MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date:	January 25, 2018	Agenda Item **6
Company:	Xcel Energy (Xcel or the Company)	
Docket No.:	**E-002/M-17-527**	
	In the Matter of the Petition of Northern States Power Company, dba Xcel Energy, for Approval of a Customer Access Joint Pilot Program	
Issues:	Should the Commission approve Xcel's Customer Access Joint Pilot Program, also referred to as Rehabilitation and Efficiency: Neighborhood Energy Works (RENEWs)? Should the Commission adopt any of the modifications or additions to the program and reporting requirements proposed by parties?	

Staff: Susan Mackenzie susan.mackenzie@state.mn.us 651-201-2241

Relevant Documents	Date
Xcel concept proposal (in 13-867)	March 1, 2017
ILSR comments (in 13-867)	March 1, 2017
Xcel initial petition	June 30, 2017
Clean Energy Access Coalition	August 15, 2017
Joint Commenters	August 16, 2017
Fresh Energy	Sept. 15, 2017
IREC	Sept. 15, 2017
Environmental Law and Policy Center	Sept. 15, 2017
Department of Commerce	Sept. 15, 2017

Relevant Documents	**Date**
Ampion	Sept. 15, 2017
Xcel reply	Sept. 25, 2017
Environmental Law and Policy Center reply	Sept. 25, 2017
IREC reply	Sept. 25, 2017
Department of Commerce reply	Sept. 25, 2017
Order Approving Value-Of-Solar Rate for Xcel's Solar-Garden Program, Clarifying Program Parameters, and Requiring Further Filings, in Docket No. E-002/M-13-867	Issued: Sept. 6, 2016

I. Statement of the issues

Should the Commission approve Xcel's Customer Access Joint Pilot Program, also referred to as Rehabilitation and Efficiency: Neighborhood Energy Works (RENEWs)?

Should the Commission adopt any of the modifications or additions to the program and reporting requirements proposed by parties?

II. Background

On September 6, 2016, the Commission issued its *Order Approving Value-Of-Solar Rate for Xcel's Solar-Garden Program, Clarifying Program Parameters, and Requiring Further Filings*, in Docket No. E-002/M-13-867 (the "September 6 Order"). Order Point 9 required Xcel to develop a community solar garden (CSG) proposal for low income customers, applying LIHEAP eligibility standards, and to file the proposal by March 1, 2017. The Commission also invited proposals from other interested parties.

On March 1, 2017, Xcel filed a concept proposal for a low income pilot program that would pair energy efficiency investments and community solar garden participation. The Company committed to filing a more detailed proposal within 90 days. No other party filed a proposal. However, the Institute for Local Self-Reliance (ILSR) filed a set of guiding principles and best practices for low income program design, as well as a set of recommendations for broadening access to an Xcel-run CSG program.

On June 1, 2017, Xcel filed a letter updating its March 1, 2017 concept proposal, indicating that it would file a proposal for a Customer Access Joint Pilot on June 30, 2017.

On June 30, 2017, Xcel filed a developed pilot proposal and request for approval of its RENEWs program.

On July 10, 2017, the Commission issued a notice seeking comments on the pilot proposal and the recommendations of the ILSR. The Commission sought responses to the following questions:

- Is Xcel's proposal for a low income pilot in the public interest?
- Is the proposal consistent with Minn. Stat. § 216B.1641, the Commission's September 6, 2016 Order (in Docket No. E-002/M-13-867), and other relevant law?
- Does Xcel's proposal to work with non-Xcel project partners (Energy CENTS Coalition, Dayton's Bluff Neighborhood Housing Association, Center for Energy and Environment and THOR Construction) raise any issues for Commission consideration?
- Minn. Stat. § 216B.1641 (e)(3) requires that any CSG plan approved by the Commission "not apply different requirements to utility and nonutility community solar garden facilities." In addressing this statutory provision, Xcel was guided by three key principles of non-discrimination. Are there other issues of discrimination concerning nonutility

developers/operators that the Commission should consider?
- To implement the pilot program, Xcel is seeking approval of new tariff sheets. Please comment on the proposed tariff sheets.
- Please comment on the guiding principles, best practices and recommendations for low income program design filed by ILSR on March 1, 2017. How do they relate to Xcel's low income pilot proposal?
- Xcel proposed annual reporting for the pilot. Should any other information, in addition to that proposed, be included in the Company's annual report to the Commission?
- Should the Commission take up the issue of cost recovery separately at a later time?

The statutory foundation for Xcel's pilot is Minn. Stat. § 216B.1641 (a), which provides for the participation of public utilities in the community solar program by owning or contracting for gardens. It states, "[t]he owner of the community solar garden may be a public utility or any other entity or organization that contracts to sell the output from the community solar garden to the utility under section 216B.164."

Minn. Stat. § 216B.1641 (e)(3) provides that the community solar garden program offered by the utility and approved by the Commission may not apply different requirements to utility and nonutility owned community solar garden facilities. [See Minn. Stat. § 216B.1641, Attachment D.]

In its April 7, 2014 Order (p. 8), in Docket No. E002/M-13-867, the Commission stated:

> ...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 non-discriminatory 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." [Minn. Stat. 216B.1641 (e)(3)]

In the September 6 Order (pp. 19-20), the Commission found:

> The Commission concurs with the parties that the potential for involving low-income customers in Xcel's solar-garden program bears further examination. The Commission concludes that Energy CENTS' proposal for an Xcel-owned garden stands the best chance of extending the benefits of community solar to low-income customers and will therefore direct the Company to file a specific proposal for consideration by the Commission and stakeholders.
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> A low income customer may face numerous obstacles to participating in the solar-garden program, including a lack of funds to make an up-front investment, an insufficient credit score, limited internet access, language barriers, and constrained time and resources. Each of the proposals discussed above addresses some of these

obstacles. But none of them directly address the concern Energy CENTS raises—that the program as currently structured may present a financial risk for these customers.

Energy CENTS' proposal for an Xcel-owned solar garden for low-income subscribers has several benefits. It would leverage the Company's technical expertise, financial stability, and existing relationship with subscribers. It makes LIHEAP participation the basis for eligibility, a criterion that would target truly needy customers and be simple to administer. And finally, Xcel's expertise and longstanding relationships with low income customers will help it design a proposal that minimizes the financial risks faced by these subscribers.

For all these reasons, the Commission will require Xcel to develop a community solar garden proposal or proposals specifically for low-income customers, applying LIHEAP eligibility standards. To gain the benefit of other stakeholders' insights, the Commission will also accept for consideration proposals by other parties to enhance access to community solar gardens for low-income customers. Xcel's proposal(s) and any others should be filed by March 1, 2017.

III. Introduction

Parties generally supported Xcel's pilot proposal but raised issues that the Commission will need to address. Some of these are near term issues such as Xcel's on-bill presentation of the credit. Others are longer term questions such as the option to allow on-bill repayment for third-party providers, how to broaden access through a scale-up plan for the pilot, and how the Company will meet statutory requirements for non-discriminatory treatment of nonutility projects.

IV. Parties' comments

Xcel's proposal for a low income pilot

Introduction and summary

On June 30, 2017, Xcel filed a request for approval of its Customer Access Joint Pilot Program, also referred to as Rehabilitation and Efficiency: Neighborhood Energy Works (RENEWs). The filing includes a description of the proposed pilot and a plan for implementation. It also includes Xcel's proposal for the non-discriminatory treatment of its own community solar garden in the context of the Solar*Rewards Community (S*RC) program.

The intent of the pilot is to explore the development of a model to combine implementation of energy efficiency measures and access to renewable energy in traditionally underserved markets by targeting a geographically defined area and leveraging local resources. One of the key features of the RENEWs program is the energy efficiency component.

The Company offered its proposal in compliance with legislative direction and Commission Orders, including Minn. Stat. § 216B.1641, the Commission's April 7, 2017 Order, and the Commission's September 6 Order.

To ensure non-discriminatory treatment of CSG facilities, Xcel stated that it was guided by three principles: (1) ensuring no preferential treatment in the interconnection queue, (2) ensuring no reliance on advantageous grid or system information, and (3) ensuring no unequal access to customer data to target subscribers.

In designing the pilot, Xcel attempted to address barriers to access for low income customers. These potential barriers and the pilot response are summarized in the Table below:

Table 1. Access Barriers and Pilot Response

Potential Barrier	Addressed by Pilot
Minimum credit score	No minimum credit score required
Long-term commitment	Subscribers may terminate at any time without penalty
Onerous contract document	Simple, streamlined documents
Remote or inconsistent recruitment	In-home subscription opportunity and ongoing support available
Enrollment fees	No upfront costs
Ongoing or hidden fees	No ongoing or hidden fees
Unfamiliar project champions	Trusted community partners with deep local roots
No connection to facility	Facility located directly in the community to be served.
Non-English language needs	Translated materials will be provided

(Xcel Initial Petition, June 30, 2017, p. 6)

Xcel hopes to serve more than 400 Xcel customers in the Railroad Island neighborhood of St. Paul,[1] through a combined energy efficiency and solar garden subscription effort. The energy efficiency component will be offered for three years. The CSG component will continue for 25 years. The pilot partner/developer anticipates a 0.5 MW AC community solar garden facility to be built on a parcel in the Railroad Island neighborhood.

Xcel intends to purchase the solar facility from minority-owned THOR Construction (the partner/developer), making it the first Company-owned solar asset. Xcel will sign a contract with Energy CENTS Coalition (ECC) to provide both energy efficiency services and subscriber recruitment and management services. The Company will own the garden, be responsible for its operations and maintenance (O&M), and will provide support to deliver community outreach and education, track participation and impacts, and assist in identifying transferable learnings through Partners in Energy.

[1] Railroad Island is a neighborhood in St. Paul that covers approximately 180 acres and is geographically bound by railroad tracks and Payne Avenue. (See Xcel's Initial Petition, June 30, 2017, Attachment A for a neighborhood map.) About 800 housing units are situated in Railroad Island, about 35% of which are owner-occupied, date to the late nineteenth to early twentieth century, and are in need of rehabilitation.

More than one hundred of the Railroad Island community's residents currently participate in LIHEAP and Xcel estimated that more than three times that number could qualify for the program. CSG subscriptions will be offered to qualifying customers[2] in capacity increments of 200 watts, up to 120% of the customer's average annual energy use.[3] Subscribers will receive a net bill credit corresponding to the monthly production of their portion of the solar garden.

The pilot will offer integrated services in three steps:

- *Customer Identification and Energy Efficiency Service Delivery*. A household in the Railroad Island neighborhood will participate in a Home Energy Squad or a Low Income Home Energy Squad visit. Through the application and delivery of this service, low income residents will qualify based on the same information they provide to determine eligibility criteria under LIHEAP. The preferred initial step for residents who live in buildings with five or more units will be participation in the Multi-Family Energy Savings program. This provides electric energy saving equipment for the residents to help lower their electric energy bills. To qualify, buildings must be listed on the Low Income Rental Classification (LIRC) with 66 percent of the residents having qualifying income.

- *Community Solar Subscription Offer*. Candidates for the Home Energy Savings program are identified through step one. The offer to subscribe to the adjacent community solar garden will be incorporated into the delivery of this program. For multi-family buildings that participate in Low Income Multi-Family Energy Savings program, all tenants will be considered eligible to subscribe to the garden when they pay their own electricity bill.

- *Subscribers Receive On-Bill Credits*. A subscription enrollment form will be completed enabling a residential customer to subscribe to the community solar garden for a period of up to five years. At the time the subscription expires, the customer (if still LIHEAP eligible, or if still resides in a multi-unit building where at least two-thirds (2/3) of the households are LIHEAP eligible) may resubmit their community solar subscription request, and enter a new subscription term. If interest outstrips availability, a subscriber waitlist will be maintained.

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[2] Xcel's proposed tariff states: "Available to residential customers who reside in the Railroad Island Community who are either LIHEAP eligible or who reside in a multifamily building (of at least five units) where at least two-thirds (2/3) of the households are LIHEAP eligible."

[3] Some commenters suggested that the pilot limits the subscription size of subscribers and ultimately restricts the potential savings of participants. However, under the CSG statute (Minn. Stat. § 216B.1641), the minimum subscription size is 200 watts. The only difference between Xcel's current CSG program and the CSG component of the proposed pilot is that the pilot will subscribe in increments of 200 watts. Customers can choose to have several subscriptions of 200 watts each up to 120% of their average annual generation.

Xcel's estimation of pilot participation in the four different segments of the RENEWs pilot is shown in Table 3 below:[4]

Table 3. Estimated Pilot Participation

	Year 1	Year 2	Year 3	Total
Low Income Home Energy Squad	40	60	85	175
Home Energy Savings	25	65	139	229
Multi-Family Energy Savings Program (building/units)	2/56	2/56	3/64	7/176
Solar*Rewards Community Subscriptions	120	20*	20*	160

*Xcel anticipates enrolling additional customers in Years 2 and 3 due to attrition.

Xcel explained that funding for the conservation component of the pilot will be through the DOC's CIP program and will incorporate spending from existing CIP programs. The Company estimated a budget of about $1.8 million for the energy efficiency component of RENEWs and plans to make a CIP budget modification filing with the Department as soon as the Commission approves the pilot. This filing will seek to modify Xcel's approved CIP budget in order to apply funds to the energy efficiency component of the RENEWs pilot. Xcel anticipates that the CIP budget approval process could occur in March 2018.

Xcel will provide the resources for marketing and coordination of the pilot through Partners in Energy.[5] This group includes: Energy CENTS Coalition (ECC), Dayton's Bluff Neighborhood Housing Services (DBNHS),[6] and the Center for Energy and Environment (CEE). All have local knowledge, experience and reputation. The purpose is to provide project management and cohesive delivery of the separate program offerings.[7]

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[4] Xcel Initial Petition, June 30, 2017, p. 8.

[5] Partners in Energy is an offering by Xcel to provide communities assistance in developing and implementing an energy action plan. An MOU is signed between the community and Xcel at the start of planning and another at the start of implementation. These documents are not binding but outline the expectations around what each party will provide and the anticipated outcomes. Currently no MOU has been signed for the Railroad Island community. Instead, the RENEWs pilot plan will serve as the energy action plan. Xcel expects Partners in Energy to provide community support to implement the pilot, including working with ECC to develop marketing material, project management, stakeholder coordination, tracking, and report development.

[6] DBNHS provides housing rehabilitations in the Railroad Island neighborhood. It is a geographically based 501(c)(3) nonprofit community development corporation that serves the City of St. Paul, Minnesota's East Side neighborhoods. DBNHS was established in 1980 as a partnership between residents, government, businesses, and financial institutions to improve the housing and quality of life in East Side neighborhoods. Since its inception, DBNHS has been directly responsible for the rehabilitation, new construction and assisted purchase of 3,281 affordable housing units (mostly ownership, but some rental units). DBNHS also administers a federally funded Youth Build Program.

[7] Partners in Energy will support outreach to community members through fliers, social media,

Xcel will contract with THOR Construction to build the garden, but plans to purchase the development from THOR. In its initial petition, the Company noted that it was nearing final negotiations with THOR to develop the 0.5 MW CSG on a tax-forfeited parcel of land.[8] THOR will submit the initial interconnection application and be responsible for interactions with the Company to complete the interconnection process. THOR will manage the application throughout the interconnection process. However, at some point, the application will be assigned to Xcel. Xcel stated that it will seek Commission approval of its final contract terms with the seller of the garden in compliance with Minn. Stat. § 216B.50.[9]

Cost recovery

Xcel proposed to recover the cost of the pilot program by crediting customers the difference between the VOS rate and the cost of the resource and program administration. As noted, customers will be enrolled with no up-front costs and zero enrollment fees. Xcel will ensure that non-participating retail ratepayers do not pay for the proposed solar garden facility. VOS bill credits and unsubscribed energy payments will be recovered through the fuel clause, as they are for other solar gardens. The Company provided two options to isolate the project costs so that the costs (other than the energy cost in the FCA) do not impact other customers. The Company would prefer to use separate accounting for the solar garden, tracking the costs as "non-utility." It is currently evaluating the viability of that option with its accountants and auditors. If that option is not viable, the Company will instead make a ratemaking adjustment to remove the asset and associated costs from future cost of service studies.

Subscription pricing

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community workshops, and educational pieces that promote energy efficiency and community solar in the context of the RENEWs pilot. Outreach will incorporate awareness building and recognition through press releases and engagement of local media. Project management activities will include the development of a master work plan for the pilot including objectives, goals and strategies, and delivery of tracking results for conservation and renewable energy impacts.

[8] THOR Construction, Inc. was founded in 1980 and is a turnkey real estate management firm, specializing in development, design, construction, consulting and utility management. THOR is Minnesota's largest ethnic, minority-owned business and one of the largest African-American owned industrial/service firms in the U.S. It has been involved with the planning and engineering at the Railroad Island site since the original master plan in 2014. Prior to that, THOR staff helped manage the soil remediation and geotechnical corrections of the site in 2007-2008. THOR is currently working with the Housing and Redevelopment Authority (HRA) of St. Paul and DBNHS in the planning and entitlements for the development of the 8 acres of property to the south and north of the solar garden. As a result of this experience, THOR has unique knowledge of the technical, design and engineering issues associated with this site and has participated in numerous public meetings regarding its use.

[9] Xcel is exploring a means of establishing an apprenticeship program for the ongoing operations and maintenance of the garden facility, possibly leveraging its relationship with vocational school partners so as to provide for a meaningful enrichment and job skills opportunity for qualified learners. The Company continues to develop this opportunity for the pilot.

The Company's subscription pricing will provide a per kWh benefit or "Net Bill Credit" in a range from $0.00 up to $0.01 per kWh. Xcel's plan is to offer an initial Net Bill Credit of $0.005 per kWh. It may increase or decrease the Net Bill Credit within the stated range depending upon the expected or demonstrated economics of the project.[10]

For a 3.8 kW subscription, this would amount to a monthly credit of about $2.16 per customer, or a 4% bill savings. Although this benefit may appear modest, when paired with bill savings driven by energy efficiency investments, the overall benefit will be greater. Xcel proposed that a single line-item on the bill represent the bill credit less the program cost (i.e. the "Net Bill Credit").[11]

The Net Bill Credit will communicate the value of the program to subscribers in the form of dollars per kWh. Subscriptions will be guaranteed no net cost, but Xcel reserves the right to modify the Net Bill Credit upon written notice to subscribers. The initial Net Bill Credit will be set forth in the RENEWs Enrollment Form signed by each subscriber. The Company argued the discretion to modify the Net Bill Credit is reasonable and consistent with practices of other garden operators. The Company also argued that this structure will enable it to respond to dynamic pricing conditions, including any modifications to the VOS adopted by the Commission.

Subscription, marketing, administration and management

Xcel will contract with ECC to expand in-home visits beyond energy efficiency services. ECC will administer both the CSG subscriptions and subject to Department approval the Xcel low income CIP portion of the pilot. ECC will be responsible for:

- identifying and recruiting participants for the community solar pilot
- ensuring customer eligibility in the community solar pilot
- explaining the details of the program, including the key terms and conditions of the pilot
- providing customers with the language-appropriate materials and disclosures
- obtaining a signed RENEWs Enrollment Form from customers electing to enroll
- uploading subscriber information to the online portal for S*RC
- maintaining current subscriber information in the online portal
- maintaining "full" or near full subscription levels to the garden
- providing regular reporting details to the Company on the status of subscription levels, attrition, and other pertinent facts

Fair disclosure

Xcel will disclose the future costs and benefits of the subscription to subscribers.[12] Due to the nature of the subscription under the RENEWs pilot, there is no requirement under the Fair

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[10] Xcel Initial Petition, June 30, 2017, p. 11.

[11] A sample bill is included as Attachment B to the Company's Initial Petition, filed June 30, 2017.

[12] Attachment B to these briefing papers is a list of the information disclosed.

Disclosure on the standard CSG Tariff Sheet 79, par. 6.S to provide the potential subscriber with a copy of the Standard Contract for S*RC. Instead, the RENEWs Amendment to the Standard Contract For S*RC will be used as part of the RENEWs Program.

A key barrier to the participation of low income subscribers in renewable energy programs is the requirement to sign a complex, long-term contract (and to have a sufficient credit score). Xcel developed the proposed contract that subscribers will sign with this in mind.[13]

Xcel's customer-subscriber enrolling in the pilot is not required to have a minimum credit score. The RENEWs Enrollment Form (included among the proposed tariff sheets) is a short, simple form that details pertinent information about the subscriber and subscription size. Each subscriber will also sign the Minnesota model "Consent To Disclose Utility Customer Data" form.[14] To simplify the process, these two forms replace the standard Subscriber Agency Agreement.

The customer need only agree to participate and receive Net Bill Credits under the program for a maximum of five years, with the potential to re-enroll. Once a customer opts in, participation is completely voluntary and he or she may terminate at any time without penalty. The terms and conditions of participation will be offered through a tariff that includes a RENEWs Enrollment Form. The tariff and enrollment form will govern the rights and duties under the program and the enrollment form will specify the initial per kWh Net Bill Credit Rate for participating customers. Potential subscribers will be provided additional information about the Company's subscription offer through an accompanying information packet. The Company and ECC will identify the need for and deliver materials translated into languages other than English.[15]

Unsubscribed energy

Xcel intends to maintain maximum subscription levels through community outreach and will maintain a waitlist.[16] During months where there is unsubscribed energy, the Company will be paid at the tariffed avoided cost rate for this energy, and will credit payment received, if any, towards the revenue requirement of the facility.

Ensuring non-discriminatory treatment

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[13] See Xcel's Initial Petition, June 30, 2017, Attachment C—the proposed program tariff, including the "RENEWs Amendment to Standard Contract For Solar*Rewards Community."

[14] Authorized by the Commission's June 9, 2017 Order in Docket No. E, G-999/CI-12-1344.

[15] A summary of the Subscriber Enrollment Terms is included in these briefing papers, see Attachment D.

[16] Should customer interest outstrip capacity in the program, the Company will consider effective means of targeting participation over time. For example, current Home Energy Savings Program (HESP) participants represent a subset of the LIHEAP eligible customers, and Xcel proposed to target participation to those customers identified through HESP visits on Railroad Island. Should additional eligibility criteria be applied or equitable customer selection methodologies be indicated, the Company will address these in an annual report.

Xcel will be offering a solar community garden directly to subscribers. In order to comply with statutory, regulatory, and program requirements, the Company proposed several key fairness principles:

- Does the proposal ensure no preferential treatment is given to a Company application in the interconnection queue?
- Does the proposal ensure there is no unfair reliance on grid or distribution system information?
- Does the proposal ensure there is no unfair reliance on customer data to target subscribers?

With respect to the first principle, the Company's argued that its proposal ensures there is no preferential treatment given to a Company application in the interconnection queue because the interconnection request will be submitted and managed until commercial operation by the third party. The Company will publish the project's S*RC project number so that any party has visibility into the queue status and milestones achieved by the developer. Xcel explained that the developer's application will be reviewed and processed as if it were submitted by any other party.

Second, the Company's proposal ensures there is no unfair reliance on grid or distribution system information because the Railroad Island project was introduced months ago by a party with no specialized knowledge of the Company's grid or distribution system assets. The project was brought forward because of its unique attributes for a concentrated energy efficiency and renewable investment to the benefit of local residents, and not based on any knowledge of the project's suitability as a distributed energy resource to the utility.

Finally, the Company's argued its proposal ensures there is no unfair reliance on customer data to target subscribers because third party service providers will independently qualify a narrow set of potential subscribers. The Company's subscriber management contractor (ECC) will have access to some customer data in the course of its normal provision of low income customer program services to the Company. There is no unfair reliance on the Company's customer records to target potential subscribers with an offer. The Company will not pay to itself any S*RC program fees directly. Instead, the Company's third party solar developer will pay all program and interconnection fees and factor such costs into its purchase agreement with the Company.

Annual reporting

In order to systematically evaluate the pilot, the Company proposed reporting on the results of the pilot in an annual report, tracking the following components:

- The impact of energy efficiency measures installed.
- The cost of delivering the proposed pilot offering.
- Identification and reporting on non-energy benefits delivered to the neighborhood (e.g.

employment, education, vacancy losses, or health and safety benefits).
- Identification of drivers and barriers to participation in a low income CSG.
- Opportunities for additional energy efficiency improvements or incorporation of new technologies that may result in greater or more cost-effective energy savings.

Xcel will not report on the Company's financial statements as required of other third-party CSG operators in the S*RC Annual Reports that are submitted to the Company and to subscribers. The S*RC Annual Report will include a description of the production from the garden. In addition, Xcel will submit on-line reports to the S*RC program manager and subscribers.

The Company proposed to file a separate annual report specifically on the pilot program with the Commission that would include: (1) total number of subscribers, (2) total garden production, (3) total bill credits provided, (4) rate of subscription uptake, and (5) any learnings on successful customer outreach strategies or necessary modifications to the terms of participation. The Company indicated that the last annual report would be a full evaluation, including market research and analysis as well as findings from the pilot. It would be filed within 12 months of the conclusion of the pilot.

Xcel's plans for the next steps

Upon Commission approval of the pilot proposal, Xcel will: (1) execute contracts with ECC, (2) proceed with its plan for Partners in Energy, (3) engage in final contract negotiations with its development partner to develop the facility, and (4) begin to develop customer-facing materials and partner training.

Once the Department approves Xcel's CIP modification filing, community outreach will begin in the first quarter of 2018.[17] Educational outreach will be performed, addressing the broad components of the RENEWs pilot project and a plan to incorporate community organizations to support customer participation.[18]

Parties' comments

Introduction

The Commission should note that a detailed summary of the parties' comments is attached to these briefing papers (Attachment A).

Parties generally supported Xcel's pilot and want to see it move forward. As detailed in IREC's reply comments, parties supported Commission approval of Xcel's low income pilot proposal

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[17] Xcel hopes that the energy efficiency component will get underway around May 1, 2018 and the solar facility thereafter following approval and contracting.

[18] Program-specific promotion will focus on engaging residents to participate in the initial step of a Home Energy Squad visit with follow-up promotion for qualifying residents to participate in the CSG pilot.

and praised the ways in which it promises to overcome barriers faced by low income customers.[19] Fresh Energy "supports Xcel's proposal as an innovative model that will combine energy efficiency up-grades with community solar garden subscriptions."[20] ELPC argued that "the Commission should approve Xcel's pilot" but with modification and additional requirements.[21] The Joint Commenters noted that Xcel's proposal is "a workable project that will deliver improved accessibility for low-income subscribers," although the Railroad Island pilot is not sufficient to increase low income accessibility "writ large."[22] Finally, the Institute for Local Self-Reliance and allied signers (the Clean Energy Access Coalition)[23] applauded "the many ways this project addresses barriers to low-income participation in community solar in Minnesota," although it too suggested several areas for potential improvement.[24]

Parties agreed that the pilot proposal appears to address many of the barriers to access for low income customers, including:

- it does not require a minimum credit score
- participants can terminate at any time without penalty, and the 5-year participation term is reasonable
- there are no upfront costs, ongoing fees, or net cost to the participant
- the project is located close to subscribers
- there is a potential for job training in the operations and maintenance phase
- it integrates with energy efficiency efforts in order to maximize energy savings/benefits
- it incorporates trusted and experienced community partners
- the program will be effectively marketed to target customers, including through non-English materials as appropriate
- the upfront enrollment terms are reasonable

Despite this support, parties agreed that more could be done to increase access to community solar gardens for low income residents beyond Xcel's pilot, which Xcel acknowledged will provide access for at most 160 low income customers.[25] Commenters also asked the Commission to consider non-discrimination issues for third-party providers.

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[19] IREC, September 25, 2017, p. 2.

[20] Fresh Energy, September 25, 2017, p. 2.

[21] ELPC, September 25, 2017, p. 5.

[22] Joint Commenters, August 16, 2017, p. 2.

[23] The Clean Energy Access Coalition (CEAC) includes: ILSR, Cooperative Energy Futures (CEF), Rural Renewable Energy Alliance, Clean Up our River Environment (CURE), Community Power, Minnesota Interfaith Power & Light, ISAIAH, and Minnesota Public Interest Research Group (MPIRG).

[24] Clean Energy Access Coalition (CEAC), August 15, 2017, pp. 1-2.

[25] Xcel Initial Petition, June 30, 2017, p. 8, Table 3.

On-bill presentation

Xcel proposed to use on-bill repayment for the pilot program and to apply a single line item (the "Net Bill Credit") on subscriber bills. Parties argued that Xcel's presentation of a single line item representing the net bill credit raises issues related to discriminatory treatment and requires modification. IREC and other commenters argued that a blended net bill credit rate does not allow customers to understand or to compare costs across providers and that third-party providers do not have the same option for consolidated billing and offering a net bill credit to customers. Commenting parties recommended that Xcel be required to separate program costs from the VOS bill credit and show each separately on the bill.[26]

Parties had different perspectives on this issue. Some raised concerns about the lack of transparency such a single billing line item would provide to CSG subscribers, and noted that developers, by contrast, must bill subscribers separately for program costs. As noted, they recommended that Xcel present both the cost of the CSG subscription and the total credit amount leading to a net bill amount on customer bills. In reply comments, the Department agreed that Xcel's billing arrangement does not provide a clear presentation of the costs and benefits to the subscriber and that both subscription costs and the total bill credit should be separately identified.

The specific perspectives offered by parties included IREC's summary observation that Xcel's consolidated bill credit raised discrimination and anti-competitiveness concerns. Specifically, the presentation of one net credit value and repayment on the one utility bill raises concerns. Fresh Energy, while appreciating the effort by Xcel to retain simplicity, argued that simplicity be balanced with transparency by separating the CSG bill credit from the CSG costs on the customer's bill and modifying its tariff sheets accordingly. ELPC recommended that the Commission require greater detail on anticipated costs and bill calculations, adding its support to Fresh Energy's proposed separation of the different components of the Net Bill Credit.

The Joint Commenters opposed a single Net Bill Credit as obscuring how much is being paid to subscribe and how much the subscriber is earning in CSG bill credits. This makes it harder to comparison shop and raises issues of discrimination against nonutility CSG facilities. Finally, Ampion warned that the consolidated billing approach proposed by Xcel would likely lead to misunderstandings and recommended "a more granular breakdown of these calculations on subscriber bills." Ampion also echoed concerns over different and potentially discriminatory treatment of utility and non-utility developers and proposed that they have the same billing formats.

While parties generally agreed with IREC that the pilot should go ahead, they argued that their concerns over net billing would only increase as Xcel scales its program. IREC specifically urged

[26] ELPC also proposed that the proposed tariff sheet (Sheet No. 100, Terms and Condition 3) be modified to provide both the full subscription cost of the CSG program delivery as well as the full VOS bill credit, in addition to the net credit.

the Commission to address billing issues in a scaling plan with input and comments from parties.

The Department initially agreed with Xcel that providing a single line item net credit on the bill for low income subscribers is a simple and reasonable method for handling billing for the RENEWs pilot. However, in reply, it agreed with the commenting parties that Xcel should be required to separate program costs from the bill credit rate and show these separately on the bill.

On-Bill repayment for third-party providers

ELPC and IREC proposed that either as a part of the scaling plan or in a separate submittal, within six months of Commission approval of the pilot, Xcel be required to file a proposal to enable on-bill repayment for all third-party CSG providers. This issue is distinct from the issue of how Xcel will present the net bill credit on customer bills.

Parties argued that Xcel's ability to use an on-bill consolidated net credit, when third-party providers cannot, raises discrimination and anti-competitiveness concerns. The DOC proposed that following one year of pilot operation, Xcel submit a proposal that addresses the ability of other nonutility providers to use on-bill repayment for their low income offerings.

IREC added that the use of on-bill repayment by Xcel, but not by third-parties, raises a disparity that is "problematic and discriminatory" for third-party providers and that they should have equal access to this streamlined billing treatment. CEAC agreed that on-bill collection should be available to all third party providers, noting that while not a sufficient reason for opposing the pilot, "on-bill collection should be available to all developers" to avoid "anti-competition concerns." As noted, Ampion warned that the consolidated billing approach used by Xcel would likely lead not only to misunderstandings involving a lack of granularity in billing, but more importantly that it raised issues of discriminatory treatment of nonutility compared to utility CSG providers. ELPC argued that applying on-bill requirements that are the same for utility and nonutility providers aligns with the comments of CEAC.

Scaling plan for pilot

Commenters, including Fresh Energy, IREC, ELPC, the Joint Commenters and CEAC, emphasized the importance of Xcel providing a detailed plan to scale its low income program. They argued that such a scaling plan is essential to a broader strategy for low income access to community solar gardens. Despite the importance of this issue, parties recommended that the Commission approve Xcel's proposed pilot and require the Company to file a scaling plan within six months of the pilot's approval.

Noting the extensions already granted to Xcel in this docket, and the need for the review of CIP filings, Fresh Energy, joined by ELPC, suggested that further delays may push the pilot well into 2018. This would be unresponsive to the Commission's September 6 Order, which emphasized the need to move ahead with a low income project. Fresh Energy noted that "it is impracticable to wait to propose additional iterations of the RENEWs pilot until the initial

Railroad Island project completes…its final report." In a major scoping analysis, Fresh Energy completed the due diligence required to identify 12 other high priority low income CSG locations. It noted that it has already identified "three specific neighborhoods that would most benefit from a RENEWs project." Of the 12 additional sites described as candidates in its attachment, Fresh Energy gave priority to: the Phillips neighborhood, Frogtown/Thomas Dale, and Near North Minneapolis. These areas share similar characteristics with Railroad Island in terms of median household income, renter-occupied housing units, and age of housing stock.

In addition to Fresh Energy's detailed assessment, other commenters also argued that Xcel should present a plan for scaling the pilot to other locations. IREC noted that Fresh Energy, ELPC, the Joint Commenters, and CEAC all observed that the Xcel pilot was insufficient and would reach only a small segment of low income customers. IREC noted that "Xcel provides no details regarding how it would grow the program beyond the pilot stage." IREC went on to suggest that Xcel made no mention of an intention to scale the program. IREC continued to support the pilot, but asked the Commission to make attention to scaling up low income CSG's contingent on approving the pilot with a scaling plan to be completed within six months of pilot project approval.

The Joint Commenters described the pilot as "necessary but not sufficient to satisfy the public interest of increasing low income accessibility across the CSG market writ large." ELPC noted the need for a scaling plan linked "more broadly (to) addressing the structural and programmatic issues that limit low income participation in community solar." CEAC observed that a "one-off project with no plan for replication or expansion to other providers, is vastly inadequate for meeting low-income needs." It noted the fact that Minnesota has over 230,000 households living below the federal poverty line who collectively spend over 17% of their disposable income on electricity. IREC cited comments by Fresh Energy, ELPC, the Joint Commenters and CEAC that described the scale of the pilot as "only a small segment of low-income customers."

The Department addressed the scalability issue in reply comments but suggested a longer time-frame for a scaling plan to be filed. It proposed that "until the Company has sufficient experience operating its RENEWs program," it defer its scalability evaluation until the low income CSG has been in operation for one year.

Non-discriminatory treatment of utility and non-utility providers

For the purposes of Xcel's pilot only, parties generally found that the pilot complied with statute, including Minn. Stat. 216B.1641 (e)(3).[27] IREC, for example, was mainly concerned that lack of third-party nonutility access to Xcel's on-bill repayment method would be discriminatory as projects moved beyond the pilot. If Xcel is situated differently from nonutility developers because it can engage in consolidated billing and third-parties must charge customers separately, this disparity gives rise to questions over whether "different requirements" are being applied, contrary to statute. This appears as the main reason for IREC's concerns over the

[27] Department, September 15, 2017, p. 3; Fresh Energy, September 15, 2017, p. 6.

disparity in bill-charge methods and the resulting difference in risks borne by Xcel and nonutility CSG developers. Similar concerns were expressed by the Joint Commenters, Ampion, ELPC, and CEAC.

The three non-discrimination principles set out in Xcel's petition received careful attention in IREC's initial comments. Respecting preferential treatment and Xcel's proposal to make public the S*RC project number and queue position, IREC supported such transparency and noted that it will be especially valuable as the program scales. On access to the grid and distribution information, the problem of equal access as the program scales is more difficult, and depends on whether Xcel or a third-party initiates the project.[28] IREC suggested that this issue be considered in the six-month scaling report discussed below. The recommended resolution is to allow all utility and nonutility projects access to system data when siting decisions are made. With respect to use of customer data to unfairly target CSG's, IREC again cautioned that the pilot does not encounter the same issues as will be true when multiple projects are built. It recommended that the Commission ask Xcel to detail how it will handle data sharing as the program scales.

IREC urged the Commission to require Xcel to address these issues in its scaling plan, and to allow parties to comment on that plan and Xcel's proposals to mitigate these issues. In its plan, Xcel should be required to respond to parties' suggestions in this proceeding on how to address these discriminatory concerns and how its three non-discrimination principles will evolve as the program grows.

IREC in particular, as well as ISLR, seek to promote a robust, competitive market for low income community solar in which Xcel competes on a level playing field with third-party solar gardens. The remedies proposed by IREC included:

- require Xcel to address whether it will solicit outside projects through an RFP process as the program scales
- order Xcel to make public the S*RC project number and queue position for the proposed pilot project
- allow all utility and nonutility developers access to the necessary system data to inform siting in low-cost, high-benefit locations
- order Xcel as part of a scaling report to detail how it will share customer data with nonutility developers

An important issue of public interest, which overrides the narrow question of definitions, is how the Commission can best promote such a flourishing market and not allow utilities to crowd out third-party providers. The question of which steps (i.e. competitive bidding, on-bill repayment, etc.) are necessary to create a level playing field may best be taken up as part of stakeholder discussions (based on a six-month filing by Xcel).

[28] IREC noted that the Commission is considering similar concepts in other proceedings, such as Docket No. E-999/CI-15-556.

CEAC and the Joint Commenters expressed concern over exclusive use by Xcel of on-bill collection for reasons of anti-competitiveness, and also emphasized that these issues of potential discrimination will only become more important as the program grows.

ELPC, like IREC, endorsed revisiting the non-discrimination principles as the program scales. In particular, the Commission should consider proactively directing Xcel to facilitate appropriate CSG provider access to public data around the grid system and help with customer targeting. The Commission could also direct Xcel to investigate and report on the potential for cost savings created by new technology, specifically energy storage.

The Joint Commenters considered the issue from the viewpoint of low income risk, noting that on-bill repayment, if enjoyed only by Xcel, would allow the Company to access the "rock bottom customer default rates generally associated with utility bills." In response, the Joint Commenters endorsed ISLR's March 1, 2017 measures to "level the playing field" for nonutility CSG's wishing to compete with Xcel for low income customers. These measures included program level goals for low income participation, tracking this participation, new tariff sheets defining low income subscribers in a simple streamlined process and a low income adder of $0.015 per kWh directed to these subscribers.

Similar concerns over discrimination were expressed by Ampion, who argued that current program rules be amended so that nonutility developers can also pursue a consolidated billing scheme. ELPC argued that the ability of "Xcel and Xcel only" to offer-no-cost subscriptions to low income subscribers by using the VOS rate to pay for the costs of the resource and program administration should be addressed by "allowing on-bill payment of third-party subscribers also using the VOS rate." It repeated this position in reply comments so as to allow nonutility CSG's the same access to "payment mechanisms as utility owned projects."

Mechanisms to broaden low income access to CSG's

ILSR, the Joint Commenters, IREC, Fresh Energy, ELPC, and CEAC all emphasized the need for further steps to broaden access by low income customers to community solar gardens and other energy saving programs. These include a variety of measures: additional bill credit adders, innovative tariffs, incentives, outreach and education, and the exploration of other state initiatives.

Although many parties called for additional mechanisms to accompany Xcel's pilot to broaden participation in utility and nonutility CSG's, those referred to most often were the recommendations of ILSR and Fresh Energy. The ILSR comments begin with a definition of low income that broadens it beyond LIHEAP participants to include any household earning less than 80% of area median income. After identifying five principles of universal low income access to community solar (participation, location, financial value and ownership, integration and tracking and review), ILSR divides its recommendations into near-term and longer-term actions. Near-term actions include a minimum participation level for low income subscribers of 5% of the CSG program as a whole (other commenters such as the Joint Commenters described this as 10% of a 50% residential goal or target). A second action area is credit risk-reduction mechanisms such as "backup subscribers," including adders targeted to low income participants and loss-reserve pay-as-you-go subscriptions to ease financial pressures from low income credit risks. A third mechanism is tariff-based on-bill financing using only bill payment history for eligibility.

Longer-term strategies proposed by ILSR target the reduction of costs and barriers to participation specifically for low income subscribers, as well as for CSG participants generally. These include the mandates described above (referencing the experience of Colorado, New York and Maryland) and points or incentives as practiced in New York or in Ontario's feed-in tariff programs. A second area is active customer acquisition through programs of improved energy efficiency and weatherization efforts, coordinated with enrolling new CSG subscribers. A third area is location and siting, referencing California's requirements for 100 MW of a 600 MW solar program to be located in disadvantaged communities combined with job-creation. A fourth area is enhancing applications for and interconnections by CSGs. This can be incentivized by reducing or waiving application fees (such as Xcel's $100/KW application deposit) or through feed-in tariffs as in Ontario. A fifth area is direct subscriber compensation such as Washington, D.C.'s Affordable Solar Program and Massachusetts' Green Communities Act. Another example is a program in Colorado to grant a $0 down option for members of Grand Valley Power Cooperative to participate in a solar farm, or Arkansas' Ouchita Electric's energy efficiency program with inclusive financing without credit checks.

Fresh Energy discussed several ways in which low income CSG's could be better targeted. One was to focus especially on multi-family buildings with rental dwellers who cannot access rooftop solar. It also emphasized the importance of customer assistance for those who have reached the end of their five-year subscription and the encouragement of third-party owned CSGs. Fresh Energy also gave emphasis to the need to streamline the LIHEAP verification process to make it less time-consuming and burdensome.

The Joint Commenters supported ILSR's proposals but cautioned that not all good ideas are equally easy to implement. The Commission should think about how different program elements work together to create a self-supporting market. The Joint Commenters identified four elements that must be present to expand low income accessibility. It asked the Commission to: (1) establish program-level goals for low income participation, although avoiding mandated levels, (2) direct Xcel to regularly report on low income participation levels, (3) direct Xcel to prequalify low income customers in a simplified and streamlined process, and (4) direct the creation of a low income bill credit adder of at least $0.015 per kWh to be combined with a $0.025 per kWh for residential customers generally. The adder would vest when the project is deemed complete, like the VOS bill credit rate.

The ELPC, especially in its reply comments, agreed that more should be done at the program level to encourage low income participation, but recommended that added comments be solicited in the CSG docket (13-867) regarding implementation of the ISLR's five principles for low income program design as well as additional suggestions for overcoming barriers and encouraging a competitive low income market.

The CEAC made a number of specific suggestions for designing better ways to enlist low income participants. These included pay-as-you-go subscriptions, raising subscription sizes (with

Colorado as an example), encouraging competitive bidding for utility-owned facilities as in New York, and expanding the use of on-bill collecting. Ampion reinforced CEAC's view that on-bill collection methods should be standardized so that non-utility developers are given equal opportunity to use them.

In its summary reply comments, IREC generally credits all of the other commenters for their suggestions for broadening low income access, as well as directing the Commission to IREC's joint and separate comments in Docket E-002/M-13-867. It also referenced its previously released *LMI Guidelines*.

Additional reporting requirements

IREC, Fresh Energy and ELPC all suggested that additional information be filed as part of Xcel's reporting requirements as a way to monitor and improve the program as it develops. The requests for this information, in order to keep it timely, are generally for quarterly rather than annual reporting. The additional information includes program costs, participation levels and successes and failures experienced during and after the pilot phase. Fresh Energy in particular lays out a detailed list of program performance measures, implementation actions, customer responses and units of housing served that will help scale up the low income program.

The Department recommended the Commission adopt Xcel's initial list of reporting requirements (as proposed in the Company's Initial Petition) and added several more CIP-related reporting requirements (to which Xcel agreed in reply comments).[29] These were proposed as annual reporting requirements.

IREC proposed a slightly different list of reporting requirements. In initial comments, IREC proposed the following in addition to Xcel's list:

- Impacts of energy efficiency measures installed
- Costs of administration of the pilot including outreach, equipment, and delivery labor
- Non-energy benefits to the neighborhood, including employment, education, vacancy losses, health and safety benefits
- Drivers and barriers to participation
- Opportunities for additional energy efficiency improvement or new cost-saving technologies

IREC stated that these should be filed separately from general CSG reporting obligations, and noted that the cost-saving technologies requirement (above) should examine energy storage technologies as they evolve and improve. In addition, it proposed that Xcel report on compliance with its principles of non-discrimination as the program evolves over time.

In its reply comments, IREC added further detail to its list, including:

[29] Department, September 15, 2017, p. 4.

- actual performance and participation using the categories of Xcel's Petition Table 3
- project implementation actions sorted by partner
- customer interest and disinterest and turnover rates as described by Fresh Energy
- housing units served by type of housing stock
- CIP reporting requirements as suggested by DOC

IREC also agreed with the Joint Commenters that general reporting on low income participation in the CSG program is needed (so long as privacy concerns are respected) and would be helpful in evaluating program performance as a whole.

Fresh Energy recommended that the Commission direct Xcel to include the following items in its reporting:

- Actual participation compared to Xcel Petition estimates as of June 30, 2017
- Specific actions undertaken by partner organizations
- Program costs and bill credit adjustments
- Customer interest and disinterest
- Housing units served by type of housing stock

ELPC emphasized the need for quarterly reports, endorsed Fresh Energy's list, and added several other items (some of which repeated other commenters):

- broken out comprehensive costs of the CSG element of RENEWs including administration, outreach, equipment, delivery labor, capital expenditures and operational costs
- CSG customer turnover rates
- annual reports resulting from yearly interviews with CSG participants and stakeholders
- case studies of individual projects to aid in successful replication

In reply comments, ELPC again endorsed the requirements of both Fresh Energy and IREC and emphasized the importance of Xcel's filing of anticipated program costs to allow for transparency and public review.

The Joint Commenters recommended that consistent with their call for low income participation goals, Xcel should report on the total number of low income subscribers in the S*RC program so as to align it with these goals and allow progress to be tracked over time.

V. Staff discussion

The staff discussion below addresses nine issues: (1) on-bill presentation of the bill credit, (2) on-bill repayment for third-party providers, (3) a scaling plan for the pilot, (4) equal treatment of utility and nonutility facilities, (5) Xcel's proposal to vary the net bill credit, (6) reporting requirements, (7) mechanisms to facilitate broader low income customer access, (8) cost recovery and accounting treatment, and (9) supplemental information to clarify the record.

Some of the immediate issues the Commission will need to consider in order to move the pilot forward include the bill presentation, variation in the net bill credit rate, the appropriate timing for information exchange and reporting, and a determination of whether the pilot is consistent with statute.

Xcel's proposal for on-bill presentation of the "Net Bill Credit"

Xcel proposed to present the Net Bill Credit as a single line item on customer bills. Parties opposed this proposal, arguing that Xcel's presentation of a single line item (the Net Bill Credit) will be confusing to customers. They asked the Commission to require Xcel to separate the Net Bill Credit and present it on bills as three cost components: the program costs, the bill credit rate, and the net bill credit.

This issue is important because, as argued by the parties, if the components are not broken out, and the program costs shown separately, there is no way for customers to compare the cost of Xcel providing the service to that of a third-party provider. As third-party providers begin to offer service to low income subscribers, these potential subscribers will not be able to compare the price of the service offered by Xcel verses the third party providers.

The Department concluded in reply that Xcel's proposed on-line bill presentation does not provide a clear representation of both costs and benefits to subscribers, and it therefore recommended with the commenting parties that both the subscription costs and the total bill credit be identified on the bill. This is also more consistent with Minn. Stat. § 216B.1641 (e)(3), which requires that the Commission treat utility and nonutility CSG programs equally.

Commenters were in agreement that Xcel should be required to present the cost of the program, the bill credit rate, and the net bill credit as separate line items. The Joint Commenters, for example, argued that this would avoid confusion over how much the customer is paying for the subscription and is earning in bill credits. This will allow customers to make comparisons between different offers for CSG subscriptions, improve competition, and remain consistent with the requirements in statute disallowing different requirements for utility and nonutility providers. IREC, together with Fresh Energy, ELPC, the Joint Commenters, CEAC and Ampion all agreed that Xcel's proposed net bill credit undermines transparency and insulates Xcel from competitive pressures. They also all agreed that Xcel should be required to separate the bill credit from the program charge, even if this may detract somewhat from the simplicity of the bill.

Xcel responded to parties' concerns by indicating that one goal of the pilot is to make participation in the Company's CSG program as easy as possible for low income customers. The Company believes that what matters to these customers is how a subscription affects their final electricity bill and that a net bill credit reflects this final, bottom line impact in simple, easy to understand terms.

The Commission will need to weigh the need for simplicity through the use of a net bill credit against the customers' need to make an informed choice. Staff agrees with the Department and the commenting parties that in addition to the Net Bill Credit, both the subscription cost and the total bill credit should be separately identified on the bill for purposes of clarity and the non-discriminatory treatment of third-party providers as required by statute.

On-bill repayment for third-party providers

There was broad support to allow on-bill repayment for third-party CSG providers. In effect, this would allow third-party providers to utilize Xcel's billing system and apply consolidated billing similar to Xcel. This would allow customers to compare offerings from different providers and would allow the providers to compete with Xcel more equally. Commenters stressed that this mechanism has the potential to greatly improve access to community solar gardens for low income customers.

There were slight differences in the positions taken on this issue. The Department proposed that Xcel operate the pilot for one year before being required to address the proposal to allow third-party providers to use on-bill repayment. Commenters emphasized the key role of on-bill repayment as a way of overcoming barriers to low income participation in other dockets. As noted, IREC finds disparate treatment of utility and nonutility providers "problematic and discriminatory." ELPC proposed that such disparities be removed and third-parties be granted on-bill repayment within six months of project approval.

However, the Department suggested that this issue be considered over a longer timeframe. It proposed that the Company be required to address the proposal to allow third-party providers to use on-bill repayment for low income offerings as part of the one-year evaluation report proposed by Xcel.

Staff agrees with the Department that the Commission may wish to consider this issue over a longer timeframe with additional record development. Although some parties argued strongly that the Commission require this option now (and/or as part of a six-month compliance filing), others suggested that the Commission explore it further as Xcel's pilot scales in tandem with other mechanisms to overcome barriers to low income access.

Staff notes that, in the past, Xcel has raised concerns with the proposal for on-bill repayment for third-parties. Specifically, Xcel argued that allowing on-bill repayment would put the Company in the role of financing program costs and assuming responsibility for the payment between subscriber and garden operators. It also indicated that on-bill third party repayment would require modification to the billing system and increase administrative costs and liabilities.[30]

In addition, staff notes that the Minnesota Department of Commerce—State Energy Office, has initiated a stakeholder workgroup to study this and other issues surrounding low income access to efficiency and renewable energy ("Connecting Low-Income Communities Through Efficiency

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[30] Xcel indicated that it addressed this issue in depth as part of comments in an earlier proceeding. See Xcel reply comments, filed April 29, 2016, in 13-867. See also staff briefing papers for the July 21, 2016 agenda meeting, in 13-867, that included extensive arguments by parties and Xcel for and against on-bill repayment for third-party providers.

& Renewables"—CLICERS). This Department-sponsored workgroup plans to issue an action report in late January that may contain recommendations or other useful information for the Commission to consider prior to its decision to allow third-party on-bill repayment.

For these reasons, the Commission may wish to ask Xcel to address the issue, including any recommendations or analysis issued by the Department sponsored workgroup (CLICERS), as part of a six-month or annual report.

Should the Commission require Xcel to file a scaling plan within six months of Commission approval of the program?

Xcel's pilot program as proposed did not include a plan to scale up the RENEWs program. The pilot is limited to the Railroad Island neighborhood and is anticipated to provide access to a single garden project for about 160 low income customers.[31] The Company proposed to file a final evaluation of the pilot one year after the completion of the three year pilot period.

IREC, Fresh Energy, ELPC, Joint Commenters, and CEAC all emphasized that Xcel's program, as proposed, would serve only a small segment of low income customers and that Xcel provided no details regarding how it would scale the program beyond the pilot stage. They argued that, while the pilot has merit as a template for further low income projects, it is only a beginning in a needed program encompassing many other low income customers.

The majority of commenters, including the Department, Fresh Energy, IREC, ELPC, the Joint Commenters and CEAC strongly urged a commitment to a broadened low income CSG program. Although each party had its own perspective, the Joint Commenters summarized the collective judgment that the Railroad Island project was "necessary but not sufficient to satisfy the public interest of increasing low income accessibility across the CSG market writ large." Many parties advocated that Xcel complete a scaling plan within six months of pilot project approval, and that approval of the pilot be contingent on Xcel's agreement.

The most detailed assessment of prospects for scaling the Railroad Island pilot were offered by Fresh Energy, whose scoping analysis of 12 prospective low income CSG projects is included in an attachment to their comments. Fresh Energy's "List of Neighborhoods/Communities Warranting Consideration in Future Iteration's of the RENEWs Model" details, for each neighborhood, the population, median household income, percentage of occupied housing units that are renter-occupied and the percentage built before 1969. This analysis enables a portrait of each neighborhood and can serve Xcel and nonutility developers in setting priorities for expanding the Railroad Island model in the metro area.

Fresh Energy did extensive work to identify the three neighborhoods that are in immediate need and would benefit from an expansion of the pilot. In its comments, Fresh Energy took the first steps to set priorities by outlining the possibilities for a rapid scaling to include three of the

[31] Table 3 in the Company's Initial Petition (June 30, 2017) indicates that the Company anticipates a maximum of 160 CSG subscriptions as part of the pilot.

12 neighborhoods. These include the Phillips neighborhood, Frogtown/Thomas Dale, and Near North Minneapolis.

Staff believes the Commission may wish to consider requiring Xcel, as part of a six-month report, to file a plan for scaling the program by offering the program in these next three neighborhoods.

Xcel responded to the parties' proposal for a plan to scale the pilot by indicating that the pilot could serve as a "model," although the Company did not detail how such a model might be replicated elsewhere or when this process might begin. Xcel's focus was on using the pilot as a learning opportunity and an initial and positive example. It suggested that the pilot might be used as a template, but suggested that it would "leave open the possibility for any developers and community partners to use learnings from the pilot to pursue other programs to increase low income access to CSG." Xcel suggested that any attention to scaling or additional projects should only be considered as "appropriate next steps once operational experience is gathered."

The Department recommended that the plan for scaling up the pilot be deferred by a year until the Company is able to gain experience operating the RENEWs program, and is more fully able to evaluate it. It suggested that the Commission direct Xcel to submit an evaluation of its RENEWs program after the CSG has been in operation for a year, and to include modifications and a proposal to expand its offering to additional low income customers at that time. However, beyond a general call for a scaling plan, the Department offered no specifics.

The Commission must therefore consider whether to order a scaling plan; whether to make pilot approval contingent on a commitment by Xcel to such a plan; and whether a plan for scaling the pilot should be filed within six months or a year of pilot approval.

Does Xcel's pilot proposal meet the requirements for equal treatment of utility and nonutility CSG facilities as set out in statute and Commission Order?

The issue of non-discrimination arises in this docket in the context of Xcel's pilot relative to the statutory requirement for equal treatment of utility and nonutility providers. Parties noted that it is difficult at this time to know whether, as Xcel's program scales, the three principles of non-discrimination proposed by Xcel will be sufficient to comply with statute [Minn. Stat. § 216B.1641 (e)(3)]. In addition to the statutory requirement, parties such as IREC and ELPC point out that low income customers will be better served if there is a robust market involving both utility and nonutility providers.

Parties generally agreed that for the purposes of the pilot only, Xcel has met the requirements for non-discrimination set out in statute and Commission Order, although there are exceptions (e.g. Ampion). The Department, for example, stated that Xcel's proposal "complies with statute" and Fresh Energy finds the pilot "generally consistent." However, parties also noted that when the focus is expanded beyond the single-neighborhood pilot, and issues of scaling and nonutility competition arise, the situation may change. At that point, comparisons will be made between utility and nonutility projects. If the requirements imposed on these projects differ, this disparity may conflict with the CSG statute. Serious questions of competition could arise if third-parties begin to have a greater presence in this under-served market.

Issues of discrimination arise because the CSG statute both enables utilities like Xcel to participate in the CSG market, but at the same time states that utility and nonutility providers must not face different requirements. Minn. Stat. Minn. Stat. § 216B.1641 (a) states, "[t]he owner of the community solar garden may be a public utility or any other entity or organization that contracts to sell the output from the community solar garden to the utility under section 216B.164." Meanwhile, Minn. Stat. § 216B.1641 (e)(3) disallows the Commission from applying different requirements to utility and nonutility owned facilities.

In recognition of these sections of statute, in its April 7, 2014 Order (p. 8), the Commission concluded that if Xcel in the future decides to offer its own solar gardens, the Commission will require it to explain in detail the processes and procedures it will put into place to ensure that third-party and utility solar gardens are treated in a non-discriminatory fashion. As noted, Xcel, in its Initial Petition of June 30, 2017, clearly mindful of the statute and order requirements on non-discriminatory treatment of nonutility projects, developed three key principles of non-discrimination. These stated respectively that no preferential treatment would be given to Xcel's proposal in the interconnection queue, that no unfair reliance would occur resulting from non-public Company information about the grid or distribution system, and that no unfair reliance would result from the use of private customer data to target subscribers.

The Commission should note that the requirements applied to Xcel in the April 7, 2014 Order were issued prior to the current focus to better serve lower income neighborhoods. By contrast, in the September 6 Order, the Commission concluded that an Xcel-owned garden stood the best chance of extending the benefits of community solar to low income customers and therefore it directed the Company to file a specific plan.

Parties seemed in the main to find Xcel's three principles sufficient as they relate explicitly to the Railroad Island pilot, but they had serious reservations over non-discriminatory treatment of nonutility developers as the low income program moves beyond the pilot phase. Fresh Energy, ELPC, the Joint Commenters, CEAC and IREC all identified discriminatory and anti-competitive concerns associated with Xcel's bill crediting approach, specifically related to its presentment of one net value on a participant's bill and its use of on-bill repayment. While IREC concluded that the Commission can approve the initial pilot project despite these concerns, it believes these issues are significant, and will only become more so as Xcel scales its program.

Given the inherent advantages that Xcel has in serving the low income market, the priority of non-discrimination must be balanced with the needs of low income customers for access to CSGs. In order to assure that third parties can compete for this market, new guidelines, rules or procedures may be necessary. The requirements for non-discrimination for third-party providers may need to be applied somewhat differently in this context.

After approving the pilot, the Commission could consider asking Xcel to take some or all of the following future actions proposed by commenting parties to address potential issues of discrimination:

- to provide on-bill transparency and extend the on-bill repayment option to all third-party providers, both utility and nonutility, as discussed above
- to develop a detailed plan within six months of approving the pilot, consistent with its April 7, 2014 Order and the CSG statute, to explain how its three principles will be applied or need to be changed as the program scales and third-party providers become active competitors.
- to conduct quarterly workgroup discussions to monitor the level of competition and hear concerns over any discriminatory practices and discuss new approaches such as competitive bidding etc.
- to require Xcel to address whether it will solicit outside projects through an RFP process as the program scales
- to require Xcel to make public the S*RC project number and queue position for the proposed pilot project
- to require Xcel to allow all utility and nonutility developers access to the necessary system data to inform siting in low-cost, high-benefit locations
- to require Xcel as part of a scaling report to detail how it will share customer data with nonutility developers, improve program economics through energy storage, and other questions

Has Xcel provided sufficient support for its proposal to vary the net bill credit based on changing circumstances?

Xcel explained that changes in the Net Bill Credit will result from changing circumstances such as an improvement in the expected or demonstrated economics of the project or changes in the VOS bill credit rate. The Company proposed an initial net bill credit of $0.005 per kWh and guaranteed that there will be no net cost for participation in the program.

IREC noted that the Commission's September 6 Order requires that the VOS credit be fixed for the term of the CSG. Although flexibility to set the Net Bill Credit will enable Xcel to respond to VOS modifications and "dynamic pricing conditions," IREC argued that the VOS rate should be set for the term of the garden pursuant to the Commission's September 6 Order. IREC agreed however that the program should guarantee that participants never face a net cost and supported providing customers with a net positive bill credit.[32]

IREC argued that although participating customers will be protected from net costs on their bills under Xcel's proposal, they should also be entitled to transparency and consistency with respect to the bill credit rate. IREC argued that allowing Xcel to change a customers' rate at the

[32] IREC, September 15, 2017, p. 7-9.

Company's discretion raises the potential for customer confusion and ultimately dilution of customer savings.[33]

ELPC agreed with IREC that the Commission should hold Xcel to the requirement that its VOS credit be fixed for the term of customers' subscription except in instances where customers would receive additional net benefits, as recommended by IREC. ELPC supported IREC's suggestion "that the Commission should only allow Xcel to depart from the Commission's prior directive and adjust the VOS rate if the VOS rate increases, such that low income subscribers would receive additional net benefit on their bill."[34] According to ELPC, this would ensure adherence to the Commission's previous requirements and consistency with requirements on nonutility CSG projects while preserving potential value to low income customers.[35]

Xcel responded that the Company should not be prevented from setting the pricing for its pilot based on changing circumstances. It has guaranteed that it will not set a negative net price (incurring costs for participants), and that it will also provide written notice to customers for any pricing change, providing transparency to customers. Xcel argued that it would be asymmetrical to deny the Company the band of flexibility in marketing a subscription offer that any other garden operator enjoys, and that a locked in bill credit would limit the Company's ability to fully analyze how this type of project will work from a financial perspective, and would not be equitable or consistent with the purpose of the project, since a major goal of the pilot is to be able to realize how projects can be geared to generate low income solar participation. Lastly, Xcel noted that some parties wrongly asserted that the Company would unilaterally modify the VOS rate through this pilot. The Company noted that it does not have authority to modify the VOS and has not proposed such a modification.[36]

Staff notes that the relevant portion of the Commission's September 6 Order (p. 23) states:

> The Commission approves the value-of-solar rate for use as the solar-garden bill-credit rate for all solar-garden applications filed after December 31, 2016. The value-of-solar rate that is in place at the time an application is deemed complete will be the subscriber bill-credit rate for the term of that solar garden.

However, the Commission should note that this statement in the September 6 Order applies to the VOS bill credit rate and not to the "Net Bill Credit rate," which is a term and concept relevant only to Xcel's RENEWs program under proposed tariff sheets (Section 9, Sheet Nos. 100-110). As noted, Xcel has attempted to address potential customer confusion that might arise from a changing net bill credit (i.e. the Company will not set a negative net price and will provide written notice to customers of any change in the net bill credit). Staff notes that, if the Commission were to adopt the IREC/ELPC recommendation, this would be a significant revision

[33] IREC, September 15, 2017, p. 8.

[34] IREC, September 15, 2017, p. 8.

[35] ELPC, September 25, 2017, p. 4.

[36] Xcel reply, September 25, 2017, p. 4.

to the RENEWs pilot. Since IREC suggested that a changing Net Bill Credit might be confusing to participants, one option is for the Commission to ask Xcel to track and report back on whether this aspect of the pilot was confusing for participants.

Reporting requirements

There were a number of different proposals for reporting requirements, which staff has attempted to organize into categories for Commission consideration. They include the need for:

- a near-term compliance report containing supplemental information to be filed within 30 days of the Order in this matter
- a six-month report
- annual reporting on the progress and operation of the pilot, with the first report to be filed by April 1, 2019[37]
- quarterly reporting (some parties asked that in place of annual reporting, Xcel be asked to file quarterly reports)
- a final evaluation report to be filed within 12 months of the conclusion of the three year pilot

30-day compliance report with supplemental information

The need for near-term supplemental reporting and what would be contained in this reporting is discussed below in a separate section of these briefing papers (see "Supplemental information to clarify the record").

Six-month report on a scaling plan and non-discrimination issues

Some parties recommended approval of the pilot contingent on Xcel filing a plan within six months for scaling the pilot and addressing fair treatment of third-party providers.

A six-month report was proposed by several parties to allow Xcel to explain how it would move beyond the pilot to offer a broader low income program in other neighborhoods. These include Fresh Energy's call for three top-priority metro neighborhood locations over and above the Railroad Island location. ELPC, for example, urged the Commission to require Xcel to submit a scaling plan within six-months of pilot project approval that included the additional metrics described in the summaries of parties' comments on reporting requirements above, emphasizing the need to lower program costs to increase "the value proposition offered to participants from the $0.005 kWh starting credit in this initial pilot." As noted, the Department supported a scaling report but suggested waiting until a year after the pilot begins. The scaling

[37] Xcel proposed to align the low income annual reporting with its April 1 Solar*Rewards Community Report and its CIP DSM Status report, making the first low income program annual report due April 1, 2019.

plan could focus specifically on the priority sites identified by Fresh Energy, collaboration with community groups, and other details.

A second area to be included in a six-month report, linked to the scaling plan, is an analysis of how non-discrimination between utility and nonutility third-party providers can be ensured, consistent with statute. This might include an assessment of how Xcel's three principles (and other non-discriminatory requirements) would be adapted to a more competitive environment, whether on-bill repayment would be extended to nonutility providers, tariff adjustments needed, and how workgroups would help to monitor non-discrimination, among other issues.

Quarterly reporting

ELPC, along with other commenters, asked that the Commission require Xcel to change the proposed reporting period from annual to quarterly and include the additional information. It also asked Xcel to commit to additional reporting via case studies on program details and partner responsibilities.

Xcel objected to quarterly reporting, suggesting it would "be unlikely to deliver any additional benefit." Instead, it stated that annual reporting would be sufficient, and would "include a qualitative analysis of customers preference information collected during the installation and/or enrollment process."[38] Specifically, Xcel proposed annual reporting over the three year period of the pilot, with the last annual report to be the final evaluation of the pilot, and to be filed within 12 months of the pilot's conclusion.

Because the pilot experience will be used to guide subsequent low income CSG's and is being developed on a learn-as-you-go basis, staff notes that there is a need to share information with stakeholders as frequently as is practicable. There are various ways to accomplish this in addition to or in place of quarterly reporting. The Commission could ask Xcel to establish a low income stakeholder workgroup or hold in-person meetings or webinars for the exchange of timely information, to discuss progress and lessons learned related to the pilot, to reinforce understanding of successful and less than successful strategies and practices, to exchange views and open a discussion with stakeholders on a competitive bidding process, and to discuss other mechanisms to broaden low income access.

Staff recommends that the Commission consider asking Xcel to hold quarterly in-person (or phone conferencing/webinars) reporting and information exchange sessions. As part of these sessions, Xcel could be asked to update stakeholders on the progress of the pilot, problems encountered, and lessons learned. This is important to ensure replicability and improvement of the pilot, to share program design details, and to disseminate lessons learned more rapidly to interested stakeholders, both locally and nationally.

Annual reporting

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[38] Xcel, September 25, 2017, p. 5.

Information sharing will be critical to the success of the pilot and will allow the Commission and stakeholders to better understand not only how to scale the project, but also how to account for the value of the program. Xcel proposed a list of annual reporting requirements on the progress and operation of the pilot. Most parties agreed to this list as well as agreeing to additional Department-proposed reporting requirements on energy efficiency.[39] The annual reporting requirements agreed to by Xcel and supported by the Department and other parties would include all of the elements listed in the DOC reply comments. In general, Xcel's list of reporting requirements included information on the total number of subscribers, total garden production, total bill credits provided, rate of subscription uptake, and any learnings on successful customer outreach strategies or modifications to the terms of participation needed to ensure the goal of creating access to community solar benefits. If the Commission decides not to require quarterly reporting or another form of information exchange, it could consider moving the date for the first annual report up to address stakeholder requests for immediate information exchange.

Final evaluation report

Xcel proposed to file a final evaluation report at the conclusion of the three year pilot period that will include market research and analysis to be performed throughout the pilot, as well as all available findings from the pilot. The final evaluation report would be the Company's third and final annual report. Xcel proposed that it be filed within 12 months of the conclusion of the three-year pilot program period.

Should the Commission seek additional comments on mechanisms that could be put in place to facilitate broader low income customer access?

Once the pilot is underway, there will be many additional possibilities both to improve its operation and to develop more effective mechanisms for low income CSG design. Parties, including ILSR, the Joint Commenters, IREC, Fresh Energy, ELPC and CEAC, raised principles and specific near-term and longer-term mechanisms to promote low income access to CSG's. These each suggest possible future actions for consideration by the Commission.

Five guiding principles outlined by ILSR can be the basis for further comment and workgroup discussion as suggested by ELPC. These guiding principles are:

- participation goals
- locational considerations, selecting locations of highest value to the grid and closest to subscribers
- financial value and ownership issues
- integration with other low income
- tracking and review of progress

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[39] Xcel agreed to the additional reporting requested by the Department, including the estimated annual energy savings for the program, the estimated annual energy savings per subscriber, and the actual bill savings benefits that accrued to participants.

The Joint Commenters offered a similar but somewhat distinct set of "elements" necessary to expand low income accessibility:

- program-level participation goals
- reporting by Xcel on achieving such goals
- simplified and streamlined prequalification of low income customers
- a low income adder of $0.015 per kWh to be combined with a residential adder of $0.025 per kWh

Parties then proposed more specific near-term actions, some of which coincide with the guiding principles and elements above. These include ILSR's:

- low income program-wide participation goal of 5%
- credit-risk-reducing mechanisms including back-up subscribers, adders, and loss-reserve backed pay-as-you-go subscriptions
- tariff-based on-bill financing (see discussion of this issue above)
- streamlined LIHEAP procedures

Longer-term strategies, proposed by ILSR and other commenters, included:

- targeted cost reduction for low income subscribers, such as points or incentives
- feed-in tariff programs
- coordination of energy efficiency improvements with recruitment of new CSG subscribers
- siting of CSGs in economically disadvantaged locations or multi-family units
- enhanced CSG interconnection options
- direct compensation and subsidies
- customer assistance at the end of the 5-year subscription term
- raising subscription sizes to capture scale economies

While some of these mechanisms are touched on elsewhere in these briefing papers and relate to other issue areas, the items listed above can serve as a checklist for Commission consideration if it chooses to go beyond simply approving Xcel's pilot.

Cost recovery and accounting treatment of costs of the pilot

Xcel intends to recover the VOS bill credits and payments for unsubscribed energy for the low income pilot through the FCA, as it does for other bill credits and unsubscribed energy. In addition, the Company noted that it is considering two options for accounting treatment so that the cost of the low income garden, other than the energy cost in the FCA, does not impact other customers.

Supplemental information to clarify the record

Parties including the Department, IREC, ELPC and Fresh Energy sought specific clarifying information, and indicated that approval of the pilot should be contingent upon these information requirements. First, parties questioned whether Xcel provided sufficient cost information and support for its initial estimates of the anticipated net bill credit. They also asked that the actual project and program costs be tracked and reported. They recommended that Xcel be required to provide detailed information on the anticipated and actual costs and cost structure of its pilot, and how these costs and other inputs factor into the calculation of the anticipated net bill credit. ELPC noted that since the proposal provides no detail on Xcel's anticipated solar developer program costs, it is impossible to evaluate Xcel's costs against the market, or determine the value that program subscribers receive.

Staff understands that Xcel does not have a specific model to support the initial net bill credit level of $0.005 per kWh, or the proposed range up to $0.01 per kWh. However, for purposes of clarifying the record, staff supports the recommendation by the Department and other commenting parties to ask Xcel to provide further support and/or explanation for the anticipated and actual costs of CSG development and operation and how these costs and other inputs factor into the calculation of the net bill credit.

The Department also sought information and an explanation of how Xcel will recover project costs in the event that the cost of the CSG developed for the RENEWs pilot equals or exceeds the Value of Solar (VOS) rate. The DOC asked that Xcel specifically identify whether it will be seeking recovery of any costs from its general ratepayers.

In addition, the Department, Fresh Energy and IREC asked for information clarifying Xcel's assumptions regarding energy savings achieved through the energy-efficiency component of its proposed pilot program, which will affect how it sizes customers' CSG subscriptions.

Lastly, staff recommends that the Commission ask Xcel to provide clarification of the accounting treatment of the pilot program costs and whether the Company plans to track the costs of the pilot program as "non-utility" or whether it plans to make a ratemaking adjustment to remove the asset and associated costs from future Cost of Service Studies. Xcel indicated that it was reviewing both options.

VI. Decision options

Xcel's pilot program

1. Approve Xcel's proposed pilot program as filed.

2. Approve Xcel's proposed pilot program, with some or all of the following modifications and/or requirements:

On-Bill presentation

3. Require Xcel to separate the components of the Net Bill Credit in the presentation on customer bills, and to modify its tariff sheets accordingly. The bill credit components shown on the bill should include the subscription cost of program delivery, the bill credit rate, and the Net Bill Credit. *(Department, Fresh Energy, ELPC, Joint Commenters, CEAC)*

4. Take no action and accept Xcel's proposal for the presentation of the Net Bill Credit on customer bills.

Non-discriminatory treatment of utility and nonutility providers

5. Find that for purposes of Xcel's RENEWs pilot for low income customers, as proposed by Xcel in its June 30, 2017 petition, that the Company has sufficiently addressed issues related to equal treatment of utility and nonutility solar garden facilities as required by Minn. Stat. § 216B.1641(e)(3). (Department, Xcel, IREC, ELPC)

6. Find consistent with Minn. Stat. § 216B.1641 (e)(3) and the Commission's April 7, 2014 Order (in Docket No. E-002/M-13-867) that if in the future Xcel owns and operates additional low income community solar gardens beyond the Railroad Island project, the Commission will require the Company to submit additional guidelines for ensuring equal treatment of nonutility solar garden providers. These guidelines should clearly acknowledge the context of extending access to low income customers who are underserved by competitive market forces and may require special and differential treatment. These guidelines should be part of the six-month scaling plan if the Commission requires one.

Varying the net bill credit

7. Approve Xcel's proposal to vary the Net Bill Credit over the term of a customer's CSG subscription. *(Xcel, Department)*

8. Require Xcel to set the Net Bill Credit at a fixed level for the term of a customer's subscription except in instances where customers would receive additional net benefits, and to revise its tariff sheets accordingly. *(IREC, ELPC)*

On-Bill repayment for third-party providers

9. Require Xcel, within six months of Commission approval of Xcel's pilot, to file a proposal for on-bill repayment for third-party providers. *(ELPC, CEAC)*

10. Take no action at this time to address the issue of on-bill repayment for third-parties. Require Xcel to report back to the Commission in writing on the recommendations on this issue by the "Connecting Low-Income Communities Through Efficiency & Renewables" (CLICERS) workgroup (sponsored by the Minnesota Department Commerce—State Energy Office), once this workgroup issues its first draft action plan. *(Staff generated)*

Reporting requirements and scaling plan

Near term (within 30 days) supplemental information

11. Require Xcel, within 30 days of the Order in this matter, to file a compliance report containing the following information:

    a. Detailed information on the actual and anticipated costs and cost structure of the RENEWs program, including the development and operation of the Railroad Island project, and how these costs and any other inputs factor into the calculation of the Net Bill Credit. *(Department, ELPC, Fresh Energy, IREC)*

    b. An explanation of how the Company will recover project costs in the event the cost of the CSG developed for the RENEWs pilot equals or exceeds the Value of Solar (VOS) rate, specifically identifying whether it will be seeking recovery of any costs from its general ratepayers. *(Department)*

    c. Clarification of the Company's assumptions regarding energy savings achieved through the energy efficiency component of its proposed pilot program that will affect how it sizes customers' CSG subscriptions. (*Department, Fresh Energy, IREC*)

    d. Publication of the S*RC project number for the Railroad Island project such that there is public visibility into the queue status of the project. (IREC)

    e. Additional detail and clarification of the LIHEAP eligibility verification process as requested by Fresh Energy in its comments filed September 15, 2017. *(Fresh Energy, IREC)*

f. An update and clarification of the Company's planned accounting treatment of the pilot program costs, specifically whether the Company plans to track the costs of the project as "non-utility" or whether it plans to make a ratemaking adjustment to remove the asset and associated costs from future Cost of Service Studies. (*Staff recommendation*)

Six-month report—plan for scaling and non-discrimination

12. Require Xcel, within six months of the Order in this matter, to file a detailed plan for scaling its pilot program to other projects in other locations and for addressing non-discriminatory treatment of third-party providers. The scaling plan should include a list of priority neighborhoods where Xcel would propose to expand the program and dates by which the expansion could occur. In addressing non-discriminatory treatment of third-party providers, Xcel should explain in detail how the program, as it scales, will continue to meet the statutory requirement under Minn. Stat. § 216B.1641 (e)(3), and the steps it will take to increase the economic value of CSGs to low income participants. *(IREC, ELPC, Joint Commenters, CEAC, Fresh Energy)*

13. Require Xcel to specifically address some or all of the following topics in the six-month report ordered in Decision Option 12 above:

    a. a plan for the solicitation of outside projects through an RFP process for its next pilot
    b. a plan for allowing nonutility CSG developers access to the necessary system data to inform siting of gardens in low-cost, high-benefit locations for low income subscribers
    c. a plan for providing access for nonutility CSG developers to relevant customer data
    d. a commitment to make public the S*RC project number for any project that becomes part of Xcel's low income pilot program as proposed by IREC

14. Require Xcel to submit an evaluation of its low income pilot program following one year of operation, including recommendations for any program changes and a plan for expanding the offering to other neighborhoods within Xcel's service territory. The proposal should address the ability of other CSG operators and third party providers to use on-bill repayment for their low income CSG offerings. (*Department*)

Quarterly reporting and information sharing

15. Require Xcel to modify its proposal to provide quarterly rather than annual reporting and to include all the same items adopted by the Commission for annual reporting. *(IREC, ELPC)*

16. Require Xcel to hold quarterly progress reporting sessions, in-person or through phone conferencing/webinars, in place of written quarterly reports. As part of these sessions, Xcel should update stakeholders on the progress of the pilot, including successes and/or

problems encountered. It should also address questions raised by stakeholders and interested parties.

Annual reporting

17. Require Xcel, consistent with its petition, to file annual reports, beginning April 1, 2019, on the progress and operation of the pilot. These reports should include the information:

    a. total number of subscribers
    b. total garden production
    c. total bill credits provided
    d. rate of subscription uptake
    e. an evaluation of its outreach strategies, and modifications to ensure CSG access
    f. the impact of energy efficiency measures installed
    g. program costs including administrative, outreach, equipment and delivery labor costs
    h. identification and reporting on non-energy benefits to the neighborhood
    i. identification of drivers and barriers to low income participation in CSGs
    j. opportunities for energy efficiency improvements or new technologies that could yield more cost-effective energy savings.
    k. estimated annual energy savings for the program (weather normalized) (MWh)
    l. estimated annual energy savings for each subscriber (weather normalized) (kWh)
    m. actual bill savings benefits that accrued to participants (the difference between what participants would have paid for electricity had they not participated in the CSG and the amount paid under the program).

(Xcel, Department, Fresh Energy, IREC, ELPC, Joint Commenters)

Additional information for annual reporting (in some cases there may be duplication with the reporting requirements above)

18. Require Xcel to report project implementation actions for each project partner, CSG program costs and bill credit adjustments, rate of subscription uptake, including actual participation by year, number of housing units served by category, and customer interest and disinterest. (*Fresh Energy, ELPC*)

19. Require Xcel to identify where appropriate and report on: the cost of delivering the proposed pilot offering (administration, outreach, equipment, and delivery labor), the non-energy benefits delivered to the neighborhood (employment, education, vacancy losses, or health and safety benefits), drivers and barriers to participation in low income community solar garden, compliance with its three principles related to non-discrimination. (*IREC, ELPC*)

20. Require Xcel to separate and report on the costs related to the community solar garden component of the pilot program from those resulting from the energy efficiency component of the project. (*IREC*)

21. Delegate authority to the Executive Secretary to issue a notice adjusting Xcel's annual reporting requirements as necessary.

Final evaluation report at the conclusion of the three year pilot

22. Accept Xcel's proposal to submit a final evaluation report within 12 months of the conclusion of the three year pilot. This report will be the last of the three annual reports and, in addition to information required above by the Commission, the report will include market research and analysis performed throughout the pilot and an analysis incorporating all available findings from the pilot. *(Xcel)*

Setting a goal for low income participation

23. Require Xcel to establish a numeric program-wide goal of 5% for low income residential subscriber participation in Xcel's CSG program. (*Joint Commenters, ILSR*)

24. Encourage Xcel to meet the low income participation goal required above through: (1) working with the S*RC Stakeholder Workgroup to develop a streamlined prequalification process to enable and track low income qualification, and (2) adding a statement to its current S*RC program reports indicating progress towards the goal. *(Joint Commenters)*

25. Require Xcel to track progress towards the low income participation goal required above by reporting on the total number of low income subscribers in the S*RC program report (Docket No. E-002/M-13-867) relative to the total number of program subscribers. (*Joint Commenters*)

[Note: The Joint Commenters noted that the low income participation goal could also be set as 10% of residential participation.]

Other mechanisms to broaden low income access to CSG

26. Direct Xcel to implement some or all of the following actions to facilitate broader low income customer access to Xcel's community solar garden program:

a. a low income adder of $0.015 per kWh to be combined with a residential adder of $0.025 per kWh
b. credit-risk-reducing mechanisms including back-up subscribers, adders, and loss-reserve-backed pay-as-you-go subscriptions
c. streamlined LIHEAP eligibility procedures
d. targeted cost reduction for low income subscribers, such as points or incentives
e. feed-in tariff programs
f. coordination of energy efficiency improvements with recruitment of new CSG subscribers
g. siting of CSGs in economically disadvantaged locations or multi-family units

h. targeted outreach to multifamily residents, who could benefit from access to CSG
i. enhanced CSG interconnection options
j. direct compensation and subsidies for low income customers
k. raising subscription sizes to capture scale economies

27. Require Xcel to work with the existing S*RC Stakeholder Workgroup to develop and file, within 120 days of the issue date of the Order in this matter, proposed tariff sheets to establish:

    a. a broad, program-level definition of "low income subscriber"
    b. a simple, streamlined process for nonutility CSG developers and owners/operators to identify and pre-qualify eligible low income subscribers, including households or rental properties already certified as "low income" by a duly authorized state or federal government agency.

    (*Joint Commenters, ILSR*)

28. Require Xcel to work with the S*RC Stakeholder Workgroup to analyze the low income community solar programs in other states and provinces (such as Colorado, New York, Maryland, California, Oregon, Washington, D.C. and Ontario) to identify programs that may be appropriate for consideration in Minnesota, and to report back to the Commission within 120 days of the Order in this matter.

29. Require Xcel to establish and work with a low income stakeholder workgroup to expand access, outreach and education for Xcel's community solar garden program for low income customers by addressing issued raised in this docket, including the development of a robust market for increasing low income customer access to Xcel's program.

30. Direct staff to issue a notice soliciting comments, in Docket No. E-002/M-13-867, on the ILSR's principles for low income program design (filed March 1, 2017, in the current docket), as well as additional suggestions for overcoming barriers and encouraging the competitive market to provide low income CSG access. *(ELPC, Joint Commenters)*

Assisting customers at the end of subscription term

31. Require Xcel to work with its Project Partners to assist customers who have reached the end of their RENEWs subscription term in finding other CSG offerings that might be available to them. *(Fresh Energy)*

Compliance filings

32. Where not otherwise specifically required, require Xcel, within 30 days of the Order in this matter, to submit compliance filings in the current docket and updated tariff sheets to reflect the Commission's decisions.

Attachments

Attachment A – Summary of parties' comments

ILSR	1
DOC	2
Fresh Energy	3
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ELPC	8
Joint Comm.	10
CEAC	12
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Attachment B – Fair Disclosure Terms

Attachment C – Subscriber Enrollment Terms

Attachment D – Minn. Stat. 216B.1641 (Community Solar Gardens)

Summary of Parties' Comments

Institute for Local Self-Reliance (ILSR) and allied signers[40]

In comments filed on March 1, 2017, the ILSR put forward a set of broad principles and best practices, which were later cited in many of the parties' comments. These included:

The need for a more inclusive definition of low income. ILSR cited to Fresh Energy's earlier comments in April 2016 concerning the definition of low income subscribers that went beyond Xcel's LIHEAP-based definition (i.e. a low income subscriber as a household earning less than 80% of area median income or already participating in an existing program such as LIHEAP).

Principles of universal access to CSG. These principles include: (1) participation widely distributed across the utility service territory maximizing low income subscription and employment, (2) locations maximizing value to the grid and closest to subscribers using existing structures and minimizing agricultural land use and enhancing pollinator habitat and food production, (3) financial value and ownership favoring a variety of ownership structures, including subscriber-ownership and low income renters, (4) integration with other low income energy assistance and efficiency improvements, and (5) tracking and review of low income participation and reporting of these data by race and income to the Department and Commission.

Near-term actions to improve Minnesota's program. These near-term actions include: (1) possible carve-outs for low income participation, (2) risk-reduction strategies such as back-up subscribers with an adder and loss reserves for pay-as-you go subscriptions, and (3) a study examining tariff-based, on-bill financing using only payment history for eligibility.

Long-term strategies for broadening access. Long-term strategies involve lessons from other states and provinces targeting the costs and barriers facing low income customers. These include: (1) pre-development mandates for participation, as in Colorado, New York and Maryland, (2) preferential treatment in queue status for low income projects, as in New York or Ontario's feed-in tariffs with priority for aboriginal, community or municipal ownership, (3) acquiring more low income customers through coordinated outreach, (4) location and siting in low income communities, as in California, (5) reducing the complexity and cost of interconnection by further reducing or waiving fees, as in Ontario, (6) compensating subscribers with adders or subsidies as in Washington, D.C. and Massachusetts, and (7) decreasing financing risk through back-up subscribers, loan loss guarantees, pay-as-you go subscriptions and opt-in tariffs using inclusive financing, no money down options with lower levels of credit checks, as in Arkansas' Ouachita Electric energy efficiency program.

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[40] The allied signers include: Community Power, Vote Solar, Clean Up the River Environment, Rural Renewable Energy Alliance, and Cooperative Energy Futures (CEF).

Department of Commerce (DOC or the Department)

The Department noted that the Commission's September 6 Order directed Xcel to develop and file a CSG proposal for low income customers and that Xcel's proposal successfully addresses many of the barriers associated with access to CSG for low income customers.

The Department supported Xcel's effort to address energy usage by low income households through customers' participation in a Home Energy Squad or Low Income Home Energy Squad visits to address energy usage and help residents lower their overall electric bills. CSG participation alone may provide a subscriber with a modest bill credit; however, by first addressing energy efficiency concerns, the program stands to save participants additional money by reducing their usage.

The CSG statute (Minn. Stat. § 216B.1641) sets out the requirements for CSGs. This statute permits public utilities and other entities to own and operate CSGs. The statute requires that CSG subscriptions be at least 200 watts of the CSGs capacity, and that no subscription be more than 120% of a subscriber's annual average consumption. Xcel's proposal complies with the statutory requirements. In addition, the proposed program complies with the September 6 Order by using the VOS as the basis for determining subscriber bill credits.

The Department noted that commenters raised concerns about the Company's proposal to offer a single line item net bill credit on customer bills and advocated separate listing of the bill credit and subscription rate so that customers are aware of the subscriber fee, as they are for non-utility CSGs, and can "comparison shop" for other solar gardens. Commenters also noted that non-utility CSG developers do not have the ability to use on-bill collection, which raises anti-competitive concerns.

In initial comments, the Department concluded that providing a single line item on-bill credit for low income subscribers was a simple, reasonable method for handling billing for the RENEWs pilot. However, in reply comments, the Department agreed with the commenters that Xcel should be required to separate program costs from the bill credit rate and show these separately on the bill. It also suggested that the Commission may wish to direct Xcel and the developers to address on bill repayment for developer gardens.

The Department recommended that Xcel's pilot project be approved. It does not expect that, should on-bill repayment be available to non-utility CSG developers, the benefits of on-bill repayment would be sufficient to overcome the additional risk of subscribing low income customers by non-utility solar developers.

Because Xcel proposed to offer an energy efficiency component with participation in the CSG, the Department recommended the addition of reporting requirements consistent with the type of reporting typically required by the CIP program. Specifically, it recommended that the following metrics be added for each program year:

e. Estimated annual energy savings for the program (weather normalized) (MWh)
f. Estimated annual energy savings for each subscriber (weather normalized) (kWh)

g. Actual bill savings benefits that accrued to participants (the difference between what participants would have paid for electricity had they not participated in the CSG and the amount paid under the program.

The Department concluded that Xcel's proposed RENEWs program is reasonable, and recommended approval with the additional reporting requirements noted in its comments.

Fresh Energy (FE)

FE argued that the Railroad Island pilot project, the focus of Xcel's proposal, should be scaled to include other similar projects. It identified several barriers that prevent the full realization of public interest goals provided in summary form in Table 1 of Xcel's June 30, 2017 filing. It supported many aspects of the proposal (no credit checks, upfront costs, ongoing fees, hidden charges, or termination penalties), as well as other features (education and outreach, in-home subscriptions, customer support and multi-language materials). However, Fresh Energy expressed reservations about whether the proposal was scalable both in terms of large facilities and additional projects.

FE identified 12 Twin Cities sites where similar projects might be located.[41] It emphasized that multi-family buildings (five or more units) should be targeted where renters may lack the ability to build rooftop solar facilities. It also emphasized the inclusion of third party CSGs, referencing outstate opportunities in Duluth and the Leech Lake Reservation, specifically targeted to low income access for solar arrays.

Fresh Energy found Xcel's proposal to be generally consistent with statute, but indicated that the proposal could be clarified to make it more so. Specifically, customers who are wait-listed for CSG participation should be assisted in finding alternative CSG opportunities. FE found Xcel to be generally consistent with the Commission's September 6, 2016 Order, which called for "enhanced access" to community solar for low income customers. However, it was concerned that the Company had not committed to additional locations for low income CSG participants beyond the proposed pilot in the Railroad Island neighborhood. FE argued that enhanced access to CSGs for low income customers requires a detailed scaling plan within six months of the Order approving the pilot. Given Xcel's target of first quarter 2018 to commence the Railroad Island pilot, FE argued that "it is impracticable to wait to propose additional iterations of the RENEWs pilot unit the initial Railroad Island project completes a full project year or publishes its final report."[42]

FE agreed that Xcel seems ready and willing to work with non-Xcel project partners, and recognized that different arrangement will be necessary in different locations apart from the

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[41] Fresh Energy, September 15, 2017, Attachment A. These sites include: Phillips, (2) Frogtown/Thomas-Dale, (3) North Minneapolis, (4) North End, (5) Dayton's Bluff, (6) Payne-Phalen, (7) West Side, (8) Greater East Side, (9) Brooklyn Center, (10) Summit-University, (11) Columbia Heights, (12) Powderhorn. For each location, FE provided statistics on: population, median income and renter-occupation, and age of housing.

[42] FE, September 15, 2017, p. 7.

pilot project.

Xcel proposed three principles of non-discrimination in response to the Commission's April 7, 2014 Order. Fresh Energy noted that the provision of Minn. Stat. § 216B.1641 (e)(3) that requires CSG plans not to apply different requirements to utility and nonutility facilities. The three Xcel principles should "stand on their own" after the pilot is implemented, and apply equally to all subsequent low income projects. This should include equal access to information on the Company's grid and distribution assets.

Fresh Energy also proposed that Xcel separate the components of the proposed "Net Bill Credit" to be shown on customer bills, and revise the tariff sheet accordingly so as to increase transparency. This separation will allow customers to evaluate and compare utility and non-utility offerings, consistent with statutory non-discrimination requirements.

In addition, FE argued that participation for everyone should be a basis for the RENEWs project evaluation. As stated by Fresh Energy: "….everyone should be able to participate in community solar, from education and development to subscription and ownership."[43]

RENEWs projects should be integrated with existing low income energy assistance, energy efficiency and weatherization programs and verify customer eligibility for these opportunities, so as to "involve LIHEAP eligible customers and leverage Xcel's energy efficiency offerings."

FE supported Xcel's proposal for reporting criteria and for a separate annual tracking report on the pilot project, based on Table 3 in Xcel's initial filing (p. 8). Fresh Energy argued, however, that project implementation actions for each project partner should be reported together with CSG program costs and bill credit adjustments, rate of subscription uptake, and number of housing units served by category.

Fresh Energy sought additional clarification of Xcel's assertion that CSG's should not be thought of as a "discount service" and should recognize that CSG's are being accessed at a "premium price compared to retail service."[44] Fresh Energy disagreed, arguing that bill savings are of special importance for low income customers, citing the New York Shared Solar Pilot program.[45] FE asked in this connection for Xcel to provide greater detail regarding its proposed $2.16 monthly credit per customer.

Fresh Energy also disagreed with Xcel's characterization of CSG's as a program in which "all customers pay more for the participation of a few, and this cost burden grows as the program grows." FE observed that the Value of Solar rate, as noted in the September 6 Order, avoids "non-participating ratepayers [from] subsidizing the program."[46]

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[43] Fresh Energy, September 15, 2017, p. 10.

[44] Xcel, June 30, 2017, p. 4.

[45] FE, September 15, 2017, p. 14.

[46] September 6 Order, p. 14.

Finally, FE disagreed with Xcel that developers have "fallen short" in enrolling low income customers, noting the considerable barriers emphasized in comments by the Joint Commenters filed in Docket No. E-002/M-13-867.

Fresh Energy also noted that determining eligibility for the pilot is complicated by the long and difficult LIHEAP application process. It added the need for Xcel to account for energy efficiency improvements prior to CSG enrollment to determine appropriate CSG subscription size. Because Xcel's pilot begins with an energy efficiency delivery phase, customer usage will be affected, altering the ultimate subscription rate.

In sum, Fresh Energy recommended that the Commission:

a. Require Xcel to file a scaling plan for its RENEWs model within six months of an Order approving the pilot, including consideration of the neighborhoods proposed by FE.
b. Direct Xcel and its project partners to assist customers who have reached the end of their RENEWs subscription term in finding other CSG offerings that might be available to them.
c. Direct Xcel to include additional items in its Annual Report, including:
d. Actual participation numbers by year, reported in-line with the Company's estimated numbers from its June 30 filing.
e. Specific actions undertaken by organizations who are partnering with Xcel to deliver the RENEWs project.
f. Program costs (including specific CSG program costs), and any bill credit adjustments.
g. Customer interest and disinterest.
h. Number of housing units served, sorted by housing stock.
i. Direct Xcel to separate the Net Bill Credit components on the customer's bill, and modify its tariff sheets accordingly.
j. Require Xcel to file detailed information regarding the initial RENEWs bill credit calculation.
k. Direct Xcel to clarify the LIHEAP eligibility verification process and energy efficiency savings assumptions, if not addressed in reply.

Interstate Renewable Energy Council (IREC)

IREC is generally supportive of Xcel's proposal and believes it will enable low income customers to participate in a CSG. However, it noted concern over whether Xcel would scale the pilot in order to provide broader access. For this reason, it recommended that the Commission require Xcel to detail its plans to grow the pilot in a supplementary filing, discussing how tracking and reporting efforts will inform such growth. It also encouraged the Commission to revisit other mechanisms for participation of low income subscribers in non-utility CSGs.[47]

IREC agreed that the pilot is in the public interest and acknowledged the barriers to access for

[47] IREC referred to its March 2016 report, and a companion report, as the basis for its comments. See IREC, *Shared Renewable Energy for Low-to-Moderate Income Consumers (LMI Guidelines)*, March 2016. See also IREC, *Model Rules for Shared Renewable Energy Programs*.

low income participants as well as Xcel's design elements to overcome them. These include: no minimum credit score, termination penalty, upfront costs and hidden fees, as well as working with local partners, targeting customers, overcoming language barriers, no net costs, positive bill credits and accompanying energy efficiency services.

IREC noted the small number of CSG subscribers to be served (about 160) and the need to scale up the program under a supplementary filing plan, including analysis of the viability of larger facilities (up to 1 MW) to realize economies of scale. As recommended by IREC in its LMI Guidelines, the result of a scaled-up low income program can be a "combination of utility-owned and non-utility owned CSGs."[48]

IREC stated that Xcel's plan generally complies with statute (Minn. Stat. 216B.1641) and Commission Orders, including the September 6 Order to develop low income proposals applying LIHEAP standards. It noted an inconsistency, however, between the Order's call for a fixed VOS credit for the term of the CSG and Xcel's proposal, which calls for a credit equal to "the difference between the Value of Solar rate and the cost of the resource and program administration."[49] It also objected to Xcel's assertion that it reserves the right to modify the net bill credit in the face of "dynamic pricing conditions", arguing that such discretion "raises the potential for customer confusion and ultimately dilution of any customer savings."[50] IREC argued that any such adjustments should only be allowed if they are positive (such as if the VOS increase) and that downward adjustments due to anticipated costs should not be permitted. If new customers face different bill credits, their net value should still be positive. All such adjustments should be tracked and reported annually.

IREC specifically recommended striking reference in tariff sheets to Xcel's ability to alter or vary the bill credit rate, except in cases in which the credit would result in a positive increase.

IREC commended Xcel's proposal to work closely with non-Xcel project partners but warned that utility projects should not "undermine the non-utility CSG market."[51] Although IREC stated that Xcel's three principles of non-discrimination were adequate at this time, it also noted that they may need to be revisited as the program grows.

IREC pointed to low income programs in other states as examples, including Consolidated Edison in New York and Xcel's Colorado program (a 5 percent low income carve out) with elevated REC payments. It noted that if and when low income CSGs become competitors in a more general market, the Oregon experience may become relevant, in which an "independent, third-party program administrator (instead of a utility)", is in overall charge of the program.[52]

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[48] IREC, September 15, 2017, pp. 6-7.

[49] Xcel Initial Petition, June 30, 2017, p. 10.

[50] IREC, September 15, 2017, p. 8.

[51] IREC, September 15, 2017, p. 9.

[52] IREC, September 15, 2017, pp. 11-12.

In the near term, IREC offered specific recommendations on implementing Xcel's three non-discrimination principles. With respect to the first principle relating to "no preferential treatment in the interconnection queue," IREC suggested that to achieve this, third parties should submit CSG applications for the pilot and Xcel will treat them like any other application. Xcel's willingness to publish S*RC project numbers and queue status was supported by IREC as valuable transparency.

Concerning the second principle, relating to "no unfair reliance on grid or distribution system information," IREC noted that this had been satisfied in the pilot since the pilot project was proposed by a party that had no specialized knowledge of the system or its location. However, once the program scales beyond the first location, it is unclear how the third-party and Xcel will share information. This raised larger issues related to system information and data sharing. IREC argued that "all projects [should] have access to the necessary system data to inform such siting," and recommended that the Commission revisit this issue as the program scales and the issue is considered in other dockets (e.g. E-999/CI-15-556).

The third principle, "no unfair reliance on customer data to target customers," has issues similar to the second principle, since once the program scales, questions of equal access to consumer data will raise issues of customer privacy and may not be resolved simply by Xcel's reassurance that no unfair reliance will occur. Again, IREC recommended that the Commission revisit this issue as the program scales.

IREC was critical of Xcel's proposal because it failed to meet several of ILSR's March 1, 2017 guidelines, including eligibility, participation, location, financial value and ownership. Under the ILSR approach, eligibility for participation would be based either 80% of area median income or on enrollment in existing means-based programs such as LIHEAP. By contrast, Xcel's pilot is restricted only to LIHEAP-eligible customers. Participation is widespread under ILSR guidelines, whereas Xcel's pilot is limited to a single 500 kW facility serving only 160 subscribers with no current plans for scaling. CSG location is based in ILSR guidelines on value to the grid, closeness to subscribers, use of existing structure, and minimal use of prime agricultural land. Xcel's proposal meets some of these criteria, but does not consider grid values nor whether the criteria will be applied to future sites. Financial value and ownership should be broad-based and long-term under ILSR guidelines, but Xcel's project is only one, utility-owned effort. In short, Xcel's project does not achieve the full vision proposed by ILSR.

IREC generally supported Xcel's reporting criteria, including number of subscribers, total garden production, total bill credits, subscription uptake, and lessons learned on outreach and access strategies. IREC proposed other possible reporting requirements on energy efficiency impacts, costs of delivery, non-energy benefits, barriers to participation and new technologies such as energy storage. These should all be separate from the other CSG reporting obligations. Costs of the CSG should be separated from those resulting from the energy efficiency components of the project. Finally, compliance reporting should be required detailing how Xcel's three principles of non-discrimination are being met.

IREC concluded by rejecting Xcel's claims that CSG's are not intended as discount service, that they are a poor fit for efficiently reducing energy bills, or that third-parties are not serving low income customers and have fallen short of expectations. In fact, CSG's allow for bill savings, reflect the benefits of the VOS rate, and can meet expectations if barriers to participation are removed and opportunities for low income involvement are created.

In reply comments, IREC noted that all parties generally support the pilot. However, IREC called for additional detail regarding scaling the pilot through a plan based on Fresh Energy's and ELPC's recommendations. The scaling plan should also address discriminatory and anti-competitive concerns related to on-bill repayment.

IREC proposed that Xcel be required to separate the components of the bill credit from the charge, while allowing third-party providers access to streamlined billing treatment. It also suggested other ways be explored to expand access to low income CSGs. It re-emphasized the need for expanded reporting requirements on program performance, implementation, consumer interest, housing units served, and CIP issues. Lastly, it argued that Xcel be required to provide detail on LIHEAP eligibility verification, clarify its assumptions regarding energy efficiency savings and impacts on subscription size, and consider more targeted outreach to multi-family residents.

Environmental Law and Policy Center (ELPC)

ELPC believes the Commission should approve Xcel's pilot with the modifications proposed by ELPC in its initial and reply comments. ELPC noted that it coordinated its comments with Fresh Energy and the ILSR, and it believes Xcel's proposal is "thoughtful" and "well-designed."

ELPC noted the need for transparency of project finances and operational responsibilities. It argued further details are needed concerning anticipated low income CSG development and program costs and how Xcel will share design details of operations and partner responsibilities. Specifically, ELPC recommended that Xcel be required to refile its proposal with detailed information on the anticipated costs of the community solar garden development and operation and how those costs and any other inputs factor into the calculation of the bill credit. It also proposed that Xcel be required to modify the proposed tariff (Sheet No. 100, Terms and Conditions #3) to provide both the full subscription cost of CSG program delivery as well as the full VOS bill credit, in addition to the net bill credit.

ELPC proposed that the Commission require Xcel's VOS credit be fixed for the term of customers' subscription except in instances where customers would receive additional net benefits and the addition of reporting requirements detailed by other parties.

ELPC noted that Xcel's petition does not discuss plans to scale up the proposal beyond the Railroad Island site. It argued that Xcel needs to address and periodically report on how it evaluates and plans to modify the program as it increases in scale beyond the pilot. Specifically, it proposed that Xcel file a scaling plan within six months of Commission approval of the proposal detailing: (1) how Xcel will expand its CSG low income customer access program beyond a single project in a single neighborhood, including through the use of competitive bidding, and (2) what steps Xcel will take to try and increase the economic value of the CSG to low income participants.

ELPC supported Xcel's proposed on-bill payment but believes the Company should breakout subscription costs and bill credits on the bill itself. It argued that Xcel should enable this method of billing for all third party providers to assure fair competition between utility and non-utility interests. It proposed, either as part of the scaling plan or in a separate filing within six months of approval, that Xcel be required to enable on-bill repayment for all third-party providers.

ELPC objected to the lack of explanation of the initial $0.005 per kWh net bill credit or the formula for its calculation. In addition, it endorsed Fresh Energy's scaling proposal considering additional sites, and recommended that Xcel submit a detailed scaling plan within six months of project approval. Such a plan should aim to improve on the proposed $0.005 per kWh value proposition.

ELPC found the Xcel proposal generally consistent with statute and Orders, but found that both the single line-item, combined bill credit, and Xcel's claim that it could adjust the credit at will, to be "misaligned with statute." It also questioned the proposed 5-year maximum subscription term.[53]

ELPC supported the community involvement of groups such as Energy CENTS Coalition and Dayton's Bluff Neighborhood Housing Association, which if described as "trusted messengers and understandable messages."[54]

Concerning non-discrimination, ELPC emphasized that the issue will grow as the program scales, and noted that Xcel's three principles do not seem to align with Xcel's use of the VOS rate to pay for program administration. This can be remedied by allowing third-party CSG subscribers to use the on-bill VOS rate.

ELPC noted the general consistency of Xcel's proposal with ILSR's guiding principles but noted that the proposal did not extend to non-utility ownership and was capable of going beyond only modest bill savings.

ELPC proposed that the proposed reporting period be changed from annual to quarterly and include the additional metrics/items detailed in its comments (including comprehensive cost of the CSG program as well as customer turnover rates) and that Xcel commit to additional reporting via case studies on program details and partner responsibilities. In addition, once a year Xcel should conduct interviews with participants and stakeholders.

ELPC joined other commenters in rejecting Xcel's assertions that CGS's will not save money, especially as low income projects are brought to larger scale individually and collectively.

In sum, ELPC asked the Commission to require Xcel to: (1) refile their proposal with details on

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[53] ELPC, September 15, 2017, p. 6.

[54] ELPC, September 15, 2017, p. 6.

costs underlying the bill credit, (2) modify its tariff sheets accordingly, (3) change reporting requirements to quarterly reports with detailed metrics, (4) file a scaling plan within six months of Commission approval detailing expansion of the program using competitive bidding, and (5) enable on-bill payment for all third-party providers.

In reply comments, ELPC noted concern with the limited scope of Xcel's pilot, the lack of transparency of the proposed net bill credit, and the potential for unfair treatment of non-utility CSGs due to the lack of access to on-bill payment. Given these concerns, ELPC recommended approval of Xcel's pilot proposal, conditional on additional requirements. First, Xcel should modify its proposed tariff to provide for the full subscription cost of the CSG as well as the full bill credit. It should also be required to make on-bill payment available to non-utility projects. Second, in addition to increased scale, Xcel should address broader "structural and programmatic issues that limit low-income participation in community solar."[55] This can occur through Commission requests in Docket No. 13-867 pursuant to ILSR's principles for low income design.[56] Third, Xcel should be required to hold to the requirement fixing the VOS rate for the full term of the subscription, unless the VOS is upgraded and value is added. Fourth, several further reporting requirements are advised, including Fresh Energy's suggested participation numbers by year, further actions by partner organizations, program costs, and IREC's compliance requirements for non-discrimination. Fifth, special attention should be given to IREC's non-discrimination principles as the program scales.

Joint Commenters (Cooperative Energy Futures, Minnesota Solar Connection Novel Energy Solutions/Minnesota Community Solar)

The Joint Commenters proposed four elements that must be present to meaningfully expand low income accessibility across the S*RC program. All four must be present to meaningfully expand low income accessibility. The Joint Commenters argued that each of the four elements is simple, straightforward, mutually supportive, and works well with existing S*RC program rules and structure. These were: (1) order a five percent goal for low income participation at the program level (10 percent of an overall 50 percent residential goal), (2) require tracking and reporting of low income participation as part of residential reporting, (3) require tariff sheets implementing a program-level definition of "low income subscriber" and a simple process to identify low income subscribers using existing certifications and definitions, (4) require tariff sheets establishing a $0.015 per kWh bill credit adder for low income subscribers, to be added to a $0.025 per kWh adder for residential customers as a whole, for a total of $0.04 per kWh. The Joint Commenters explained their reasoning for each element as follows:

(1) E*stablish a program-level goal for low income subscriber participation*

In earlier comments, the Joint Commenters requested that the Commission adopt a 50 percent program capacity target for residential customers. Because low income customers are a subset

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[55] ELPC, September 25, 2017, p. 3.

[56] ELPC suggested that Docket 13-867 is the appropriate docket in which to further explore overcoming barriers to and program-level facilitation of low income customer access to community solar.

of residential customers, the Joint Commenters proposed setting the low income target as 10 percent of this 50 percent, or five percent of the CSG program total.

The Joint Commenters emphasized the role of a numeric goal but opposed a mandatory carve-out approach. They tied their low income goal to the broader residential target of 50% in recognition that virtually all low income subscribers will be residential customers.

(2) *Direct Xcel to regularly report on the level of low income participation in the S*RC program*

Noting that what gets measured gets done, the Joint Commenters proposed to require Xcel to track and regularly report on the pilot program's level of low income subscription. Further, they proposed that the Commission order reporting on the low income target in addressing comments on accessibility in this docket. This would immediately start to track progress towards a low income participant goal. Xcel could meet this requirement by also working with the S*RC stakeholder workgroup to develop a streamlined qualification process for low income subscribers.

As the Joint Commenters observed, it is difficult to see how the Commission could follow progress toward a numeric 5% goal without such tracking. They also referenced ILSR's "Principles of Universal Access to Community Solar," which noted that low income subscribers should be tracked on a per project basis.

(3) Direct Xcel to develop a simple, streamlined process for non-utility CSG developers and owners/operators to identify and pre-qualify eligible low income subscribers

The Joint Commenters noted that in order to enable the low income goal and reporting recommendations above, it would be helpful to clearly define and establish a process for qualifying eligible low income subscribers. ILSR discussed several "principals and best practices for program design," including the need for a strong definition of low income. The Joint Commenters supported Fresh Energy's definition of a low income subscriber as a household earning less than 80% of the area median income, or one that already participates in an existing means-based program, such as LIHEAP. The Joint Commenters would therefore expand the list of "existing means-based program(s)" to allow low income eligibility for any household or rental property that has already been certified as "low income" (e.g., earning less than 80% of the area median income) by a duly authorized state or federal government agency.

As the Joint Commenters noted, the Company's proposed qualification process is limited to households "residing in the Railroad Island community" and is narrowly tailored to pair with energy efficiency services under an arrangement that is not broadly available to non-utility CSG developers.

The Joint Commenters asked the Commission to direct Xcel to work with the S*RC Stakeholder Workgroup over a three-to-four-month period to develop and file proposed tariff sheets to establish:

h. a broad, program-level definition of "low income subscriber"

i. a simple, streamlined process for non-utility CSG developers/owners/operators to identify and pre-qualify eligible low income subscribers, including households or rental properties already certified as “low income” by a duly authorized state or federal government agency

Because households’ economic conditions may improve, pre-qualified households and rental properties could be re-evaluated for qualification on a five-year cycle–similar to the five-year low income qualification term proposed by Xcel for its 500-kW project.

(4) *Direct the creation of a low income bill-credit adder for qualifying low income subscribers, similar to the Department of Commerce’s proposed residential bill credit adder*

Specifically, the Joint Commenters supported the creation of a $0.015 per kWh bill credit adder that would be combined with the $0.025 per kWh residential adder proposed by the DOC for a total of $0.04 per kWh. Once the program achieves its participation goal, the low income adder could be phased out.

In more detailed comments, the Joint Commenters responded to the specific issues raised in the Commission’s July 10 notice. In response to whether a low income pilot is in the public interest (Topic 1), they observed that the Railroad Island project was itself in the public interest, but taken alone was not sufficient without a significant scaling up.

Regarding issues of discrimination concerning nonutility developers of CSGs (Topic 4), the Joint Commenters noted two of Xcel’s requirements. First, they granted that on-bill credit repayment opportunities to reduce risk were currently only available to Xcel, but in principle should extend to nonutility CSGs.

Second, they argued that Xcel’s proposed net bill credit is insufficiently transparent and may cause certain consumers to be unable to competitively shop subscription prices and bill credit values.

The Joint Commenters also noted several factors that explain the higher costs attributable to low income customers. These include the fact that they use relatively less electricity, leading to smaller contracts, have more limited access to banking services, and face risks that are reflected in higher financing costs.

Concerning reporting, the Joint Commenters asked that Xcel include the total number of low subscribers in the CSG program relative to all residential subscribers. Once the program achieves its low income subscriber participation goal, this low income adder could phase out.

Clean Energy Access Coalition (Institute for Local Self-Reliance, Cooperative Energy Futures (CEF), Rural Renewable Energy Alliance, Clean Up our River Environment (CURE), Community Power, Minnesota Interfaith Power & Light, ISAIAH, and Minnesota Public Interest Research Group)

The Clean Energy Access Coalition (CEAC) applauded the many ways in which Xcel’s project addressed barriers to low income participation in community solar in Minnesota. The CEAC recommended Xcel's pilot project be approved, but noted a few areas for potential improvement:

Total savings are low. In New York, as part of its pilot community solar program, Consolidated Edison is offering low income participants savings more than twice those of the pilot ($5 per month) and the New York PUC has asked the utility to find additional savings for these participants. CEAC indicated that in the transition to VOS it hopes that compensation for these participants will be comparable to other CSG subscribers.

Subscription sizes should be larger. In Colorado, GRID Alternatives offers average subscription sizes of 5 kilowatts, offsetting half of a typical customer's electricity bill. In Minnesota, CEAC hopes most participants will substantially reduce or eliminate their bill, so that savings accompany their participation. In addition, as the low income program moves beyond the pilot, utility-owned CSG projects should be competitively bid, as is Consolidated Edison's community solar pilot in New York.

CEAC also noted several inadequacies. In particular, Xcel's pilot offers no plan for replication or expansion to other providers, despite the fact that Minnesota has over 230,000 households below the federal poverty level. On average, these households face an energy cost equal to 17% of their annual household income. The 160 participants are a tiny minority. It is therefore important that the pilot be rapidly scaled up to give low income participants the same access as those without income limitations.

CEAC also objected to Xcel's claim that community solar was not intended as a discount service and that other customers pay a premium, when in fact almost all subscriptions in Minnesota offer bill savings. Xcel's implication that solar energy costs more is contrary to experience in the existing CSG program and Xcel's own project proposal. CEAC also rejected Xcel's argument that savings for participants are only made possible because of cost-shifting to non-participants. Xcel's proposal itself argued that the VOS rate does not cause cost-shifting; nor does Xcel explain why such cost-shifting does not occur in its own case but would occur for projects developed by a third party. In fact, the Company's calculated VOS rate has consistently exceeded its retail rate for all customer classes, suggesting that the direction of cross-subsidization works in the opposite direction.

Expand On-Bill Collection. Xcel proposed to use an on-bill collection system that offers the credits and includes the charges for community solar on the same bill, consistent with ILSR guidelines. However, the bill credit and subscription rate are combined, making it less transparent and more difficult for participants to comparison shop for other community solar options. These bill credits and subscription rates should be listed separately. Also, the use of on-bill collection raises anti-competitive concerns if it is not also available to third party developers. This is not a sufficient concern to oppose its use for the current project, but on-bill collection should be available to all developers if it is used in subsequent Company-owned projects.

Finally, CEAC noted in the guiding principles provided by ILSR include many actions that could increase access for low income residents beyond the small pilot. For example, soliciting backup subscribers or developing a small credit reserve could radically reduce the perceived risk of providing credit to low income participants. Tariff-based financing (using Xcel's cost recovery tools) could actually eliminate the need for credit-scoring.

Ampion

Ampion, a Boston-based software service provider for distributed energy resources across the nation, commented on the net bill credit presentation, third party bill repayment, and issues surrounding statutory language and the Commission's CSG orders. In general, Ampion commended Xcel and the Commission for implementing the Customer Access Joint Pilot Program.

Based on its experience in New York with low income customers, Ampion believes the proposed net bill credit will lead to subscriber misunderstandings. Subscribers in other markets question utilities and non-utility providers regarding how bill credits are calculated. The lack of traceability to the exact bill credit and cost of participation will exacerbate the issue, preventing consumers from assessing the costs and benefits of the program. Thus, Ampion recommended a "more granular breakdown" of the calculation on the subscriber bill.

Ampion also observed that Minn. Stat. 216B.1641(e)(3), which stipulates that the Commission "not apply different requirements to utility and non-utility" CSG facilities, requires that the Commission allow consolidated billing for both Xcel and third-party CSG providers. Not allowing the same consolidated billing as an option for third-party providers constitutes a violation of statute.

Ampion recommended that the Commission consider modifying existing rules such that nonutility providers may elect to pursue a consolidated billing approach for collection of their subscription payments. The Commission should establish data exchange provisions that allow for the instantaneous transfer of necessary information, such as ongoing customer allocation and subscription payment information, such as ongoing customer allocation and subscription payment information, between the utility and project developer/third-party agent each month in order to facilitate such consolidated billing mechanism.

Fair Disclosure[57]

The Company, through ECC, will disclose to prospective subscribers the future costs and benefits of the subscription, including:

a. there are no nonrecurring (i.e. one-time) charges
b. there are no recurring net charges
c. terms and conditions of service
d. no net charges will be added during the course of service; however if the Net Bill Credit changes, notice will be provided to the Subscriber
e. the Subscriber is required to sign a RENEWs Enrollment Form and the Minnesota model "Consent to Disclose Utility Customer Data" form
f. terms and conditions for early termination
g. the Community Solar Garden will not charge penalties to the Subscriber
h. the process for unsubscribing does not incur any associated costs
i. an explanation of the Subscriber data the Community Solar Garden Operator (which is Northern States Power Company) can access and collect
j. the data privacy policies of Northern States Power Company
k. the method of providing notice to Subscribers when the CSG is out of service, including notice of estimated length and loss of production
l. assurance that all installations, upgrades and repairs will be under 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. allocation of unsubscribed production
n. a copy of the solar panel warranty
   a description of the compensation to be paid for any underperformance proof of insurance proof of a long-term maintenance plan current production projections and a description of the methodology used to develop production projections
o. Northern States Power Company contact information for questions and complaints

[57] Xcel's Initial Petition, June 30, 2017, pp. 12-13. This list of Fair Disclosures as set forth on pages 12-13 of Xcel's Initial Petition is not included in tariff. There is a list of Fair Disclosures included in Xcel's tariffed Subscriber Agency Agreement (Section 9, Tariff Sheet No. 98), but that list will not apply to the low income pilot. Xcel anticipates that the fair disclosure statements above will be included in an information packet provided to subscribers.

Subscriber Enrollment Terms (See the RENEWs Solar*Rewards Community Enrollment Form, Tariff Sheet No. 108-110)

Participation Term. The Company will offer its subscribers a term of up to five years, after which time the customer's program benefit would terminate and the garden production could be re-allocated to the next eligible customer. Near or after the end of the term of the subscriber's enrollment, the subscriber can apply for a new subscription. The subscription manager would maintain a waitlist for interested customers, and the waitlist would be randomized on an annual basis, so as to be fair without regard to when customers are first contacted about the program by Energy CENTS Coalition (ECC) or first expressed interest in subscribing. Reapplying subscribers would be added to this waitlist. Customer eligibility for LIHEAP would be re-checked upon re-enrollment.

Cancellation by Customer. If a subscriber wishes to end his or her subscription, the subscriber will provide notice of the cancellation request to the Company's subscription manager (Energy CENTS Coalition). Bill credits will be terminated and no cancellation fee will be assessed to the participant.

Cancellation by Company. As detailed in the proposed tariff sheets, the Company may cancel the Subscription Contract prior to the end of its term for any of the following reasons:

a. The Subscriber does not reside in the Railroad Island Community.
b. The Subscriber is not a retail electric customer of the Company.
c. The Subscriber adds distributed generation such that the Subscription size exceeds 120% of the Subscriber's average annual consumption of electricity over the prior twenty four (24) month period.
d. The Subscriber's electric service has been disconnected due to non-payment.
e. The RENEWs Community Solar Garden does not achieve Commercial Operation, or otherwise has sustained substantial damage or has operational issues that cannot be repaired at reasonable cost, which the Community Solar Garden Operator may determine in its sole discretion.
f. There is not enough capacity for the Community Solar Garden Operator to accommodate the Subscription, or there is no longer enough capacity.
g. Either the Interconnection Agreement or the Standard Contract for Solar*Rewards Community associated with the Subscription has expired or been terminated.
h. The Subscriber otherwise violates the terms of the RENEWs Enrollment Form.
i. Any other reason as authorized by the tariff as its terms may change over time as authorized by written Commission order.

Transfer. A customer's subscription to the Company's pilot program cannot be assigned. A subscription may be transferred to a new residence of the Subscriber if the new residence is in the Railroad Island Community and there is no time gap between residences. If the subscription is transferred to a new address, compliance with the 120% rule will be checked, and if appropriate the Subscription will be scaled down so as to comply with the 120% rule.

Minn. Stat. 216B.1641 COMMUNITY SOLAR GARDEN.

(a) The public utility subject to section 116C.779 shall file by September 30, 2013, a plan with the commission to operate a community solar garden program which shall begin operations within 90 days after commission approval of the plan. Other public utilities may file an application at their election. The community solar garden program must be designed to offset the energy use of not less than five subscribers in each community solar garden facility of which no single subscriber has more than a 40 percent interest. The owner of the community solar garden may be a public utility or any other entity or organization that contracts to sell the output from the community solar garden to the utility under section 216B.164. There shall be no limitation on the number or cumulative generating capacity of community solar garden facilities other than the limitations imposed under section 216B.164, subdivision 4c, or other limitations provided in law or regulations.

(b) A solar garden is a facility that generates electricity by means of a ground-mounted or roof-mounted solar photovoltaic device whereby subscribers receive a bill credit for the electricity generated in proportion to the size of their subscription. The solar garden must have a nameplate capacity of no more than one megawatt. Each subscription shall be sized to represent at least 200 watts of the community solar garden's generating capacity and to supply, when combined with other distributed generation resources serving the premises, no more than 120 percent of the average annual consumption of electricity by each subscriber at the premises to which the subscription is attributed.

(c) The solar generation facility must be located in the service territory of the public utility filing the plan. Subscribers must be retail customers of the public utility located in the same county or a county contiguous to where the facility is located.

(d) The public utility must purchase from the community solar garden all energy generated by the solar garden. The purchase shall be at the rate calculated under section 216B.164, subdivision 10, or, until that rate for the public utility has been approved by the commission, the applicable retail rate. A solar garden is eligible for any incentive programs offered under either section 116C.7792 or section 216C.415. A subscriber's portion of the purchase shall be provided by a credit on the subscriber's bill.

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

(1) reasonably allow for the creation, financing, and accessibility of community solar gardens;
(2) establish uniform standards, fees, and processes for the interconnection of community solar garden facilities that allow the utility to recover reasonable interconnection costs for each community solar garden;
(3) not apply different requirements to utility and nonutility community solar garden facilities;
(4) be consistent with the public interest;
(5) identify the information that must be provided to potential subscribers to ensure fair disclosure of future costs and benefits of subscriptions;

(6) include a program implementation schedule;
(7) identify all proposed rules, fees, and charges; and
(8) identify the means by which the program will be promoted.

(f) Notwithstanding any other law, neither the manager of nor the subscribers to a community solar garden facility shall be considered a utility solely as a result of their participation in the community solar garden facility.

(g) Within 180 days of commission approval of a plan under this section, a utility shall begin crediting subscriber accounts for each community solar garden facility in its service territory, and shall file with the commissioner of commerce a description of its crediting system.

(h) For the purposes of this section, the following terms have the meanings given:

(1) "subscriber" means a retail customer of a utility who owns one or more subscriptions of a community solar garden facility interconnected with that utility; and
(2) "subscription" means a contract between a subscriber and the owner of a solar garden.