasonably allow for the creation, financing, and accessibility of community solar gardens.

The Commission agrees with the solar developers that garden operators should not be required to provide a warranty of production or compensation for performance below the warranted level. While such a requirement might be desirable from a consumer-protection standpoint, it would increase the burden on solar-garden developers and likely impede the creation and financing of solar gardens at this early stage in the industry’s development.

The Commission concludes that subscribers’ interests will be adequately protected by a requirement that garden operators provide them with a copy of the solar-panel warranty, the operator’s production projections, and a description of the methodology the operator used to develop those projections. The Commission will also require Xcel to disclose to subscribers that the Company recognizes that not all production risk factors, such as grid-failure events or atypically cloudy weather, are within the solar-garden operator’s control.

The Commission declines to adopt the OAG’s recommendations to (1) require garden operators to submit contracts, marketing materials, and financial-projection methodologies for review and (2) develop uniform standards for solar-garden production estimates. The Commission concludes that subscribers’ interests will be adequately protected by the disclosures just described. The OAG’s proposals would provide a marginal increase in consumer protections but would greatly increase the burden on developers and risk significantly delaying the solar-garden program’s start.

For the same reason, the Commission declines to adopt the Department’s recommendation that a solar-garden operator be required to obtain a site-specific solar production study as part of its application.

Finally, the Commission finds that the remainder of Xcel’s proposed disclosure requirements will help to protect subscribers while imposing a minimal burden on garden operators. The Commission will therefore order that the tariff and the proposed contract between Xcel and garden operators also require the following disclosures:

- Future costs and benefits of the subscription, as more fully detailed below in the ordering paragraphs;
- A copy of the contract between the solar-garden operator and Xcel;
- Proof of insurance;
- Proof of a long-term maintenance plan;
- A statement that Xcel makes no representations concerning the taxable consequences to the subscriber of bill credits or other tax issues related to participating in the solar garden.

The Commission will order Xcel to amend section 6(S) of the proposed standard solar-garden contract to be consistent with these disclosure requirements.

³⁵ Minn. Stat. § 216B.1641(e)(4), (5), (7).

2. Trust Accounts and Opinion Letters

Xcel suggested two additional consumer-protection requirements for solar-garden operators: (1) maintain a trust account for garden operation and maintenance (O&M) expenses through the term of the garden contract and (2) provide subscribers with opinion letters from attorneys and tax professionals that the operator is not misleading the subscriber about any legal or tax benefits of participation.

The solar developers did not object to a requirement to maintain funds dedicated for O&M expenses. However, MN Community Solar requested clarification of what kind of bank account would qualify as a trust account.

Fresh Energy and IREC opposed the requirement that solar-garden operators obtain opinion letters before marketing subscriptions, arguing that it was unnecessary and would create additional costs that would presumably be passed on to subscribers. They suggested that if a large subscriber wanted an opinion letter, that subscriber could negotiate for it.

The Commission concurs with Xcel that requiring funds to be set aside for garden O&M is a prudent subscriber-protection measure. However, to avoid confusion about the type of account required, the Commission will simply require that the garden operator demonstrate that it has funds dedicated for its O&M expenses.

The Commission also concurs with Xcel that garden operators should be required to obtain opinion letters on the legal and tax benefits of participation and will so order. This is a consumer-protection measure commonly used with similar programs in other jurisdictions. It will ensure that the garden operator is providing accurate information about the legal and tax implications of subscription.

3. Subscription Transfers

Xcel's proposed solar-garden contract provides that subscriptions may be transferred or sold to any person or entity who qualifies to be a subscriber. Any transfer of subscriptions must be coordinated with the garden operator, who must inform Xcel of the transfer through the subscriber-management system.

The OAG argued that the Commission should ensure that subscribers' initial investments are protected by mandating that subscribers be allowed to transfer their subscriptions or cancel them and receive a full refund.

In a similar vein, Fresh Energy argued that subscribers should be allowed to sell their subscriptions back to the garden operator for resale to other subscribers. According to Fresh Energy, only allowing subscription transfers between subscribers requires subscribers to act as their own resellers, makes it more difficult for them to get out of their subscriptions, and thereby reduces the value of their subscriptions.

The Commission concurs with Fresh Energy that subscribers should be able to transfer their subscriptions back to the garden operator. This will ensure that subscribers who move away or need to sell their subscriptions for other reasons are not prevented from doing so and will promote participation in the program. The Commission will require Xcel to amend section 7(C) of the solar-garden contract accordingly.

4. Dispute Resolution

The solar-garden contract provides that Xcel and a garden operator may bring disputes to the Commission for resolution. However, the contract provides that the Commission has no role under the contract to resolve any disputes between a subscriber and solar-garden operator.

The Department objected to the language limiting the Commission's role in resolving disputes between the garden operator and subscribers. The Department cautioned that, due to the bill-credit payment mechanism, a subscriber could easily get caught between the garden operator and Xcel in a dispute over the amount of bill credits. The Department recommended that the Commission reserve the option of resolving disputes.

The Commission is charged with approving a solar-garden plan that is in the public interest. The Commission therefore concurs with the Department that the Commission may have a role to play in resolving certain disputes between subscribers and solar-garden operators. The Commission will therefore direct Xcel to amend section 12 of the solar-garden contract to delete the phrase "the MPUC does not have any role under this Contract to resolve any dispute between any Subscriber and the Community Solar Garden Operator."

Additionally, due to the complex relationships among subscribers, solar-garden operators, and Xcel, the Commission concludes that Xcel should be required to include a message in subscribers' bills clarifying that the garden operator is responsible for resolving disputes over the accuracy of production data and that Xcel is responsible for resolving disputes about the applicable bill-credit rate. The Commission will delegate authority to the Executive Secretary to approve the specific language and frequency of the notice.

Finally, to facilitate the speedy resolution of subscriber questions and complaints, the Commission will order that the solar-garden tariff and contract include a requirement that the solar-garden operator provide subscribers with its contact information.

5. Data Privacy

The nature of the solar-garden program requires that Xcel and garden operators share private subscriber data, such as names, account numbers, service addresses, and information about energy usage, energy production, and bill credits. Xcel's proposed solar-garden contract contains a number of provisions governing the sharing of subscribers' private information. A consent form attached to the contract will require subscribers to authorize their data to be shared under certain circumstances.

The OAG recommended several amendments to the solar-garden contract and consent form to clarify and strengthen subscriber privacy protections. No party opposed the OAG's recommendations. The Commission finds that the suggested amendments are in the public interest and will direct Xcel to include them in the contract and consent form as set forth below in the ordering paragraphs.

The Commission is currently investigating the privacy practices of all utilities in Docket No. E,G-999/CI-12-1344. The Commission will require that the provisions of the solar-garden contract and consent form addressing data privacy remain in place unless and until the Commission adopts

other requirements in that generic privacy proceeding or in any other applicable order. The Commission will direct Xcel to file any necessary revisions to its solar-garden tariffs and contracts within 30 days of any order addressing utility privacy practices.

I. Other Program Terms and Conditions

Commenters recommended a number of miscellaneous changes to Xcel's proposed solar-garden program, which the Commission addresses in this section.

1. Length of Solar-Garden Contract

Xcel initially proposed a 20-year term for the standard solar-garden contract. A number of commenters recommended a 25-year term to be consistent with the Department's value-of-solar methodology and to more closely match the expected lifespan of solar panels. Xcel stated that it supports a contract term consistent with the value-of-solar methodology. The Commission concurs with the parties and will order that the standard contract between Xcel and solar-garden operators include a 25-year term.

2. References to "Customer"

The solar-garden contract uses the term "Customer" to refer to the solar-garden operator in numerous provisions throughout the document. Fresh Energy argues that the contract should not refer to the garden operator as a customer because the garden operator is actually a power producer. For clarity's sake, the Commission will require Xcel to delete the contract language defining "Customer" as the solar-garden operator and to replace all subsequent references to "Customer" with "Community Solar Garden Operator."

3. Billing-Error Provision

Section 1(E) of the proposed solar-garden contract provides that the garden operator is fully responsible for correcting any misallocation of bill credits caused by inaccurate subscription information. In certain situations, this provision could penalize an operator for Xcel's mistake. The Commission will therefore require Xcel to amend section 1(E) of the standard contract by adding ", unless such inaccuracies are caused by the Company" at the end of the sentence.

4. Audit-and-Inspection Provision

Section 6(G) of the solar-garden contract allows Xcel to audit the garden operator's subscription records and to inspect the solar panels on 30 days' notice. Fresh Energy argued that the Commission should add protections to safeguard operators from arbitrary or unreasonably burdensome audit requests. Xcel stated that reserving the right to audit subscription information is an important subscriber-protection measure, while reserving the right to inspect the garden is a grid-safety measure.

The Commission concurs with Fresh Energy that section 6(G), as currently written, holds the potential to be unduly burdensome. The Commission will remove the audit provision from the standard contract and leave that issue for Xcel to negotiate with operators on an individual basis. The audit provision as drafted is overly intrusive without a clear corresponding benefit. The Commission will allow Xcel to retain the right to inspect a solar garden, but only as necessary to

assure the safety and reliability of Xcel's system. The Commission will require Xcel to amend section 6(G) as set forth below in the ordering paragraphs.

5. Breach, Notice, and Termination

Section 10(b) of the solar-garden contract sets forth the procedure Xcel will use to remedy an operator's breach of the contract. The process includes several rounds of notice, culminating in disconnection of the garden and termination of the contract if the operator fails to cure its breach in a timely manner. Section 6(L) contains a separate procedure for terminating the contract—in certain cases without notice—when a solar garden has been, or is expected to be, out of service for an extended period of time due to maintenance issues.

Fresh Energy argued that there is no direct harm to Xcel if a solar garden is temporarily underperforming and that it would therefore be inappropriate for Xcel to terminate the contract due to maintenance issues. Fresh Energy argued that this clause should at least require Xcel to forbear from terminating the contract if the operator can show that it is making a good faith effort to repair or replace the broken equipment.

The public interest requires that subscribers' investments in a solar garden be protected during a contract dispute between Xcel and a garden operator. The Commission believes that this goal would be best accomplished through agency oversight of garden disconnections and contract terminations. With respect to section 6(L), the Commission will require that, before Xcel terminates a solar-garden operator's contract for maintenance reasons, the Company bring that request before the Commission for review. The Commission will direct Xcel to amend section 6(L) accordingly, as set forth in the ordering paragraphs.

The Commission is reluctant to further rewrite Xcel's proposed breach and termination provisions without additional input from the Company. The Commission will therefore direct Xcel to include plan provisions to address breach, notice, and contract termination in a compliance filing within 30 days of the date of this order. Recognizing that there may be circumstances in which Xcel must act to disconnect a garden before Commission approval can be obtained, the Commission will also direct Xcel to include plan provisions to address disconnection in emergencies.

6. Modified Contracts

The OAG argued that the Commission should not approve Xcel's proposed standard contract as part of a tariff because the filed-rate doctrine could shield Xcel from liability to ratepayers for harms caused by the program. MN Community Solar argued that approving the solar-garden contract in a tariff could also limit the ability of Xcel and solar-garden operators to negotiate new contract terms for their unique situations.

Xcel responded that it is required by Minn. Stat. § 216B.05 to file the solar-garden contract as part of its tariff. Fresh Energy and IREC saw significant value in having standardized solar-garden contracts, whether or not they are filed as tariffs. They stated that, even if a contract's filing makes damages unavailable, a subscriber could seek redress before the Commission and would have recourse to the usual legal remedies for any harm resulting from the subscriber's contract with the solar-garden operator.

The Commission acknowledges Xcel's obligation under Minn. Stat. § 216B.05 to file electric service contracts. And the Commission concurs with Fresh Energy and IREC that having a standard contract will help ensure that the solar-garden program is as understandable as possible for subscribers and garden operators. However, the Commission also recognizes that Xcel and individual garden operators may wish to vary certain contract terms to address their unique circumstances.

The Commission will therefore direct Xcel to amend its solar-garden plan to allow garden developers and Xcel to negotiate contracts that vary from the standard contract. The Commission will require that each such contract be filed to allow stakeholders to evaluate whether the nonstandard terms are consistent with the public interest. A nonstandard contract will go into effect 30 days after filing unless an objection is filed with the Commission within that 30-day period.

J. Transition to the Value-of-Solar Rate

The Commission has tried to establish a bill-credit rate that will be workable for solar-garden developers and subscribers, as well as Xcel and its ratepayers, until Xcel has an approved value-of-solar tariff in place. However, it is important that the transition to a value-of-solar rate occur as soon as reasonably possible to ensure that solar gardens are compensated for the full value of the solar energy they produce, including all the benefits represented by the solar RECs.

The Commission will therefore require Xcel to file, within 30 days of the Commission's order approving a value-of-solar methodology, a value-of-solar tariff for the solar-garden program subject to Commission review and approval. However, recognizing that the contours of a value-of-solar tariff are not entirely clear at this time, the Commission will allow Xcel alternatively to make a filing that includes a calculation of the value-of-solar rate for the solar-garden program and shows cause why the rate should not be implemented. This will give Xcel and the Commission the flexibility to address any issues that may arise in applying the value-of-solar rate to solar gardens.

K. Procedure for Solar-Garden Plan Approval

In this order the Commission has examined a variety of aspects of Xcel's solar-garden plan and has directed Xcel to make numerous changes to the plan. Some of the Commission's decisions will require further fine-tuning of the solar-garden tariff and contract.

In the interests of clarity, the Commission will reject Xcel's tariff filing and require the Company to refile its community-solar-garden plan for Commission review and approval within 30 days of the date of this order. This filing will include a revised solar-garden tariff and standard contract amended as required by this order, revised policies and procedures consistent with the Commission's decisions in this order, and any other changes necessary to ensure consistency and completeness.

Xcel's solar-garden plan is not approved, and Xcel will not be subject to the statutory timelines, until it has made a compliance filing of its revised tariff and standard contract demonstrating that the tariff and standard contract comply with the terms of this order and the applicable provisions of the solar-garden statute.

Once the Department has filed its approval of Xcel's revised solar-garden plan, the Executive Secretary may issue a notice stating that the solar-garden plan has been approved. The Commission further delegates to the Executive Secretary the authority to issue notices and establish and vary the timelines set forth in this order as necessary for the reasonable implementation of Xcel's solar-garden plan.

L. Additional Compliance Filings

Xcel's community-solar-garden program is a landmark undertaking in Minnesota, and, as with any new program, there will be implementation challenges and unintended consequences. To facilitate regulatory oversight and program improvements based on experience with the program, the Commission will require Xcel to file annual reports beginning 18 months after the first solar garden begins operating. These reports will include the following information:

- reporting on solar-garden program costs, including an analysis of the deposit, application, participation, and metering fees and further justification for these fees going forward;
- reporting on the solar gardens, including but not limited to size, location, and type of subscriber groups;
- reporting on known complaints and their resolution;
- a copy of each contract signed with a solar-garden operator, if not otherwise required by this order;
- reporting on the bill credits earned and paid;
- reporting on the application process; and
- lessons learned and any recommended changes to the program.

As solar penetration levels on Xcel's system rise through the solar-garden program and other initiatives, the system will need the ability to adapt to the rapid load changes caused by intermittent generation. Smart inverters, which have equipment that allows them to communicate with the grid operator, can help provide this capability. The Commission will require Xcel to report back to the Commission by September 1, 2015, on the progress toward certification of smart inverters, barriers to their broader installation, and their potential for use in solar gardens.

M. Further Stakeholder Collaboration

Xcel engaged stakeholders in developing its solar-garden program, and their comments in this docket have resulted in further program refinements. The Commission encourages continued collaboration among Xcel, solar-garden developers, the Department, the OAG, and other interested parties to

- ensure the smooth implementation of Xcel's solar-garden program;
- clarify and streamline the application process, interconnection, and bill crediting;
- discuss uniform subscriber disclosure forms;
- clarify what information a solar-garden developer must make available on its website;
- discuss limitations on promotional activities and materials;

- discuss uniform standards for solar-garden production estimates; and
- develop and implement best practices for solar gardens in Minnesota.

The Commission will direct Xcel to make compliance filings six months and twelve months following the date of this order, reporting on the progress of the discussions between the parties and any resolutions for each issue raised.

ORDER

1. The Commission hereby rejects Xcel's tariff filing and requires Xcel to file, within 30 days of the date of this order, a revised tariff and standard contract amended as required by this order, revised policies and procedures reflecting the decisions of the Commission herein, and any other changes necessary to ensure consistency and completeness.
2. Xcel's solar-garden plan is not approved under Minn. Stat. § 216B.1641, and Xcel will not be subject to the timelines therein, until it has made a compliance filing of its revised tariff and standard contract with the Department and the Commission, demonstrating that the tariff and standard contract comply with the terms of this order and the applicable provisions of the statute. Upon receipt of the Department's compliance approval, the Executive Secretary may issue a notice stating that Xcel's solar-garden plan has been approved.
3. The Commission rejects Xcel's proposal to limit application processing to 2.5 MW per quarter and to close the quarterly application process upon receipt of 2.5 MW of applications. Xcel shall adopt an application process that conforms to the following requirements:
 - a. Xcel shall allow applicants to submit applications as they are ready and shall process those applications on a first-ready, first-served basis.
 - b. Applications are deemed "ready" if
 - i. they meet the definition of completeness in Xcel's solar-garden tariff;
 - ii. the project has obtained or arranged appropriate insurance or has entered into an insurance-broker agreement;
 - iii. there is evidence of site control and point of interconnection;
 - iv. there is evidence of projected subscription at the time of construction; and
 - v. the project proposal complies with all applicable material terms of the tariff and standard contract and with any additional considerations that Xcel, solar-garden developers, the Department, the OAG, and interested parties participating in the workgroup have agreed to include in the plan.
 - c. Xcel shall make information on the total number of pending and approved applications and their size available on its website.

- d. Once a solar-garden application has been submitted, Xcel shall determine within 30 days whether it is complete. Once Xcel finds an application complete, Xcel shall approve or reject it within 60 days unless the solar-garden operator has agreed to an extension.
4. Xcel shall submit a filing for Commission approval of any proposal to offer utility-owned solar gardens. The filing shall include a detailed explanation of all processes and procedures to ensure that solar-garden operators are treated on a nondiscriminatory basis with Xcel-owned solar gardens.
5. Xcel shall adopt solar-garden program fees as follows:
 - a. The application fee shall be \$1,200.
 - b. The annual participation fee shall be \$300.
 - c. The monthly metering fee shall be \$5.50 for single phase and \$8.00 for three phase.
 - d. Xcel shall require the solar-garden operator to make a one-time refundable \$100/kW deposit and shall pay interest on the deposit amount in accordance with Minn. Stat. §325E.02.
 - e. Xcel shall refund the deposit to the solar-garden operator within 30 days of the solar garden's completion or within 30 days of the date on which the solar-garden operator informs Xcel that it will no longer pursue completion of the solar garden.
 - f. Xcel shall amend the solar-garden plan to remove the requirement of a one-time refundable \$100/kW escrow fee.
6. Xcel shall amend the solar-garden tariff to define the maximum solar-garden capacity as no more than 1 MW alternating current (AC).
7. Xcel shall complete engineering studies and interconnection cost estimates for prospective solar-garden operators within the timeframes set forth in the Commission's September 28, 2004 order in Docket No. E-999/CI-01-1023. Failure to meet these timeframes will extend the operator's deadline for achieving commercial operation on a day-for-day basis for the purpose of determining deposit refund.
8. Xcel shall revise its tariff to expand the definition of "Community Solar Garden Site" to allow a garden site based on a point of interconnection.
9. Xcel shall credit each subscriber's portion of the solar-garden production at the applicable retail rate, which shall be 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.
10. The solar-garden operator or developer may transfer the solar RECs to Xcel at a compensation rate of \$0.02 per kWh for solar-garden facilities with capacity greater than 250 kW and \$0.03 for solar-garden facilities with capacity of 250 kW or less.

11. The applicable retail rate and solar REC value must be reviewed annually and adjusted accordingly. At such time as the Commission may issue an order approving a value-of-solar rate for solar gardens, the applicable retail rate and the solar REC value will expire according to the schedule set forth in that order.
12. No solar-REC value shall be paid if the solar garden has received or intends to accept a Made in Minnesota benefit, pursuant to Minn. Stat. §§ 216C.411–.415 or a Solar*Rewards benefit, as defined in Minn. Stat. § 116C.7792.
13. The Commission approves Xcel’s proposal to size subscriptions based on a subscriber’s average annual consumption of electricity over the prior 24 months (and based on the annual estimated generation of the photovoltaic system as determined by PVWatts).
14. Xcel shall include a process for sizing the subscription of a customer who does not have 24 prior months of consumption data, which includes a description of the calculation used to estimate annual electric energy consumption.
15. Xcel shall carry surplus bill credits forward for at least a 12-month cycle, purchase any outstanding bill credits reflected on the statement for the billing period that includes the last day of February, and restart the credit cycle in the next billing period with a zero balance.
16. Xcel shall purchase unsubscribed energy from the solar-garden operator at (1) Xcel’s avoided-cost rate for solar gardens larger than 40 kW capacity and (2) the Company’s average retail utility energy rate for solar gardens smaller than 40 kW.
17. The tariff and contract between Xcel and the solar-garden operator shall include the following subscriber-protection measures:
 - a. A requirement that the solar-garden operator provide the subscriber with a statement that Xcel makes no representations concerning the taxable consequences to the subscriber of bill credits or other tax issues related to participating in the solar garden.
 - b. A requirement that the solar-garden operator obtain opinion letters from attorneys and tax professionals providing assurance that the operator is not misleading a subscriber on any legal or tax benefits of participation.
 - c. A requirement that the solar-garden operator demonstrate that it has funds dedicated for its O&M expenses.
 - d. A requirement that the solar-garden operator provide the subscriber with the following information:
 - i. Future costs and benefits of the subscription, which shall include the following information:
 - (a) All nonrecurring (i.e. one-time) charges;
 - (b) All recurring charges;

- (c) Terms and conditions of service;
 - (d) Whether any charges may increase during the course of service and, if so, how much advance notice is provided to the subscriber;
 - (e) Whether the subscriber may be required to sign a term contract;
 - (f) Terms and conditions for early termination;
 - (g) Any penalties that the solar garden may charge to a subscriber;
 - (h) The process for unsubscribing and any associated costs;
 - (i) An explanation of the subscriber data that the solar-garden operator will share with Xcel and that Xcel will share with the solar-garden operator;
 - (j) Xcel's data-privacy policy and solar-garden operator's data-privacy policy;
 - (k) The method of providing notice to subscribers when the solar garden is out of service, including notice of the estimated length and loss of production;
 - (l) Assurance that all installations, upgrades, and repairs will be under the direct supervision of a NABCEP-certified solar professional and that maintenance will be performed according to industry standards, including the recommendations of the manufacturers of solar panels and other operational components;
 - (m) The allocation of unsubscribed production; and
 - (n) A statement that the solar-garden operator is solely responsible for resolving any disputes with Xcel or the subscriber about the accuracy of the solar-garden production and that Xcel is solely responsible for resolving any disputes with the subscriber about the applicable rate used to determine the amount of the bill credit;
- ii. A copy of the contract between the solar-garden operator and Xcel;
 - iii. A copy of the solar-panel warranty;
 - iv. Proof of insurance;
 - v. Proof of a long-term maintenance plan;
 - vi. The solar garden's production projections and a description of the methodology employed by the solar-garden operator in developing those projections; and

- vii. Solar-garden operator contact information for subscriber questions and complaints.
 - e. A requirement that Xcel include a bill message to solar-garden subscribers clarifying that questions or concerns related to their solar garden should be directed to the solar-garden operator, including a statement that the solar-garden operator is solely responsible for resolving any disputes with Xcel or the subscriber about the accuracy of the solar-garden production and that Xcel is solely responsible for resolving any disputes with the subscriber about the applicable rate used to determine the amount of the bill credit. The Commission delegates authority to the Executive Secretary to approve the specific language and frequency of the notice.
 - f. A requirement that Xcel disclose to subscribers that the Company recognizes that not all production risk factors, such as grid-failure events or atypically cloudy weather, are within the solar-garden operator's control.
18. Xcel shall amend section 6(S) of the standard contract to be consistent with the preceding order point.
19. Xcel shall modify the tariff and Attachment A to Xcel's standard contract, sections 4(a)–(f), to clarify
- a. That the solar-garden operator shall not disclose subscriber information in annual reports or other public documents absent explicit, informed consent from the subscriber;
 - b. That the solar-garden operator shall not release any customer data to third parties except to fulfill the regulated purposes of the solar-garden program, to comply with a legal or regulatory requirement, or upon explicit, informed consent from a subscriber;
 - c. That Xcel shall clearly define "Subscriber's Account Information" and "Subscriber Energy Usage Data" and shall limit the types of customer information it may disclose;
 - d. That Xcel shall clearly define "Aggregated Information" and clearly explain to customers the risks associated with disclosure of such information; and
 - e. That Xcel shall remain liable for its inappropriate release of "Subscriber's Account Information" and "Subscriber Energy Usage Data."
20. These provisions addressing data privacy shall remain in place until and unless other requirements are adopted by the Commission in its generic privacy proceeding, Docket No. E,G-999/CI-12-1344, or other Commission order. Xcel shall file the necessary revisions to its tariffs and contracts within 30 days of such order.
21. Xcel shall amend its solar-garden tariff and contract as follows:
- a. The standard contract between Xcel and a solar-garden operator shall include a 25-year term.

b. Xcel shall delete the contract provision defining “Customer” as the solar-garden operator and replace all subsequent references to “Customer” with “Community Solar Garden Operator.”

c. Xcel shall amend section 1(E) of the proposed contract by adding “, unless such inaccuracies are caused by the Company” at the end of the sentence.

d. Xcel shall amend section 6(G) of the proposed contract as follows:

~~The Company reserves the right, upon thirty (30) days written notice, to audit the Community Solar Garden Operator’s Subscriber and Subscription records and to inspect the PV System as necessary to assure the safety and reliability of the system at any time during the Term of this Contract, and for an additional period of one year thereafter.~~

e. Xcel shall amend section 6(L) of the proposed contract as follows:

~~The Community Solar Garden Operator shall maintain the PV System and the individual components of the PV System in good working order at all times during the term of this Contract. If during the term of agreement the PV System or any of the individual components of the system should be damaged or destroyed, or taken out of service for maintenance, the Community Solar Garden Operator shall provide the Company written notice within 30 calendar days of the event and promptly repair or replace the damaged or destroyed equipment to its original specifications, tilt and orientation at the Community Solar Garden Operator’s sole expense. If the time period for repair or replacement is reasonably anticipated to exceed one hundred and eighty (180) days, the Company shall have the right, ~~exercisable at its sole option,~~ to request to terminate this Contract upon not less than thirty (30) days by written notice, with no further obligation of the Parties to perform here under following the effective date of such termination. ~~In all other situations, if the PV System is out of operation for more than ninety (90) consecutive days during the Term of this Contract, the Company shall have the right to terminate this Contract by providing written notice to Community Solar Garden Operator anytime during the period following the expiration of such ninety (90) days and before the PV System has been made fully operational again.~~~~

f. Xcel shall include plan provisions to address breach and termination of the contract, including provisions for giving notice and to address an emergency.

g. Xcel shall amend section 7(C) as follows:

- f. reporting on the application process; and
 - g. lessons learned and any potential changes to the program.
24. Xcel shall report back to the Commission by September 1, 2015, on the progress toward certification of smart inverters and other relevant barriers to the broader installation and use of smart inverters for solar gardens.
 25. The Commission encourages continued collaboration among Xcel, solar-garden developers, the Department, the OAG, and other interested parties. Xcel shall make compliance filings six months and twelve months following the date of this order, reporting on the progress of the discussions between the parties and any resolutions for each issue raised.
 26. The Commission delegates to the Executive Secretary the authority to issue notices and establish and vary timelines set forth in this order as necessary for the reasonable implementation of Xcel's solar-garden plan.
 27. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary



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