STATE OF MINNESOTA BEFORE THE PUBLIC UTILITIES COMMISSION

Nancy Lange	Chair
Dan Lipschultz	Commissioner
Matthew Schuerger	Commissioner
Katie Sieben	Commissioner
John Tuma	Commissioner

In the Matter of the Petition of Northern States Power Company, dba Xcel Energy, for Approval of a Customer Access Joint Pilot Program Docket No. E-002/M-17-527

COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC. ON XCEL ENERGY'S PETITION FOR APPROVAL OF A CUSTOMER ACCESS JOINT PILOT PROGRAM

TABLE OF CONTENTS

			<u>Page</u>
I.	INTR	ODUCTION	2
II.	RESP	ONSES TO COMMISSION QUESTIONS	4
	A.	Is Xcel's proposal for a low-income pilot in the public interest?	4
	B.	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?	7
	C.	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?	9
	D.	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 (described on pages 17-18 in the Petition). However, are there other issues of discrimination concerning non-utility developers/operators that the	
		Commission should consider?	9

		1.	No preferential treatment in interconnection queue	12
		2.	No unfair reliance on grid or distribution system information	12
		3.	No unfair reliance on customer data to target subscribers	14
	E.	sheets	plement the pilot program, Xcel is seeking approval of new tariff (included as Attachment C to the Petition). Please comment on the sed tariff sheets.	15
	F.	recom	comment on the guiding principles, best practices and mendations for low-income program design filed by ILSR on March 7. How do they relate to Xcel's low-income pilot proposal?	15
	G.	inforn	proposed annual reporting for the pilot. Should any other nation, in addition to that proposed, be included in the Company's I report to the Commission?	17
	H.		d the Commission take up the issue of cost recovery separately at a ime?	19
	I.	What	other parts of Xcel's proposal require additional clarification?	19
Ш	CONC	LUSIC)N	22

I. INTRODUCTION

In its September 9, 2016 Order Approving Value-of-Solar Rate for Xcel's Solar-Garden Program, Clarifying Program Parameters, and Requiring Further Filings (September 6 Order), the Commission directed Xcel Energy to develop a community solar garden (CSG) proposal specifically for low-income customers, applying Low-Income Home Energy Assistance Program (LIHEAP) eligibility standards, and to file the proposal by March 1, 2017. In addition, the Commission requested proposals from other parties to enhance access to CSGs for low-income customers, to be filed by the same date. On March 1, 2017, Xcel submitted a preliminary concept proposal, and requested an additional 90 days to submit a more detailed proposal and implementation plan, which the Commission granted. The Institute for Local Self-Reliance (ILSR) and a group of allied organization also submitted comments regarding low-income community solar models. On June 30, 2017, Xcel filed a Petition for Approval of a Customer

Access Joint Pilot Program (Petition) and, on July 10, 2017, the Commission solicited comments on the Petition, asking nine specific questions. Accordingly, the Interstate Renewable Energy Council, Inc. (IREC) files these initial comments.

IREC is a 501(c)(3) non-partisan, non-profit organization working nationally to increase consumer access to sustainable energy and energy efficiency through independent fact-based policy leadership, quality workforce development and consumer empowerment. In service of our mission, IREC works to increase the adoption of policies and regulatory reforms that expand access to and streamline grid integration of distributed energy resources to optimize their widespread benefits. The scope of our work includes implementing shared renewable energy programs to expand options for consumers that cannot host a renewable energy system, and generating and promoting national model rules, standards, and best practices. IREC has participated in community and shared renewable energy proceedings in Colorado, Oregon, California, New York, Maryland, and Washington, D.C. In Minnesota, IREC has participated in Docket No. E-002/M-13-867 regarding Xcel's CSG program since its inception, filed comments regarding low-income CSG program design on April 1 and April 29, 2016, and was a signatory to joint comments filed on those same dates. IREC references those comments as relevant here.

In addition, in March 2016, IREC released a first-of-its-kind report, *Shared Renewable Energy for Low- to Moderate-Income Consumers: Guidelines and Model Provisions (LMI Guidelines)*, a companion to our existing *Model Rules for Shared Renewable Energy Programs.*²
The *LMI Guidelines* reflect extensive research by IREC and input from our LMI working group,

¹ On August 16, 2017, the Commission issued a Notice of Extended Comment Period, extending the initial comment deadline to September 15, 2017.

² IREC's *LMI Guidelines* and an associated four-page Quick Reference Guide are available at www.irecusa.org/publications/shared-renewable-energy-for-low-to-moderate-incomeconsumers-policy-guidelines-and-model-provisions.

which included customer-focused organizations, consumer advocates, environmental justice groups, and others, as well as our broader group of external reviewers. IREC also references these *LMI Guidelines* as relevant here.

Generally, IREC is supportive of Xcel's proposal and believes that it will enable lowincome customers to participate in a CSG. It is a promising first step towards the important goal of improving low-income customer access to CSGs and solar generally. IREC is concerned, however, that Xcel provides no discussion of how it will scale this pilot program, such that it can improve access for more low-income customers via utility-owned CSGs beyond the pilot offering. IREC recommends that the Commission require Xcel to provide detail on its plans to grow the pilot in a supplementary filing, and to discuss how its tracking and reporting efforts will inform such growth. IREC also encourages the Commission to revisit its consideration of other mechanisms to facilitate low-income customer participation in non-utility-owned CSGs, as discussed in ILSR's comments and comments previously filed in Docket No. E-002/M-13-867, which may complement Xcel's utility-owned offerings and more comprehensively promote lowincome access. In addition, IREC provides some more specific comments on Xcel's proposed treatment of the net bill credit rate, its non-discrimination principles, and its plans for tracking and reporting. IREC closes our comments by emphasizing the role of this pilot proposal in allowing low-income customers to access the benefits of CSGs and countering Xcel's mischaracterization of certain aspects of Minnesota's CSG program.

II. RESPONSES TO COMMISSION QUESTIONS

A. Is Xcel's proposal for a low-income pilot in the public interest?

Yes, IREC believes that Xcel's low-income pilot proposal is in the public interest. We also offer suggestions about how it may be further improved. IREC commends Xcel and its partners for taking this important step toward improving low-income customer access to CSGs

and to solar generally. The proposal acknowledges barriers to access to the CSG program for low-income customers and incorporates program design elements to overcome them, including: not requiring a minimum credit score; allowing participants to terminate at any time without penalty; avoiding upfront costs and ongoing, hidden fees; and incorporating efforts to work with trusted community partners and to market the program effectively to target customers, including through providing non-English materials as appropriate.³ In addition, IREC agrees that the program should guarantee that participants never face a net cost, and supports providing customers with a net positive bill credit.⁴ IREC also supports pairing the CSG offering with energy-efficiency services, in hopes that doing so will help to maximize participants' energy savings and benefits.⁵

Xcel's pilot proposal envisions a 500-kW facility serving 160 customers. While IREC believes this is a good start, we note 160 customers represent a small fragment of the total low-income population that might benefit from such a program offering. Therefore, IREC urges the Commission to require Xcel to describe how it plans to scale its low-income CSG program, such that more eligible customers can take advantage of it over the long term. We recommend that the Commission require Xcel to explain its plans to learn from the pilot and develop a full program in a supplementary filing. In particular, IREC requests additional information regarding other potential communities with which Xcel could work. IREC also suggests that Xcel assess the

³ Xcel Petition at 5-6.

⁴ See Xcel Petition at 11 ("The Company's subscription pricing method attempts to provide access to the program with a positive per kWh benefit in a range up to \$0.01. The Company currently plans to offer customers an initial Net Bill Credit of \$0.005 per kWh.").

⁵ See Xcel Petition at 6-9.

⁶ Petition at 8-9. IREC notes that while the Petition says the pilot program will serve "more than 400 Xcel Energy customers in the Railroad Island neighborhood of St. Paul," that number appears to combine customers receiving energy efficiency assistance with customers subscribing to the CSG. Petition at 6.

viability of larger facilities (up to 1 MW, as required by law), and the benefits of economies of scale, such as lower costs and the potential to offer customers greater net bill savings. IREC recognizes the value of in-community facilities and suggests that an expanded program would benefit from consideration of various system sizes and arrangements to maximize benefits for participants.

In addition to exploring pathways for Xcel to improve CSG access for more low-income customers through utility-owned CSGs, IREC encourages the Commission to continue to consider other ways to enable low-income customer access to CSGs, including third-party and customer-owned CSGs. IREC appreciates the Commission's rationale that an Xcel-owned CSG currently reflects the "best chance of extending the benefits of community solar to low-income customers" and protecting them from financial risk. Nonetheless, IREC emphasizes that there are a number of additional program design options and other tools that can improve low-income customer access to CSGs and mitigate financial risk. IREC refers the Commission to our joint and separate comments filed in Docket No. E-002/M-13-867, as well as IREC's LMI Guidelines, for further discussion of these possibilities. We encourage the Commission to revisit this issue in the future. Ultimately, IREC suggests that low-income customers may be best served by a combination of utility-owned and non-utility-owned CSGs, and together these options could truly bring low-income access to scale. In particular, IREC emphasizes that facilitating nonutility-owned low-income program models could open the door for increased customer choice and control, in that customers would be able choose from a variety of offerings instead of only having one Xcel-owned option. These future options could include customer-owned CSGs,

⁷ September 6 Order at 19-20.

which may be of particular importance and value to some low-income individuals and communities.

B. 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?

Regarding the relevant statutory provision, Minn. Stat. § 216B.1641, IREC believes Xcel's pilot proposal generally complies with its requirements. Likewise, IREC believes that the pilot proposal generally complies with the Commission's prior orders implementing that statutory provision. IREC discusses § 216B.1641(e)(3) and other relevant orders regarding equal treatment of utility versus non-utility facilities in Section II.D below.

Regarding the Commission's September 6 Order, IREC believes that Xcel's pilot proposal is an adequate first step towards meeting the requirement "to develop a community solar garden proposals or proposals specifically for low-income customers, applying LIHEAP eligibility standards." As discussed above in Section II.A, however, IREC has concerns about Xcel's lack of plans to scale its pilot to expand access beyond the initial group of 160 customers. Without such a plan, Xcel seems unlikely to realize the goal of improving access to CSGs for low-income customers beyond this initial, small group.

In addition, IREC notes that the Commission required in its September 6 Order that the value-of-solar (VOS) credit should be fixed for the term of CSG.⁹ In its Petition Xcel proposes "to recover the costs of the pilot program by crediting customers the difference between the

⁸ September 6 Order at 20, 26.

⁹ September 6 Order at 23 (Order ¶ 1: "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.").

Value of Solar [] rate and the cost of the resource and program administration." However, Xcel "reserve[s] the right to modify the Net Bill Credit upon written notice to subscribers." Xcel states that this is "reasonable and consistent with practices of other garden operators," but provides no evidence to support this claim. Xcel indicates such flexibility will enable it to respond to VOS modifications and "dynamic pricing conditions," but the VOS rate should be set for the term of the garden pursuant to the Commission's September 6 Order. In addition to being inconsistent with the Commission's prior order, Xcel's proposal is also questionable from a policy perspective. 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 their bill credit rate. If Xcel has the ability to change a customer's rate at its discretion, this raises the potential for customer confusion and ultimately dilution of any customer savings.

IREC suggests 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 bills. As far as adjusting the net bill credit to account for unanticipated costs (and thus lowering the net value of the credit), IREC does not believe Xcel should be permitted to make such adjustments within the customer's participation term in order to protect participating customer's bill savings. For new customers, or for customers signing up for a new term, however, Xcel could adjust costs assessed on the participating customer, as long as the net value is positive for customer. Xcel should be required

¹⁰ Petition at 10.

¹¹ Petition at 11.

¹² Petition at 11.

¹³ Petition at 11.

to track all such costs and adjustments, and include them as part of its annual reporting, so that they can inform any necessary program modifications going forward.

C. 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?

IREC is not aware of any issues raised by Xcel's proposal to work with non-Xcel project partners. IREC commends Xcel's efforts to work with low-income customer groups and other local groups. In our *LMI Guidelines*, IREC emphasizes the importance of such collaboration.

D. 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 (described on pages 17-18 in the Petition). However, are there other issues of discrimination concerning non-utility developers/operators that the Commission should consider?

IREC agrees that ensuring non-discrimination is a critical issue, especially if the Commission ultimately wishes to encourage both utility and non-utility CSGs serving low-income customers. As discussed above in Sections II.A and II.B, IREC suggests additional measures to facilitate non-utility CSGs in order to expand low-income customer access more broadly. While IREC supports Xcel's pilot proposal, which we believe is in the public interest and meets an underserved market need, IREC also seeks to ensure that it does not undermine the non-utility CSG market. Non-utility-owned CSGs could eventually serve low-income customers, especially if the Commission incorporates additional mechanisms to support it doing so. IREC notes that the Commission previously addressed this issue and Minn. Stat. § 216B.1641(e)(3) in

its Order Rejecting Xcel's Solar-Garden Tariff Filing and Requiring the Company to File a Revised Solar-Garden Plan. ¹⁴

Based on the Commission's prior guidance and the scope of the pilot proposal currently, IREC agrees that Xcel's three principles and its plans to uphold them are adequate to meet the statutory mandate at this time. ¹⁵ As the low-income CSG program grows, and especially as a market develops for non-utility-owned CSGs serving low-income customers, IREC encourages the Commission to monitor the issue of non-discrimination, and to revisit these principles and protective measures as needed. IREC suggests that additional detail and potentially additional measures may be required as the market evolves.

Additionally, we note growing interest from other utilities and states in the idea of using utility-owned shared renewables facilities to serve the low-income population, which may eventually provide the Commission with models and other ideas for further consideration. For example, the New York Commission recently approved a pilot program that will allow Consolidated Edison to build and own shared renewables facilities, installed on utility property and serving low-income customers. ¹⁶ In Colorado, within Xcel's CSG program in that state, the Commission and stakeholders attempted to balance both utility- and non-utility-owned facilities

¹⁴ Order Rejecting Xcel's Solar-Garden Tariff Filing and Requiring the Company to File a Revised Solar-Garden Plan, Docket No. E-002/M-13-867, at 8 (April 7, 2014) ("Finally, if Xcel in the future decides to offer its own solar gardens, the Commission will require the Company to submit a proposal for Commission approval including a detailed explanation of processes and procedures to ensure that third-party and utility solar gardens are treated in a nondiscriminatory fashion. This requirement will serve the public interest by advancing the solar-garden statute's directive that the plan approved by the Commission 'not apply different requirements to utility and nonutility community solar garden facilities."").

¹⁵ Petition at 17-18.

¹⁶ Order Approving Shared Solar Pilot Program with Modification, Case No. 16-E-0622 (Aug. 2, 2017); Robert Walton, *Con Edison Approved to Build Solar Generation for Low Income Customers*, Utility Dive (Aug. 4, 2017), www.utilitydive.com/news/con-edison-approved-to-build-solar-generation-for-low-income-customers/448624.

serving low-income customers. Xcel was required to assume the state-mandated 5-percent low-income CSG carve-out through dedicated utility-owned low-income CSGs.¹⁷ In addition, the utility will hold an annual solicitation of 4 MW of CSGs "that commit to provide 100% of their output to qualified low-income customers," with bidders specifying incentive levels necessary to realize their projects.¹⁸ There will also be 500 kW of program capacity set aside for a low-income standard offer for dedicated CSGs up to 100 kW, with an elevated renewable energy credit (REC) incentive payment.¹⁹ The Colorado approach may be an interesting model for Minnesota to consider in the future, along with additional mechanisms to support the success of non-utility offerings. IREC encourages the Commission to monitor these other states' programs and will seek to share any useful information we are able to glean from them.

When utility ownership is limited just to facilities serving low-income customers, as in Xcel's Minnesota pilot proposal, and in Colorado and New York, unfair competition and discrimination may not be as much of an immediate concern, since utility ownership is constrained to a relatively small and underserved market segment. To the extent Xcel's pilot proposal may open the door to its participation in the general market, however, these issues become more critical, and will require more robust and detailed assurances. IREC notes that Oregon is currently tackling these issues within its shared solar program, which allows for both utility and non-utility ownership, by relying on an independent, third-party program

¹⁷ Decision No. C16-1075, Decision Granting Motion to Approve Settlement, Granting Motion for Waivers, Denying Motion to Dismiss Application, Ordering Tariff Filings, Addressing New Proceeding on Trial and Pilot Rate Programs, Addressing Recovery of Renewable Compliance Plan Costs, and Addressing Future Resource Acquisition, Proceeding Nos., 16AL-0048E, 16A-0055E, 16A-0139E, Att. A: Non-Unanimous Comprehensive Settlement Agreement, at 69 (Nov. 23, 2016) (CO Settlement).

¹⁸ CO Settlement at 69-72.

¹⁹ CO Settlement at 72.

administrator (instead of the utility) and incorporating other program design features to ensure as level a playing field as possible.²⁰ Utility participation only through an unregulated affiliate presents another possible strategy.²¹ IREC emphasizes our recommendation that the Commission monitor and, as necessary, revisit these topics as this pilot program scales and the CSG program evolves.

In the near term, IREC offers the following comments regarding each of Xcel's three principles, as well as a few recommendations for improvement.

1. No preferential treatment in interconnection queue

IREC agrees that this is a critical non-discriminatory principle and Xcel appears to offer a viable method for ensuring it is achieved: the third-party CSG developer will submit and manage the application for the pilot CSG, and Xcel will treat it like any other application. ²² Xcel states that it is "willing to publish this project's Solar*Rewards Community project number so any party has visibility into the queue status and milestones achieved by the developer." ²³ IREC believes such transparency would be valuable, especially if Xcel is able to scale its program and build additional facilities, and we encourage the Commission to require such publication.

2. No unfair reliance on grid or distribution system information

For this initial pilot project, Xcel will meet this guiding principle because the proposed project was introduced months ago by a party with no specialized knowledge of Xcel's system.²⁴ Therefore, the project had no competitive advantage over other projects with respect to grid

²⁰ Order No. 17-232, Docket No. AR 603 (June 29, 2017).

²¹ See IREC Guiding Principles for Shared Renewable Energy Programs (Feb. 2017), available at www.irecusa.org/publications/guiding-principles-for-shared-renewable-energy-programs (Guiding Principle No. 4: Promote Fair Market Competition).

²² Petition at 17.

²³ Petition at 17.

²⁴ Petition at 17-18.

location. IREC questions how Xcel could maintain this principle as it scales its program, however, as it is not clear whether or not a third-party developer would always approach Xcel with a project in hand, versus Xcel soliciting or otherwise seeking out projects. We recommend that the Commission require Xcel to provide additional detail on this point in a future filing regarding scaling the program, as suggested above in Section II.A.

Moreover, this principle raises an important question regarding the value of system data transparency for all projects. IREC suggests that the Commission should ultimately encourage both Xcel and non-utility providers to site projects in low-cost and high-benefit locations, in part by ensuring that all projects have access to the necessary system data to inform such siting. The Commission could prevent Xcel's "unfair reliance" on system data by requiring appropriate third-party access to relevant system data, to avoid information asymmetry and discriminatory treatment. When combined with appropriate price signals, 25 such information transparency can allow CSGs to maximize their value to the grid and all customers, in addition to meeting the particular needs and interests of their participants. Therefore, while IREC supports this principle at this time, we encourage the Commission to revisit this idea as the program scales and as it explores similar ideas in other proceedings, such as Docket No. E999/CI-15-556. 26

²⁵ See September 6 Order at 14 ("The Commission will also require Xcel, beginning with the 2018 value-of-solar rate, to use location-specific avoided costs in calculating avoided distribution capacity. Part of the benefit of distributed generation derives from its location on the grid; by being located near load, it reduces local peak demand and defers the need for distribution-system upgrades. The approved methodology allows a utility to calculate its value-of-solar rate using either location-specific or system-wide avoided distribution-capacity costs. In its filings to date, Xcel has used system-wide avoided distribution-capacity costs to calculate the value-of-solar rate. To fully reflect the value of distributed solar generation, however, Xcel will be required to begin including location-specific avoided costs in its 2018 value-of-solar calculations.").

²⁶ See, e.g., Notice of Comment Period on Distribution System Planning Efforts and Considerations, Docket No. E999/CI-15-556, at 9 (April 21, 2017) (asking stakeholders to answer questions regarding "access to grid and planning data by customers and third parties").

3. No unfair reliance on customer data to target subscribers

Similar to the situation with the second principle above, for this initial pilot project, Xcel meets this principle through relying on its partner to target narrow group of potential subscribers who will qualify. Xcel states that is subscriber management partner "will have access to some customer data in the course of its normal provision of low income customer program services to the Company," but that there will be "no unfair reliance on the Company's customer records to target potential subscribers with an offer." While this approach may be appropriate for this initial pilot, IREC again questions how it would apply as the program scales. As for the second principle, we suggest that the Commission require Xcel to provide additional detail on this point in a future filing regarding scaling the program.

Likewise, IREC also views this principle as raising a broader issue about customer data sharing. As with system data, third-party providers may be able to benefit from appropriately shared customer data in order to reach customers and communities that may stand to benefit most from CSG participation. IREC recognizes that such data access raises questions related to customer privacy and warrants further discussion. Nonetheless, we suggest that the Commission explore whether appropriate customer data access for non-utility parties may be a better long-term solution to mitigating the concern about Xcel's "unfair reliance" on such data than Xcel's proposal to avoid relying on customer data to the extent possible. Therefore, as with the second principle above, while IREC supports this third principle at this time, we encourage the Commission to revisit this idea as the program scales.

²⁷ Petition at 18.

E. To implement the pilot program, Xcel is seeking approval of new tariff sheets (included as Attachment C to the Petition). Please comment on the proposed tariff sheets.

To respond to our concerns expressed above in Section II.B regarding adjustments to the net bill credit rate, RENEWs Solar*Rewards Community Enrollment Form, Terms & Conditions, Section 2, IREC suggests striking the last sentence ("The Community Solar Garden Operator in its sole discretion may alter or vary the Net Bill Credit rate as set forth in the RENEWs Enrollment Form upon written notification to the Subscriber or modifying per our comments above."). Alternatively, IREC suggests that the sentence could be modified to account for our suggestion in Section II.B above that Xcel only be allowed to modify the net bill credit rate if the VOS rate were to increase (i.e., if it would benefit the participating customer).

F. 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?

As mentioned above, IREC and other parties offered various proposals in Docket No. E-002/M-13-867, however ILSR was the only party besides Xcel to submit comments in response to the Commission's September 6 Order. ILSR's comments incorporate many recommendations similar to those prior filings, as well as IREC's *LMI Guidelines*. Rather than reiterate them here, IREC refers the Commission to our prior comments and our *LMI Guidelines*, which together discuss the opportunities, challenges, and other considerations to be aware of with respect to some of ILSR's suggested approaches.

Xcel's pilot proposal does not comport with several of ILSR's key program design recommendations. These include:

• Eligibility—ILSR supports defining "low-income" as a household that earns less than 80% of the area median income, or a customer that already participates in an existing means-based program, such as LIHEAP.²⁸ IREC agrees with this definition, which

²⁸ ILSR Comments at 1.

- comports with our *LMI Guidelines*. However, Xcel's pilot program would be available only to LIHEAP-eligible customers, consistent with the Commission's initial direction.
- Participation—ILSR states that "everyone should be able to participate in community solar, from education and development to subscription and ownership," and that "projects should be located throughout the utility service territory and community solar programs should maximize low-income participation, subscription, and employment." However, Xcel's pilot program is limited to a single 500-kW facility serving 160 customers, with no current plans to scale it such that it could be more broadly available. There is no mention of job-training or other employment-related efforts.
- Location—ILSR states that "community solar projects should favor locations that present the highest value to the grid and are closest to subscribers, that use existing structures, and that minimize siting on prime agricultural land. Ground-mounted projects should consider "pollinator friendly" habitat and should consider concomitant food production-e.g., free range fowl and sheep, as in England and Germany." While Xcel's pilot proposal comports in that the proposed project is close to subscribes and not on prime agricultural land, it does not consider grid values or other elements, nor does it indicate whether such considerations will be incorporated in any future projects. IREC suggested one approach to facilitating high-value grid locations in our discussion of system data access in Section II.D.2.
- Financial value and ownership—ILSR states that "community solar programs should favor subscriber-owned projects, allow for a variety of ownership structures, and provide both initial and long-term financial value to participants (including pass-through benefits for low-income renters whose landlords opt in)." However, Xcel's pilot proposal only allows for one utility-owned project, and does not favor or even allow for participant-owned projects. While Xcel would ensure that customers are not subject to any extra costs, it is unclear whether the program would result in any significant value for participants, beyond a relatively limited anticipated bill credit.

While Xcel's proposal does comport with certain of ILSR's recommendations—including specifically integration with existing programs (energy efficiency), and incorporation of a tracking and reporting component—it does not achieve the vision that ILSR provides. Like IREC and other commenters in Docket No. E-002/M-13-867, ILSR offers a number of ways that the Commission could promote low-income access more broadly, beyond participation in a single Xcel-owned offering. As discussed above in Section II.A, IREC encourages the

²⁹ ILSR Comments at 2.

³⁰ ILSR Comments at 2.

³¹ ILSR Comments at 2.

Commission to consider ILSR's and other parties' prior comments, and to revisit the development of additional program design components and other mechanisms to complement Xcel's utility-owned approach and more broadly enable low-income access.

G. 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?

IREC emphasizes the importance of tracking and reporting for the pilot, both to demonstrate whether or not it is meeting its intended goals, as well as to inform any changes to the initial project or modifications to the program design to support future projects. IREC supports Xcel's proposed reporting criteria: "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."³² We further support: reporting the impacts of the energy efficiency measures installed; reporting the cost of delivering the proposed pilot offering (administration, outreach, equipment, and delivery labor); identification and reporting on the non-energy benefits delivered to the neighborhood (employment, education, vacancy losses, or health and safety benefits); identification and reporting of drivers and barriers to participation in low-income community solar garden, and opportunities for additional energy efficiency improvements or incorporation of new technologies that may result in greater or more cost-effective energy savings. 33 IREC agrees that the low-income pilot report should be separate from Xcel's other CSG reporting obligations.³⁴

³² Petition at 16.

³³ Petition at 16-17.

³⁴ Petition at 9.

Regarding reporting on the cost of delivering the proposed pilot offering, IREC suggests that the cost breakdown should, to the extent possible, indicate the costs related to the CSG project and offering versus the costs associated with the energy-efficiency component of the program. IREC recognizes that some costs will be related to both program components and it may not be possible to break them out in each case. However, providing as much specific detail on the CSG cost components as possible will help the Commission and stakeholders to assess the value of this element of the program.

Regarding identification and reporting of drivers and barriers to participation in low-income CSGs, as well as "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," IREC emphasizes that these elements will be critical to informing expansion of the program to serve more customers. Xcel states that the "intent of the pilot is to explore the development of a model to combine the implementation of energy efficiency measures and access to renewable energy in traditional underserved markets by targeting a geographically defined area and leveraging local resources." Beyond the identified reporting elements, however, Xcel does not articulate its plan to expand the model. IREC suggests that the Commission require Xcel to draft its report with an eye toward making its pilot into a full-fledged program, and identifying any programmatic changes or next steps required to do so.

Regarding identification and reporting of opportunities to incorporate new technologies that may result in greater or more cost-effective energy savings, IREC recommends that the Commission direct Xcel specifically to consider energy storage in this context. As the Commission is aware, energy storage holds immense promise for utilities and their customers,

³⁵ Petition at 16.

and, as its costs continue to decline, it will become more feasible to pair it with solar (including CSGs) and otherwise facilitate its incorporation into the utility system.

Finally, as discussed above in Section II.D, IREC suggests the Commission require Xcel to report on its compliance with its three principles related to non-discrimination, and any issues or learnings that arise. These are critical program elements that may need to evolve over time, and clear reporting and analysis can help inform future changes.

H. Should the Commission take up the issue of cost recovery separately at a later time?

IREC has no comment at this time regarding the timing of addressing cost recovery.

As indicated in Section II.G above, IREC supports reporting on program costs to aid in understanding the degree of the program's success and to improve future iterations of the program model. IREC would also support Xcel separately tracking and accounting for costs, if possible, as we believe that would aid in transparency and reporting related to costs. ³⁶ In addition, if CSG costs are unexpectedly higher, such that participating customers cannot fully bear them because they would result in net billing costs for those customers, then IREC suggests that Xcel and the Commission would have to assess the possibility that ratepayers would have to pay those excess costs. While Xcel does not seem to anticipate that this situation would arise, careful cost tracking and reporting can help shed light on any such issues that may arise in a timely manner.

I. What other parts of Xcel's proposal require additional clarification?

While IREC is supportive of Xcel's pilot proposal, we are concerned by Xcel's framing of it and of the CSG program generally.³⁷ In its Petition, Xcel mischaracterizes Minnesota's

³⁶ See Petition at 10.

³⁷ Petition at 4 (quoting prior concept proposal filing in Docket No. E-002/M-13-867).

successful CSG program and the motivations for ensuring that low-income customers can access it. IREC urges the Commission to expressly reject Xcel's statements on these points.

First, Xcel states that "...community solar is not intended to be a discount service. As the Company has highlighted in this record, participants in community solar elsewhere in Minnesota and across the country access similar programs at a premium price compared to retail service." In fact, nearly all other state-level community or shared renewable energy programs comparable to Minnesota's allow for customer bill savings, and such savings are a primary motivator for many customers to participate in these programs. The desire to ensure that low-income customers can participate is driven in large part by an interest in allowing them access to those energy bill savings. As the Commission noted in its September 6 Order, and consistent with IREC's *LMI Guidelines*, obstacles to such access include: "lack of funds to make an up-front investment, an insufficient credit score, limited internet access, language barriers, and constrained time and resource." Xcel's pilot proposal and any future low-income CSG efforts should address these barriers in order to improve access for low-income customers to bill savings and other CSG benefits. Overcoming these barriers is the reason that the Commission required Xcel "to create a point of access for low income customers."

Second, Xcel states that "...the structure of Solar*Rewards Community is a relatively poor fit for efficiently reducing customer bills. This is because all customers fund the bill credit

³⁸ Petition at 4.

³⁹ See, e.g., Smart Electric Power Association (SEPA), What the Community Solar Customer Wants (Aug. 2016), available at https://sheltongrp.com/insights/ty-community-solar (based on marketing research, concluding that "reduced energy costs" are "by far the top cited driver for those interested in solar (66%)").

⁴⁰ September 6 Order at 19-20; *see also* IREC *LMI Guidelines* at 11-17 (identifying financial barriers, ownership barriers and split incentives, and marketing, education, and outreach barriers).

⁴¹ Petition at 4.

for participating subscribers—including Residential class customer with low incomes. All customers pay more for the participation of a few, and this cost burden grows as the program grows."⁴² These statements are unsubstantiated and do not account for the benefits that CSGs may bring to the system or other ratepayers. Indeed the VOS rate is explicitly designed to account for the benefits and translate their value to participants. Thus, the underlying premise of relying on the VOS for this pilot and for CSGs more generally is that ratepayers should be indifferent when CSGs are compensated via a VOS rate. IREC strongly urges the Commission to repudiate Xcel's statements on this issue.

Finally, Xcel states that third-party providers are not serving low-income customers, citing higher customer acquisition and service costs, as well as financing obstacles. HEC recognizes that a bias towards proportionally higher-income customers (and non-residential customers) has existed under Minnesota's current program design and that so far the program has not meaningfully expanded access for low-income customers, and we support the Commission's and Xcel's efforts to address this issue. However, we do not agree with Xcel that this is a failure on the part of participating solar developers because they have "fallen short" of expectations. Rather, these providers are responding to program design and market forces. IREC suggests that program design modifications, such as differentiated bill credits or prescriptive measures, can

⁴² Petition at 4.

⁴³ Minn. Stat. § 216B.164, subd. 10(a) (indicating that the VOS methodology can be used for a tariff "that compensates customers through a bill credit mechanism for the value to the utility, its customers, and society for operating distributed solar photovoltaic resources interconnected to the utility system and operated by customers primarily for meeting their own energy needs."); *see also* Order Approving Distributed Solar Value Methodology, Docket No. E-999/M-14-65, at 15-16 (April 1, 2014) (indicating Commission determination that Dept. of Commerce methodology meets the statutory requirements).

⁴⁴ Petition at 4.

⁴⁵ Petition at 4.

help to drive different CSG compositions, should the Commission determine such a change to be

a priority. As noted above, stakeholders have offered a number of mechanisms to help drive

more low-income customer access and participation in third-party offerings, and could serve to

encourage providers to better meet the Commission's policy goals.

As the Commission is aware, Minnesota's CSG program has seen dramatic customer

interest. Projects continue to be installed and offer customers real economic and non-economic

benefits. The goal of Xcel's low-income pilot and any other low-income CSG efforts should be

to open these opportunities to low-income customers, as well. IREC urges the Commission to

reject Xcel's framing of this opportunity as inconsistent with its September 6 Order and the

underlying goals of this effort to improve low-income CSG access.

III. **CONCLUSION**

IREC appreciates the opportunity to provide these comments on Xcel's pilot proposal.

IREC strongly supports the Commission's and Xcel's efforts to improve low-income customer

access to and participation in community solar gardens, and we look forward to continuing our

participation in this proceeding.

Dated: September 15, 2017

SHUTE, MIHALY & WEINBERGER LLP

By: /s/ Erica S. McConnell

ERICA S. McCONNELL

396 Hayes Street

San Francisco, California 94102

Telephone:

(415) 552-7272

Facsimile:

(415) 552-5816

mcconnell@smwlaw.com

Attorneys for Interstate Renewable Energy

Council. Inc.

22

CERTIFICATE OF SERVICE

Docket No. E-002/M-17-527

I, the undersigned, state that I am a citizen of the United States and am employed in the City and County of San Francisco; that I am over the age of eighteen (18) years and not a party to the within cause; and that my business address is 396 Hayes Street, San Francisco, CA 94102.

On September 15, 2017, I served a true and correct copy of

COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC. ON XCEL ENERGY'S PETITION FOR APPROVAL OF A CUSTOMER ACCESS JOINT PILOT PROGRAM

on the parties in this action as follows:

SEE ATTACHED SERVICE LIST

BY ELECTRONIC FILING: I caused a copy of the document(s) to be sent to the e-mail addresses of the persons designated as accepting electronic service on the Official Service List by using the eService feature of the eFiling application of the Minnesota Public Utilities Commission.

BY MAIL: I enclosed the document(s) in a sealed envelope addressed to the persons designated as requiring paper service on the Official Service List. I am readily familiar with Shute, Mihaly & Weinberger LLP's practice for collecting and processing correspondence for mailing. On the same day that the correspondence is placed for collection and mailing, it is deposited in the ordinary course of business with the United States Postal Service, in a sealed envelope with postage fully prepaid.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed in San Francisco, California on September 15, 2017.

	/s/Amy Zehring
'-	Amy Zehring

912726.7

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
David	Aafedt	daafedt@winthrop.com	Winthrop & Weinstine, P.A.	Suite 3500, 225 South Sixth Street Minneapolis. MN 554024629	Electronic Service	No	OFF_SL_17-527_M-17-527
Ross	Abbey	rabbey@mnsolarconnectio n.com	Bright Green Consulting	345 St. Peter Street Suite 1600 St. Paul, MN 55102	Electronic Service	No	OFF_SL_17-527_M-17-527
Michael	Allen	michael.allen@allenergysol ar.com	All Energy Solar	721 W 26th st Suite 211 Minneapolis, Minnesota 55405	Electronic Service	No	OFF_SL_17-527_M-17-527
David	Amster Olzweski	david@mysunshare.com	SunShare, LLC	1774 Platte St Denver, CO 80202	Electronic Service	No	OFF_SL_17-527_M-17-527
Julia	Anderson	Julia.Anderson@ag.state.m n.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_17-527_M-17-527
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_17-527_M-17-527
Alison C	Archer	aarcher@misoenergy.org	MISO	2985 Ames Crossing Rd Eagan, MN 55121	Electronic Service	No	OFF_SL_17-527_M-17-527
Sara	Baldwin Auck	sarab@irecusa.org	Interstate Renewable Energy Council, Inc.	PO Box 1156 Latham, NY 12110	Electronic Service	No	OFF_SL_17-527_M-17-527
Ryan	Barlow	Ryan.Barlow@ag.state.mn. us	Office of the Attorney General-RUD	445 Minnesota Street Bremer Tower, Suite of St. Paul, Minnesota 55101	Electronic Service 1400	No	OFF_SL_17-527_M-17-527
James J.	Bertrand	james.bertrand@stinson.co m	Stinson Leonard Street LLP	150 South Fifth Street, Suite 2300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
William A.	Blazar	bblazar@mnchamber.com	Minnesota Chamber Of Commerce	Suite 1500 400 Robert Street Nor St. Paul, MN 55101	Electronic Service th	No	OFF_SL_17-527_M-17-527
Kenneth	Bradley	kbradley1965@gmail.com		2837 Emerson Ave S Apt CW112 Minneapolis, MN 55408	Electronic Service	No	OFF_SL_17-527_M-17-527
Michael J.	Bull	mbull@mncee.org	Center for Energy and Environment	212 Third Ave N Ste 560 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_17-527_M-17-527
Jessica	Burdette	jessica.burdette@state.mn. us	Department of Commerce	85 7th Place East Suite 500 St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-527_M-17-527
James	Canaday	james.canaday@ag.state. mn.us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota St. St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-527_M-17-527
Jeanne	Cochran	Jeanne.Cochran@state.mn .us	Office of Administrative Hearings	P.O. Box 64620 St. Paul, MN 55164-0620	Electronic Service	No	OFF_SL_17-527_M-17-527
John	Coffman	john@johncoffman.net	AARP	871 Tuxedo Blvd. St, Louis, MO 63119-2044	Electronic Service	No	OFF_SL_17-527_M-17-527
Corey	Conover	corey.conover@minneapoli smn.gov	Minneapolis City Attorney	350 S. Fifth Street City Hall, Room 210 Minneapolis, MN 554022453	Electronic Service	No	OFF_SL_17-527_M-17-527
Carl	Cronin	Regulatory.records@xcele nergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_17-527_M-17-527
Arthur	Crowell	Crowell.arthur@yahoo.com	A Work of Art Solar	14333 Orchard Rd. Minnetonka, MN 55345	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Joseph	Dammel	joseph.dammel@ag.state. mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St. Paul, MN 55101-2131	Electronic Service	No	OFF_SL_17-527_M-17-527
Timothy	DenHerder Thomas	timothy@cooperativeenerg yfutures.com	Cooperative Energy Futures	3500 Bloomington Ave. S Minneapolis, MN 55407	Electronic Service	No	OFF_SL_17-527_M-17-527
James	Denniston	james.r.denniston@xcelen ergy.com	Xcel Energy Services, Inc.	414 Nicollet Mall, Fifth Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_17-527_M-17-527
lan	Dobson	Residential.Utilities@ag.sta te.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_17-527_M-17-527
Jason	Edens	jason@rreal.org	Rural Renewable Energy Alliance	3963 8th Street SW Backus, MN 55435	Electronic Service	No	OFF_SL_17-527_M-17-527
Betsy	Engelking	betsy@geronimoenergy.co m	Geronimo Energy	7650 Edinborough Way Suite 725 Edina, MN 55435	Electronic Service	No	OFF_SL_17-527_M-17-527
John	Farrell	jfarrell@ilsr.org	Institute for Local Self- Reliance	1313 5th St SE #303 Minneapolis, MN 55414	Electronic Service	No	OFF_SL_17-527_M-17-527
Sharon	Ferguson	sharon.ferguson@state.mn .us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_17-527_M-17-527
Stephen	Fogel	Stephen.E.Fogel@XcelEne rgy.com	Xcel Energy Services, Inc.	816 Congress Ave, Suite 1650 Austin, TX 78701	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Nathan	Franzen	nathan@geronimoenergy.c om	Geronimo Energy	7650 Edinborough Way Suite 725 Edina, MN 55435	Electronic Service	No	OFF_SL_17-527_M-17-527
Hal	Galvin	halgalvin@comcast.net	Provectus Energy Development IIc	1936 Kenwood Parkway Minneapolis, MN 55405	Electronic Service	No	OFF_SL_17-527_M-17-527
Edward	Garvey	edward.garvey@AESLcons ulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_17-527_M-17-527
Allen	Gleckner	gleckner@fresh-energy.org	Fresh Energy	408 St. Peter Street Ste 220 Saint Paul, Minnesota 55102	Electronic Service	No	OFF_SL_17-527_M-17-527
Janet	Gonzalez	Janet.gonzalez@state.mn. us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-527_M-17-527
Sean	Gosiewski	sean@afors.org	Alliance for Sustainability	2801 21st Ave S Ste 100 Minneapolis, MN 55407	Electronic Service	No	OFF_SL_17-527_M-17-527
Todd J.	Guerrero	todd.guerrero@kutakrock.c om	Kutak Rock LLP	Suite 1750 220 South Sixth Stree Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_17-527_M-17-527
Timothy	Gulden	info@winonarenewableene rgy.com	Winona Renewable Energy, LLC	1449 Ridgewood Dr Winona, MN 55987	Electronic Service	No	OFF_SL_17-527_M-17-527
Michael	Harvey	mike@weknowsolar.com	We Know Solar	265 Mounds View Rd Suite #1 River Falls, WI 54022	Electronic Service	No	OFF_SL_17-527_M-17-527
Duane	Hebert	duane.hebert@novelenerg y.biz	Novel Energy Solutions	1628 2nd Ave SE Rochester, MN 55904	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Kimberly	Hellwig	kimberly.hellwig@stoel.co m	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527
Michael	Норре	il23@mtn.org	Local Union 23, I.B.E.W.	932 Payne Avenue St. Paul, MN 55130	Electronic Service	No	OFF_SL_17-527_M-17-527
Jim	Horan	Jim@MREA.org	Minnesota Rural Electric Association	11640 73rd Ave N Maple Grove, MN 55369	Electronic Service	No	OFF_SL_17-527_M-17-527
Jan	Hubbard	jan.hubbard@comcast.net		7730 Mississippi Lane Brooklyn Park, MN 55444	Electronic Service	No	OFF_SL_17-527_M-17-527
John S.	Jaffray	jjaffray@jjrpower.com	JJR Power	350 Highway 7 Suite 236 Excelsior, MN 55331	Electronic Service	No	OFF_SL_17-527_M-17-527
Julia	Jazynka	jjazynka@energyfreedomc oalition.com	Energy Freedom Coalition of America	101 Constitution Ave NW Ste 525 East Washington, DC 20001	Electronic Service	No	OFF_SL_17-527_M-17-527
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2265 Roswell Road Suite 100 Marietta, GA 30062	Electronic Service	No	OFF_SL_17-527_M-17-527
Linda	Jensen	linda.s.jensen@ag.state.m n.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	No	OFF_SL_17-527_M-17-527
Richard	Johnson	Rick.Johnson@lawmoss.co m	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Sarah	Johnson Phillips	sjphillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527
Julie	Jorgensen	Julie@greenmark.us.com	GreenMark Community Solar LLC	708 N. 1st St. #421 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_17-527_M-17-527
Michael	Kampmeyer	mkampmeyer@a-e- group.com	AEG Group, LLC	260 Salem Church Road Sunfish Lake, Minnesota 55118	Electronic Service	No	OFF_SL_17-527_M-17-527
Mark J.	Kaufman	mkaufman@ibewlocal949.o rg	IBEW Local Union 949	12908 Nicollet Avenue South Burnsville, MN 55337	Electronic Service	No	OFF_SL_17-527_M-17-527
John	Kearney	jmkearney@MnSEIA.org	MnSEIA	2512 33rd Ave S Minneapolis, MN 55406	Electronic Service	No	OFF_SL_17-527_M-17-527
Madeleine	Klein	mklein@socoreenergy.com	SoCore Energy	225 W Hubbard Street Suite 200 Chicago, IL 60654	Electronic Service	No	OFF_SL_17-527_M-17-527
Brad	Klein	bklein@elpc.org	Environmental Law & Policy Center	35 E. Wacker Drive, Suite 1600 Suite 1600 Chicago, IL 60601	Electronic Service	No	OFF_SL_17-527_M-17-527
Thomas	Koehler	TGK@IBEW160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_17-527_M-17-527
Jon	Kramer	sundialjon@gmail.com	Sundial Solar	3209 W 76th St Edina, MN 55435	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Krause	michaelkrause61@yahoo.c om	Kandiyo Consulting, LLC	433 S 7th Street Suite 2025 Minneapolis, Minnesota 55415	Electronic Service	No	OFF_SL_17-527_M-17-527
Michael	Krikava	mkrikava@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527
Douglas	Larson	dlarson@dakotaelectric.co m	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_17-527_M-17-527
Peder	Larson	plarson@larkinhoffman.co m	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_17-527_M-17-527
Dean	Leischow	dean@sunrisenrg.com	Sunrise Energy Ventures	315 Manitoba Ave Wayzata, MN 55391	Electronic Service	No	OFF_SL_17-527_M-17-527
Paula	Maccabee	Pmaccabee@justchangela w.com	Just Change Law Offices	1961 Selby Ave Saint Paul, MN 55104	Electronic Service	No	OFF_SL_17-527_M-17-527
Peter	Madsen	peter.madsen@ag.state.m n.us	Office of the Attorney General-DOC	Bremer Tower, Suite 1800 445 Minnesota Street St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_17-527_M-17-527
Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_17-527_M-17-527
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_17-527_M-17-527
Erica	McConnell	mcconnell@smwlaw.com	Shute, Mihaly & Weinberger LLP	396 Hayes St San Francisco, California 94102-4421	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Thomas	Melone	Thomas.Melone@AllcoUS.com	Minnesota Go Solar LLC	222 South 9th Street Suite 1600 Minneapolis, Minnesota 55120	Electronic Service	No	OFF_SL_17-527_M-17-527
Joseph	Meyer	joseph.meyer@ag.state.mn .us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_17-527_M-17-527
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_17-527_M-17-527
Andrew	Moratzka	andrew.moratzka@stoel.co m	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527
Martin	Morud	mmorud@trunorthsolar.co m	Tru North Solar	5115 45th Ave S Minneapolis, MN 55417	Electronic Service	No	OFF_SL_17-527_M-17-527
David	Niles	david.niles@avantenergy.c om	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_17-527_M-17-527
Rolf	Nordstrom	mordstrom@gpisd.net	Great Plains Institute	2801 21ST AVE S STE 220 Minneapolis, MN 55407-1229	Electronic Service	No	OFF_SL_17-527_M-17-527
Jeff	O'Neill	jeff.oneill@ci.monticello.mn .us	City of Monticello	505 Walnut Street Suite 1 Monticelllo, Minnesota 55362	Electronic Service	No	OFF_SL_17-527_M-17-527
Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	OFF_SL_17-527_M-17-527
Jeff	Oxley	jeff.oxley@state.mn.us	Office of Administrative Hearings	600 North Robert Street St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Eric	Pasi	ericp@ips-solar.com	Innovative Power Systems Solar	2670 Patton Rd Roseville, MN 55113	Electronic Service	No	OFF_SL_17-527_M-17-527
Dan	Patry	dpatry@sunedison.com	SunEdison	600 Clipper Drive Belmont, CA 94002	Electronic Service	No	OFF_SL_17-527_M-17-527
Jeffrey C	Paulson	jeff.jcplaw@comcast.net	Paulson Law Office, Ltd.	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_17-527_M-17-527
Gayle	Prest	gayle.prest@minneapolism n.gov	City of Mpls Sustainability	350 South 5th St, #315 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_17-527_M-17-527
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_17-527_M-17-527
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-527_M-17-527
Inga	Schuchard	ischuchard@larkinhoffman. com	Larkin Hoffman	8300 Norman Center Drive Suite 1000 Minneapolis, MN 55437	Electronic Service	No	OFF_SL_17-527_M-17-527
David	Shaffer	shaff081@gmail.com	Minnesota Solar Energy Industries Project	1005 Fairmount Ave Saint Paul, MN 55105	Electronic Service	No	OFF_SL_17-527_M-17-527
Doug	Shoemaker	dougs@mnRenewables.or g	MRES	2928 5th Ave S Minneapolis, MN 55408	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Zeviel	Simpser	zsimpser@briggs.com	Briggs and Morgan PA	2200 IDS Center80 South Eighth Street Minneapolis. MN 554022157	Electronic Service	No	OFF_SL_17-527_M-17-527
Ken	Smith	ken.smith@districtenergy.c om	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_17-527_M-17-527
Byron E.	Starns	byron.starns@stinson.com	Stinson Leonard Street LLP	150 South 5th Street Suite 2300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527
James M.	Strommen	jstrommen@kennedy- graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Stree Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_17-527_M-17-527
Thomas P.	Sweeney III	tom.sweeney@easycleane nergy.com	Clean Energy Collective	P O Box 1828 Boulder, CO 80306-1828	Electronic Service	No	OFF_SL_17-527_M-17-527
Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_17-527_M-17-527
Lisa	Veith	lisa.veith@ci.stpaul.mn.us	City of St. Paul	400 City Hall and Courthouse 15 West Kellogg Blvd. St. Paul, MN 55102	Electronic Service	No	OFF_SL_17-527_M-17-527
Jason	Willett	jason.willett@metc.state.m n.us	Metropolitan Council	390 Robert St N Saint Paul, MN 55101-1805	Electronic Service	No	OFF_SL_17-527_M-17-527

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis. MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527
Cam	Winton	cwinton@mnchamber.com	Minnesota Chamber of Commerce	400 Robert Street North Suite 1500 St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_17-527_M-17-527
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_17-527_M-17-527
Patrick	Zomer	Patrick.Zomer@lawmoss.c om	Moss & Barnett a Professional Association	150 S. 5th Street, #1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-527_M-17-527