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February 24, 2015

**VIA ELECTRONIC FILING**

Burl W. Haar  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101

**Re: Initial Reply Comments  
Community Solar Garden Program  
Docket No. E002/M-13-867**

Dear Dr. Haar,

SunShare, LLC respectfully submits the attached *Initial Comments by SunShare, LLC in Reply to February 10 Comments by Northern States Power ("Xcel Energy")* regarding Xcel Energy's Comments filed in the above-mentioned docket.

Please do not hesitate to contact me if you have any questions.

Sincerely,

s/ Ross Abbey

Ross Abbey

SunShare, LLC  
Director of Business Development and  
Government Affairs – Minnesota

609 S. 10<sup>th</sup> Street, Suite 210  
Minneapolis, MN 55404  
(612) 345-8881  
ross@mysunshare.com

*On behalf of SunShare, LLC*

Cc: Appended Service List

**STATE OF MINNESOTA  
PUBLIC UTILITIES COMMISSION**

|                         |              |
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February 24, 2014

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

**Docket No. E002/M-13-867**

**INITIAL COMMENTS BY SUNSHARE, LLC IN REPLY TO FEBURARY 10  
COMMENTS BY NORTHEN STATES POWER (“XCEL ENERGY”)**

SunShare, LLC respectfully submits these Comments in response to the Commission's February 13, 2014 Notice of Comment Period in this docket.

SunShare was founded in 2011 to develop, own, and operate Community Solar projects. Since opening our Minnesota office in September 2014, we have grown to over 20 local employees, including engineering, land, project-management, sales, and legal professionals. SunShare is a regular participant in Xcel's Solar\*Rewards Community Implementation Workgroup.

Thank you for scheduling expedited briefing on this matter, as Xcel's February 10, 2014 Comments have inadvertently created a significant degree of market uncertainty, potentially delaying development timelines for the majority of Community Solar Garden (CSG) projects here in Minnesota. Combined with SunShare's pre-existing concerns regarding Xcel's interconnection transparency, this market uncertainty reduces developers' ability to build CSG projects during the 2015 construction window (slowing the delivery of customer benefits, along with solar-related job growth and economic development).

**SUMMARY OF COMMENTS**

As described in our detailed Comments below, SunShare requests that the Commission take the following actions:

- a. Resolve market uncertainty by clarifying that Xcel can and should continue to process CSG applications in a timely manner;
- b. Direct Xcel to develop a “pre-screen request” process under which prospective CSG interconnection applicants can pay Xcel for relevant engineering information for a point on Xcel's distribution system;
- c. Direct Xcel to provide information regarding the engineering and modeling parameters Xcel uses to establish the “transfer minimum daytime load” for CSG applications under Section 10;
- d. The Commission should clarify that S\*RC developers may change the site associated with a given S\*RC project application if necessary due to interconnection issues;

- e. Clarify that Xcel may allow a developer to assign the return of S\*RC project deposits directly to the deposit lender to reduce lender risk and enable the creation and financing of Community Solar Gardens;
- f. Require Xcel to clarify the applicability and impact of the Section 10 six-month validity clock;
- g. Reaffirm the Commission's September 17, 2014 Order regarding CSG site definition, and Deny Xcel permission to take any unilateral action to delay or disqualify co-located CSG interconnection requests; and
- h. Establish, if the Commission deems necessary, an appropriate timeframe, process, and methodology for estimating the S\*RC program's rate impact, if any.

We believe that these issues are procedurally ripe for consideration, and we urge prompt Commission action to ensure the success of the CSG program and support the many small businesses like ours seeking to build Community Solar Gardens in 2015 based on the Commission's September 2014 Order.

Going forward, we believe there may also be a need to develop a structural solution (e.g., incentives and penalties) to encourage and allow for rapid interconnection of distributed solar. As such, we welcome comments by the company and other stakeholders to achieve better alignment between Xcel Energy and applicants for Community Solar Garden interconnection.

## COMMENTS

### I. Section 10 interconnection process rules

To sustain a healthy 2015 and 2016 CSG construction season, we believe there are at least six issues regarding Xcel's interconnection rules (including those raised in Xcel's February 10 comments) that require near-term clarification by the Commission, to avoid jeopardizing the program with delays regarding the issues Xcel has raised, and we have encountered in the interconnection process.<sup>1</sup>

- 1) Xcel has sufficient authority to continue processing CSG interconnection applications, without delay, in support of 2015 project commissioning.

SunShare is sincerely concerned by Xcel's suggestion that it may unilaterally delay or disqualify distribution-level CSG applications by "referring" the developer "to the interconnection process managed by" MISO.<sup>2</sup> SunShare and other CSG developers are not attempting to connect to transmission wires or otherwise "interconnect" with MISO.

We thus request that the Commission deny the company permission to take any unilateral action of this sort, until such time as the Commission issues a ruling on this issue. The Commission should

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<sup>1</sup> If Xcel knows of, or believes there to be, any undisclosed utility-side issues that may prevent CSG project construction in 2015, we request that they notify the Commission now.

<sup>2</sup> Xcel Energy Feb. 10, 2015 Comments, 13-867, at 2. *Id.* at 3, fn. 2 ("As a practical matter, it is not clear that any proposed solar garden would be allowed to proceed as a solar garden if it would be subject to MISO procedures.")

also require Xcel to retain jurisdiction and continue to quickly process CSG applications under Section 10.

SunShare does not read Xcel's February 10 Comments as presenting a sufficient claim of (or argument for) MISO jurisdiction over co-located CSG projects.<sup>3</sup> Rather, Xcel implies that there may be some ambiguity within the Section 10 tariff as to whether and/or how Xcel should work with MISO if necessary for Xcel to approve a DG interconnection request.

Contrary to Xcel's assertion, SunShare believes that the Section 10 tariff is capable of efficiently handling a high volume of CSG interconnection requests, as seen under Xcel Minnesota's nation-leading, competitive Community Solar Garden program. That said, some portions of the tariff do require additional clarification, as described in the three sub-sections below.<sup>4</sup>

Finally, as noted in our Summary of Comments, there may also be a need for additional mechanisms to motivate Xcel to move quickly to solve problems and allocate additional resources to support market development, especially given the short timeframe before the expiration of the Federal Investment Tax Credit.

2) Xcel has an obligation to process all valid CSG interconnection requests with diligence.

*How should Xcel handle parallel and/or serial CSG interconnection applications by related entities when it suspects that the generators are collectively large enough to cause a back flow or power export to the transmission system?*

SunShare suggests that following the standard MISO rules would be a reasonable approach. According to MISO, if Xcel (the distribution-system owner) determines that there is no NERC violation associated with that power export (aka transmission back flow), Xcel does not need to contact MISO for engineering analysis.<sup>5</sup> See Exhibits A and B, attached.

On the other hand, if Xcel does determine that a given interconnection application could potentially cause a NERC issue, it would presumably need to coordinate with MISO on an affected system study, including possible System Impact Studies and Facilities Studies.<sup>6</sup>

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<sup>3</sup> FERC Order 2003-C (June 16, 2005) Docket No. RM02-1-006, at 18-19 ("FPA section 201(b)(1) . . . denies [FERC and ISO] jurisdiction 'over facilities used in local distribution' except as specifically provided in Parts II and III of the FPA."). See also FERC Order 2003-A (Mar. 5, 2004), Docket No. RM02-1-001; FERC Order 2003-B (Dec. 20, 2004), Docket No. Rm02-1-005; and FERC Order 2006A (Nov. 22, 2005) Docket No. RM02-12-001, at 50-51.

<sup>4</sup> See Xcel Energy Feb. 10, 2015 Comments, 13-867, at 4 ("neither the system nor its governing policies are designed to handle" the current level of CSG applications).

<sup>5</sup> "MISO Instructions for Interconnection Requests to the Distribution System," available at <https://www.misoenergy.org/Library/Repository/Study/Generator%20Interconnection/Distribution%20System%20Interconnection%20Request%20Instructions.pdf> (attached as "Exhibit A").

See also MISO "Generator Interconnection Study & Agreement Jurisdiction in MISO Footprint," available at [https://www.misoenergy.org/Library/Repository/Study/Generator%20Interconnection/GI-Jurisdiction\\_Flowchart.pdf](https://www.misoenergy.org/Library/Repository/Study/Generator%20Interconnection/GI-Jurisdiction_Flowchart.pdf) (attached as "Exhibit B").

<sup>6</sup> See *id.* As we understand it, these studies will determine how the DG owner may interconnect at the distribution level, along with the estimated cost of any required upgrades to the grid.

We thus respectfully ask the Commission to clarify that Xcel should follow MISO rules to the extent necessary to expeditiously process co-located CSG interconnection requests.

There is a second related question: *How does Xcel define and implement the threshold test for when Xcel will consider transmission issues related to CSG interconnection applications?*

This issue is important for CSG project timelines and cost-economics, because if the threshold is set too low (as a practical matter), it could trigger a high volume of costly transmission-level studies that may not actually be necessary from a technical engineering perspective.

The Section 10 tariff sets the threshold for transmission consideration at the point when the “Generation System’s total Nameplate Capacity” is greater than the “expected distribution substation minimum load.”<sup>7</sup> For CSG applications, Xcel appears to be interpreting the latter phrase as “transfer minimum daytime load”. But there is no additional clarity regarding the actual engineering and modeling parameters that Xcel will use to determine that value.<sup>8</sup>

To prevent inefficient study requirements and improve interconnection transparency, we ask the Commission and Xcel to provide this information to CSG developers upon request.

- 3) The Commission should require Xcel to provide timely, relevant transparency into available substation capacity.

As we stated in December, we believe the Commission should take action to improve the efficiency of Xcel’s CSG interconnection process “through improved predictability, transparency, and reporting”.<sup>9</sup> As shown in other states, increased interconnection transparency and cost-predictability will lead to better site planning and lower development and interconnection costs – benefiting Xcel, CSG developers, and their subscribers.

Unfortunately, as it stands today, the company is asking Minnesota CSG developers to pay roughly \$102,700 in CSG deposits and application fees before Xcel will provide basic capacity information regarding a given substation. We do not believe this was the intent of the Commission’s approval of Xcel’s S\*RC deposit requirement. Yet the current process (tariff plus business rules) is driving a significant number of deposit and fee payments before CSG developers are allowed basic insights into Xcel’s available interconnection capacity – leading artificially high and economically inefficient levels of churn for S\*RC project applications and deposits and a significantly inflated CSG queue (compared to expected actual construction levels).

For this reason, SunShare respectfully requests that the Commission direct Xcel to develop a “pre-screen request” or “feasibility study” process under which CSG developers could pay Xcel for more transparency into locations around Xcel’s distribution system.<sup>10</sup>

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<sup>7</sup> Xcel Energy MN Rate Book, Section 10, Sheet No. 83.

<sup>8</sup> Ideally, the modeling parameters including consideration of the expected characteristic daily power production profile of the solar facility in question.”

<sup>9</sup> SunShare’s December 29, 2014 Comments, at 4-5, incorporated herein by reference.

<sup>10</sup> We have raised this request multiple times at the Xcel S\*RC Implementation Workgroup, without resolution or proposed alternative solution. See e.g., January 7, 2015S\*RC Implementation Workgroup Meeting Minutes, at 2-3 (“Next steps: Further discussion at next Stakeholder Meeting”).

The company's feasibility report would provide a snapshot of the current available substation capacity, the number of DG interconnection applications (and requested MW capacity) currently in line for a given substation and/or feeder, the status of these interconnection requests, and other relevant information (incl. transformer loading).<sup>11, 12</sup> More bluntly, It would help developers to stop wasting their money, and Xcel's time, in processing CSG interconnection applications that have no reasonable chance to interconnect on a cost-effective basis.

Xcel already offers a "pre-screen request" (aka "feasibility study") service in Colorado, where they charge \$1,000 for solar projects under 250 kW and \$2,000 for solar projects over 250 kW.<sup>13</sup> For this basic fee, Xcel also provides developers with a "non-binding ballpark cost estimate for interconnection" within one to two weeks.<sup>14</sup> At the transmission level, MISO provides prospective small generators nine categories of engineering data, in return for a \$300 fee.<sup>15</sup> We believe that a \$300 fee similar to MISO's would be appropriate for Xcel Minnesota.

4) The Commission should clarify that S\*RC developers may change the site associated with a given S\*RC project application

As stated on December 29, SunShare believes that CSG developers should have the flexibility to change the project site location (for legitimate reasons) without having to submit a new S\*RC application.<sup>16</sup> This issue is closely related to the lack of interconnection transparency and other unsettled issues regarding interconnection discussed in the present Comments.

For example, a CSG developer may need to change a site location if Xcel's engineering studies reveal that interconnection of an initial S\*RC project location is cost-prohibitive. In that scenario, the developer would still have the full 24 months (under Section 9) to achieve CSG commissioning, but would need to submit a new Section 10 interconnection application for the new site location.

Of concern, Xcel has explained (at the S\*RC Implementation Workgroup) that, under its business rules, any change to a S\*RC application's site location would cause Xcel to deem the S\*RC application "incomplete" – even after the same application has already been "deemed complete" by Xcel.

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<sup>11</sup> In order to avoid wasteful duplication of costs, the feasibility-study fee should help offset the cost of a subsequent, timely filed interconnection application (if any).

<sup>12</sup> Prospective CSG applicants should also be allowed to pay for one question-and-answer meeting with the relevant utility-side engineer, which could help uncover other electrical constraints relevant to the proposed scale of CSG interconnection requests.

<sup>13</sup> See Xcel Energy, Solar\*Rewards Community – Interconnection Pre-Screen Request, *available at* <http://www.xcelenergy.com/staticfiles/xcel/Marketing/Files/CO-SR-PreScreen-Request.pdf>.

<sup>14</sup> *Id.* (To be clear, the pre-screen request does not hold a generator's place in the DG interconnection queue.)

<sup>15</sup> Small Generator Interconnection Agreements and Procedures, Order No. 792, 145 FERC ¶ 61,159 (2013), *available at* <http://www.ferc.gov/whats-new/comm-meet/2013/112113/E-1.pdf>. This Order does not apply directly to distribution owners; we reference it here only for context regarding engineering-transparency practices and study costs.

<sup>16</sup> SunShare December 29, 2014 Comments at 5.

For this reason, SunShare asks the Commission to clarify that once an S\*RC project application has been deemed initially “Complete”, Xcel cannot later revoke that finding of completeness (apart from situations where Xcel initially overlooked, but then later identified, a legitimate clerical defect with a CSG application filing).

Alternatively, the Commission could direct Xcel MN to adopt its Colorado business rule, which allows CSG developers to change the site of an S\*RC application once before requiring them to submit a new S\*RC application (and pay a second application fee).<sup>17</sup>

5) The Commission should clarify that S\*RC developers may assign deposit returns to the deposit lender

To enable developers to effectively cancel an existing S\*RC application and quickly re-deploy those funds into new S\*RC applications – as necessitated by the lack of interconnection transparency available to S\*RC applicants (incl. before the December 12, 2014 market open) – developers should be allowed to assign the return of S\*RC project deposits directly to the deposit lender.<sup>18</sup>

By reducing CSG lender risk around flow-of-funds (incl. potential lender concerns regarding security, fraud, and developer nonpayment), this will allow CSG developers to obtain lower-cost financing and increase the tempo at which recalled deposit fees may be redeployed in service of 2015 and 2016 CSG project construction. This is of exceptional importance to smaller companies like SunShare. Lenders want to know that if something happens to a company, how will Xcel know to return the deposit capital to those lenders.

We have had extensive discussions with Xcel regarding this request over the last three months, but the company has offered no commercially reasonable solution.<sup>19</sup> Unfortunately, it seems that the Xcel may believe itself bound by prior Commission Orders to return any and all CSG deposits to the CSG developer – rather than to the lender who provided the actual deposit, which would support improved financing of CSG projects.

For this reason, we ask the Commission to clarify that Xcel may allow a developer to assign the return of S\*RC project deposits directly to the deposit lender to reduce lender risk and enable the creation and financing of Community Solar Gardens.

6) How will the Section 10 six-month application validity clock impact CSG projects?

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<sup>17</sup> See Xcel Solar\*Rewards Community - Policy for Site Relocation, *available at* <https://www.xcelenergy.com/staticfiles/xe/Marketing/Files/CO-SRC-Guidelines-For-Site-Relocation.pdf> (“One site relocation is allowed without penalty as long as the original completion date is met.”)

<sup>18</sup> We have had extensive discussions with Xcel regarding this request, but the company has offered no commercially reasonable solution.

<sup>19</sup> See *also* Xcel Energy Jan. 13, 2015 Supplemental Comments, 13-867, at 5 (“We are also concerned about facilitating commercial solutions for developers in this way and have not yet assessed the scope of our own potential liability for these assignment transactions.”)

As noted in our December 29 comments, there is a concerning lack of clarity regarding how the 6-month “validity” clock in Section 10 will impact CSG interconnection requests.<sup>20</sup>

While this 6-month clock would appear to apply to all Section 10 interconnection requests (covering S\*RC developers and other distributed generators alike), the tariff language itself is vague and unclear. If applied to CSG projects, the rule could potentially prevent current S\*RC project applications from being constructed after mid-2016 (*i.e.*, more than six months after 2015 interconnection approval).

The Commission should thus require Xcel to clarify:

- (i) when does the Section 10 six-month validity clock start and stop, precisely;
- (ii) what is the practical impact (*e.g.*, on application queuing) of Xcel deeming an approved Section 10 Application to be no longer “valid” as the term is used in Section 10; and
- (iii) to which categories of Section 10 interconnection applications the six-month clock applies.

## II. CSG site-definition rule

In its September 17, 2014 Order, the Commission required Xcel to replace its initial definition of “community solar garden site” with a definition stating that: “Multiple Community Solar Garden Sites may be situated in close proximity to one another in order to share in distribution infrastructure.”<sup>21</sup>

By drawing this Section 9 site definition into question, Xcel’s February 10 Comments would appear to be an untimely *de facto* Request for Reconsideration of the Commission’s September Order.

The company’s February 10 Comments were also surprising, in that Xcel never raised its alleged concerns regarding the co-location rule with developers in S\*RC Implementation Workgroup. As the group’s primary agenda-setter, the company could have easily scheduled an agenda item to discuss any concerns it had with co-location, as well as receive stakeholder input. (More generally, members of the Workgroup have repeatedly asked Xcel to outline any concerns, staffing updates, engineering issues or other material issues that could both the smooth rollout of the program.)

Procedural issues aside, SunShare does not believe that Xcel has articulated a justifiable reason to restrict co-located projects sized above a particular one-size-fits-all numerical limit. Co-location has clearly been allowed up to this point, and the practice is already constrained by distribution and engineering considerations, along with subscriber-proximity requirements (in statute) and non-program factors related to land contracts and local-government zoning ordinances.

We thus reject Xcel’s proposed interpretation of Section 10, as summarized in the Commission’s February 13 Notice Seeking Comments.

In terms of limiting potential harm to CSG developers, SunShare and others have been operating under the current site-definition understanding since the September 2014 Order – obtaining site

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<sup>20</sup> SunShare’s December 29, 2014 Comments at 5. See also Xcel Energy MN Rate Book, Section 10, Sheet No. 94. (“An approved [interconnection] Application is valid for 6 months from the date of the approval.”).

<sup>21</sup> September 17, 2014 Order at 14-15.



control, submitting Xcel program deposits and fees, and entering into business contracts based on this understanding.

Unfortunately, Xcel's February 10 filing has caused market uncertainty regarding the status of relatively larger groups of CSG projects, and CSG projects more generally.<sup>22</sup> For this reason, we ask that the Commission move as fast as possible to resolve this new uncertainty in the market place by reaffirming your September 17, 2014 Order regarding site definition.

Alternatively, the Commission could articulate a near-term grandfathering principal (sheltering co-located S\*RC applications submitted to date), combined with a longer-term timeline or set of conditions under which it would re-examine the site definition based on accumulated utility experience and market data. From a policy perspective, the Commission may also want to consider more-finely grained, cost- or market-based mechanisms for influencing the extent of co-located CSG projects.<sup>23, 24</sup>

### III. State Law and Legislative Intent

In May 2013, the Minnesota Legislature adopted, and Governor Dayton signed into law, Minn. Stat. 261B.1641 as part of a package of policies intended to prioritize and accelerate development of the state's solar PV market, which also included *inter alia*:

- A Solar Energy Standard that requires investor-owned utilities to procure 1.5% of their eligible retail sales from solar generation by 2020;<sup>25</sup> and
- A statutory goal that “by 2030, ten percent of the retail electric sales in Minnesota be generated by solar energy”.<sup>26</sup>

In this context, Minn. Stat. § 216B.1641 was obviously intended to help Minnesota to meet its ambitious 2020 and 2030 solar goals and beyond.

As demonstrated by the record, the CSG statute was also intended:

[T]o allow . . . for expanded customer self-generation by: (1) allowing for more optimal solar PV siting and more economical project scale; (2) helping to reduce the high initial costs associated with on-site solar PV [and] improving customer access to PV generation through simplified administrative process.<sup>27</sup>

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<sup>22</sup> Fresh Energy, SunEdison, SunShare, and Sunrise Energy Ventures Feb. 20, 2015 Letter, 13-867, at 1.

<sup>23</sup> For example, Xcel's Section 10 scoping study fee appears to be the same for all CSG sites with a combined capacity of 1 MW or above. Contrary to Xcel's regulatory posture, this fee structure would tend to encourage CSG developers to maximize project co-location (to spread study costs across more 1-MW interconnection applications), while undermining the economics of single-sited CSG projects.

<sup>24</sup> SunShare understands that the Commission's October 9, 2014 Notice of Comment, set to expire on close on May 2nd, requests stakeholder input on design features of the (available, but not yet elected) value-of-solar rate for CSG subscribers.

<sup>25</sup> Minn. Stat. 216B.1691, Subd. 2f.

<sup>26</sup> Minn. Stat. 216B.1691, Subd. 2f (a), (c).

<sup>27</sup> Fresh Energy Nov. 11, 2013 Initial Revised Comments, 13-867, at 1-2.

In contrast, the company's February 10 Comments states that:

We believe the purpose of the community solar garden legislation was to provide our residential and small business customers, who have limited land, capital and/or resources, access to distributed solar generation . . . .<sup>28</sup>

Xcel's overly-restrictive characterization of the legislative intent, including the implication that subscriptions should be restricted to certain customer classes, is contrary to both the statute and the record.<sup>29</sup>

Xcel and others have also commented on the "unexpected" level of S\*RC project applications. But the fact that the program's 2015 application numbers have exceeded Xcel's initially proposed 10 MW per-year market cap says more about the latter than the former. (As the Commission ruled in April 2014, Xcel's attempt to place an arbitrary cap on the pace and scale of CSG development was not supported by statute or the public interest.<sup>30</sup>)

Contrary to inaccurate media reports, many observers predicted a strong market response in advance of the December 2014 opening of Xcel's CSG program. Indeed, over 12 months prior, Fresh Energy predicted in this docket that "it would be reasonable for the Commission to expect that CSG facilities supply at least a third of the utility's solar requirement by 2020."<sup>31</sup>

As the Commission itself noted "[a]llowing maximum garden development in the early years of the program is particularly critical to allow developers to take advantage of the federal Investment Tax Credit before it expires."<sup>32</sup>

In this context, the healthy market response to Xcel's S\*RC program represent a good start towards satisfying the state's 2020 and 2030 solar goals, while also taking advantage of cost-reducing market competition among solar developers.

#### **IV. Rate-Impact Methodology**

As with the co-location rule, Xcel has raised no concerns regarding alleged fuel-cost-adjustment impact with developers at the S\*RC Implementation Workgroup. In particular, Xcel requested (and thus received) no Workgroup input regarding an appropriate / reasonable methodology for estimating potential fuel-cost-adjustment impact.

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<sup>28</sup> Xcel Energy Feb. 10, 2015 Comments, 13-867, at 2, 4-5.

<sup>29</sup> See Minn. Stat. 216B.1641(h)(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"). See *also* Fresh Energy June 2, 2014 Answer to Motion to Show Cause, 13-867, at 5-6 ("[C]ommercial subscribers . . . should have the same opportunity as other subscribers to participate in Xcel's program and receive fair compensation for the value they deliver to the utility, its customers, and society.")

<sup>30</sup> April 7, 2014 Order at 1, 7. ("A capacity limit holds the potential to delay the growth of solar gardens and limit opportunities for subscribers to participate in the program.")

<sup>31</sup> Fresh Energy Dec. 3, 2013 Supplemental Initial Comments, 13-867, at 5-6.

<sup>32</sup> Apr. 7, 2014 Order Rejecting Xcel's Solar-Garden Tariff Filing and Requiring the Company to File a Revised Solar-Garden Plan, at 7.

If Xcel had requested such input, they likely could have avoided publishing a flawed back-of-the-envelope calculation based on a number questionable assumptions.

For one example, Xcel assumes that the entire CSG fleet will be 100% subscribed all of the time – rather than produce at least some unsubscribed energy (for which Xcel pays a much lower rate). Given basic realities around CSG marketing lead times and subscriber churn, that assumption seems overly aggressive.

For a second example, Xcel's calculation assumes that 100% of developers' S\*RC project applications to date will accomplish final commissioning within 24 months.<sup>33</sup> This is not realistic. As SunShare stated in December, of the 427 applications that Xcel received in the first week, "it seems likely that a number of these S\*RC projects will . . . fail to achieve commercial operation" due to interconnection hurdles, including projects later determined to be improperly sited due to the lack-of-transparency issues discussed in section II, above.<sup>34</sup> (For comparison, in Colorado, which has better interconnection-transparency rules, roughly half or more of the applied-for CSG program capacity has been self-eliminated by the applicants.)<sup>35</sup>

More generally Xcel's proposed methodology also appears to be inconsistent and in conflict with the Commission's 2014 "VOST" Order establishing a rigorous methodology for valuation of solar resources that connect to Xcel's distribution system.<sup>36</sup> Indeed, Xcel's June 2014 Reply Comments in this docket included detailed numeric values for a number of non-energy benefits that distributed solar generators provides to Xcel and its ratepayers - most of which are missing from Xcel's February 10th rate-impact calculation.<sup>37</sup> CSG projects will deliver these quantifiable non-energy benefits to Xcel and its ratepayers, so it seems only fair that these benefits be included in any rate-impact calculation.

If the Commission does deem it advisable to estimate the impact of Xcel's S\*RC Program on its Fuel Clause Adjustment rate, we would request notice and a reasonable opportunity to comment regarding the most appropriate timeframe, process, and methodology for estimating said impact, if any.

## CONCLUSION

In conclusion, in the absence of additional relevant information from Xcel Energy or other Community Solar stakeholders, we believe that the Commission should take the actions summarized and described above, in order to restore market certainty, guide Xcel's actions, and support a robust competitive Community Solar market in service of the state's 10 percent solar goal and other relevant policy goals.

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<sup>33</sup> Xcel Energy MN Rate Book, Section 9, Sheet No. 67 ("The applicant shall complete the project within twenty-four (24) months from the Company finding that the application is complete.").

<sup>34</sup> Sunk costs related to this issue are still being spent (primarily on the developer side), but could be mitigated through improved interconnection transparency, as discussed in section II.3, above.

<sup>35</sup> Based on our experience with Xcel's Solar\*Rewards Community program in Colorado, where we have submitted roughly twenty CSG interconnections applications to date.

<sup>36</sup> See April 1, 2014 Order Approving Distributed Solar Value Methodology.

<sup>37</sup> See, e.g., Xcel Energy June 19, 2014 Reply Comments, 13-867, at 7.

As before, we thank the Commission for its diligent work in overseeing Xcel's administration of Minn. Stat. 216B.1641.

Very truly yours,

/s/ Ross Abbey  
Ross Abbey

SunShare, LLC  
Director of Business Development and  
Government Affairs - Minnesota

609 S. 10<sup>th</sup> Street, Suite 210  
Minneapolis, MN 55404  
(612) 345-8331  
ross@mysunshare.com

*On behalf of SunShare, LLC*

## Exhibit A



## **MISO instructions for Interconnection Requests to the Distribution System**

Attachment X of the MISO Tariff only covers requests for interconnection to the Transmission System. Interconnection requests for facilities over which functional control was not transferred to MISO should be made to the owner of those facilities. Coordination is often required between the owner of the distribution facilities, the Transmission Owner, and MISO.

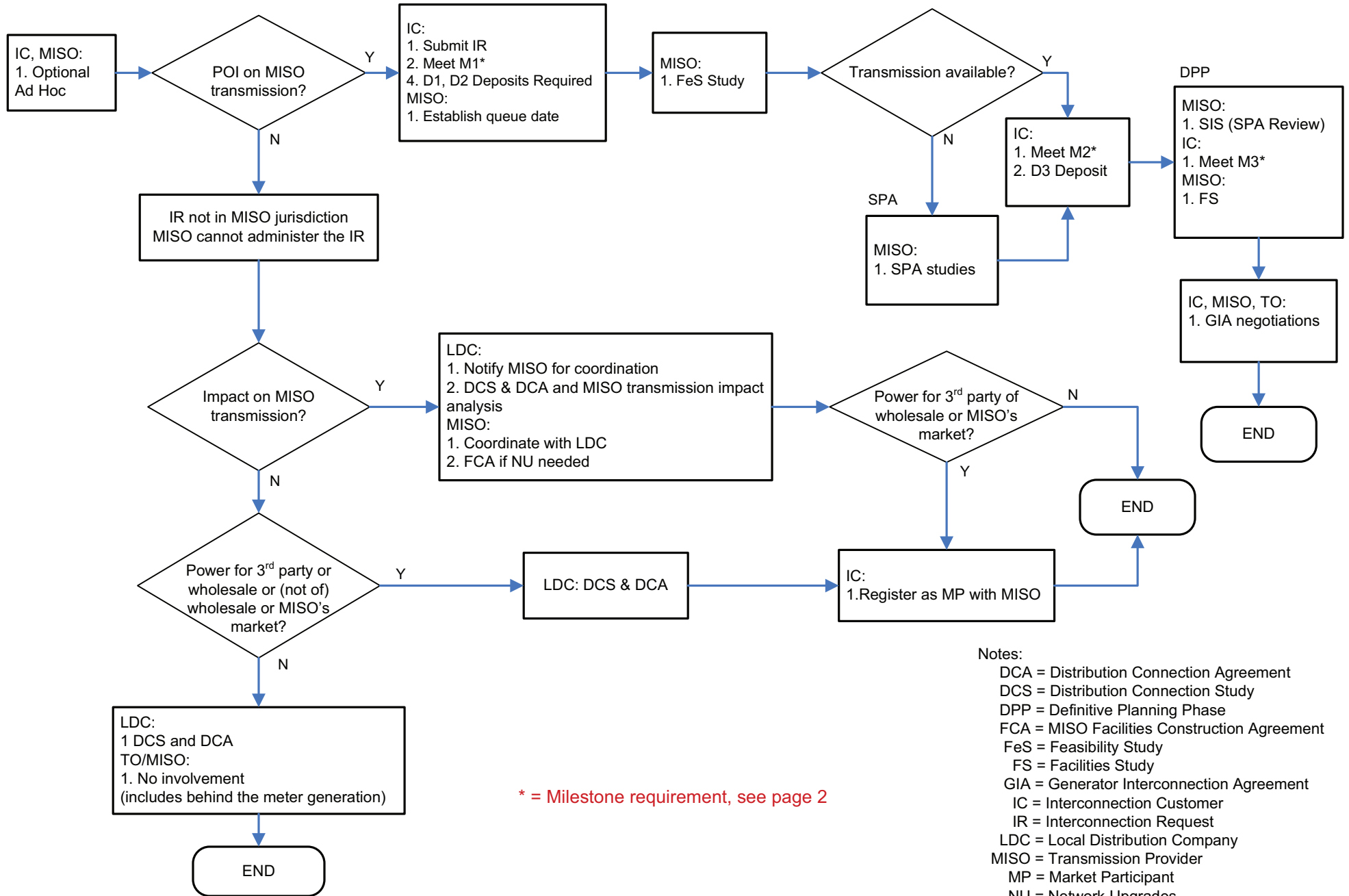
When a request is made to the distribution company, MISO should become involved if in the course of the distribution company's evaluation it becomes apparent that there is a NERC Planning Criteria violation on the Transmission System that is created or aggravated by the new interconnection. After receiving such a notice, MISO will consult with the affected Transmission Owner to review the assumptions used by the distribution company. If MISO and the affected Transmission Owner agree that there is a reliability problem that needs to be resolved, they will engage the interconnection customer in either a System Impact Study or a Facilities Study, as the circumstances may dictate, to determine the resolution of the constraint.

MISO expects that if upgrades are required on the Transmission System, then the distribution company will condition the interconnection on the construction of those upgrades.

For more information pertaining to a specific situation, for example, rules around participation in the MISO Energy Market, contact either your customer representative or MISO Client Relations at [clientrelations@misoenergy.org](mailto:clientrelations@misoenergy.org).

## Exhibit B

# Generator Interconnection Study & Agreement Jurisdiction in MISO footprint



\* = Milestone requirement, see page 2

### Notes:

- DCA = Distribution Connection Agreement
- DCS = Distribution Connection Study
- DPP = Definitive Planning Phase
- FCA = MISO Facilities Construction Agreement
- FeS = Feasibility Study
- FS = Facilities Study
- GIA = Generator Interconnection Agreement
- IC = Interconnection Customer
- IR = Interconnection Request
- LDC = Local Distribution Company
- MISO = Transmission Provider
- MP = Market Participant
- NU = Network Upgrades
- OA = MISO Operating Agreement
- POI = Point of Interconnection
- SIS = System Impact Study
- SPA = System Planning & Analysis
- TO = Transmission Owner

### Special Cases:

QF connecting to- A) Transmission: submit request to MISO b) Distribution: submit request to LDC. LDC coordinates with MISO  
 Gen connecting to non-MISO facilities (e.g. muni) located with MISO local balancing authority – submit request to Muni TP. Muni TP to coordinate with MISO



CERTIFICATE OF SERVICE

I, Ross Abbey, hereby certify that on February 24, 2014, I served copies of the following document on the attached list of persons by electronic filing, certified mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Initial Comments by SunShare, LLC in Reply to February 10 Comments by Northern States Power (“Xcel Energy”)

Docket No. E002/M-13-867

Certified this 24<sup>th</sup> day of February, 2014

s/ Ross Abbey

Ross Abbey

SunShare, LLC  
Director of Business Development and  
Government Affairs – Minnesota

609 S. 10<sup>th</sup> Street, Suite 210  
Minneapolis, MN 55404  
(612) 345-8881  
ross@mysunshare.com

*On behalf of SunShare, LLC*

| First Name | Last Name | Email                               | Company Name                       | Address  | Delivery Method    | View Trade Secret | Service List Name                           |
|------------|-----------|-------------------------------------|------------------------------------|--|--------------------|-------------------|---|
| Ross       | Abbey     | abbey@fresh-energy.org              | Fresh Energy                       | 408 Saint Peter St Ste 220<br><br>St. Paul,<br>MN<br>55102-1125    | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Michael    | Allen     | michael.allen@allenergysolar.com    | All Energy Solar                   | 721 W 26th st Suite 211<br><br>Minneapolis,<br>Minnesota<br>55405  | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Julia      | Anderson  | Julia.Anderson@ag.state.mn.us       | Office of the Attorney General-DOC | 1800 BRM Tower<br>445 Minnesota St<br>St. Paul,<br>MN<br>551012134 | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Kenneth    | Bradley   | kbradley1965@gmail.com              |                                    | 2837 Emerson Ave S Apt CW112<br><br>Minneapolis,<br>MN<br>55408    | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Michael J. | Bull      | mbull@mncee.org                     | Center for Energy and Environment  | 212 Third Ave N Ste 560<br><br>Minneapolis,<br>MN<br>55401         | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Jessica    | Burdette  | jessica.burdette@state.mn.us        | Department of Commerce             | 85 7th Place East<br>Suite 500<br>St. Paul,<br>MN<br>55101         | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Joel       | Cannon    | jcannon@tenksolar.com               | Tenk Solar, Inc.                   | 9549 Penn Avenue S<br><br>Bloomington,<br>MN<br>55431              | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| John J.    | Carroll   | jcarroll@newportpartners.com        | Newport Partners, LLC              | 9 Cushing, Suite 200<br><br>Irvine,<br>California<br>92618         | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Arthur     | Crowell   | Crowell.arthur@yahoo.com            | A Work of Art Landscapes           | 234 Jackson Ave N<br><br>Hopkins,<br>MN<br>55343                   | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Dustin     | Denison   | dustin@appliedenergyinnovations.org | Applied Energy Innovations         | 4000 Minnehaha Ave S<br><br>Minneapolis,<br>MN<br>55406            | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
|            |           |                                     |                                    |  |                    |                   |   |

| First Name | Last Name | Email                            | Company Name                       | Address   | Delivery Method    | View Trade Secret | Service List Name                           |
|------------|-----------|----------------------------------|------------------------------------|---|--------------------|-------------------|---|
| James      | Denniston | james.r.denniston@xcelenergy.com | Xcel Energy Services, Inc.         | 414 Nicollet Mall, Fifth Floor<br><br>Minneapolis, MN 55401                                       | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Ian        | Dobson    | ian.dobson@ag.state.mn.us        | Office of the Attorney General-RUD | Antitrust and Utilities Division<br>445 Minnesota Street, 1400<br>BRM Tower<br>St. Paul, MN 55101 | Electronic Service | Yes               | SPL_SL_13-867_Community Solar Garden - Xcel |
| Bill       | Droessler | bdroessler@iwla.org              | Izaak Walton League of America-MWO | 1619 Dayton Ave Ste 202<br><br>Saint Paul, MN 55104   | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Betsy      | Engelking | betsy@geronimoenergy.com         | Geronimo Energy                    | 7650 Edinborough Way Suite 725<br>Edina, MN 55435   | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| John       | Farrell   | jfarrell@ilsr.org                | Institute for Local Self-Reliance  | 1313 5th St SE #303<br><br>Minneapolis, MN 55414  | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Sharon     | Ferguson  | sharon.ferguson@state.mn.us      | Department of Commerce             | 85 7th Place E Ste 500<br><br>Saint Paul, MN 551012198  | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Nathan     | Franzen   | nathan@geronimoenergy.com        | Geronimo Energy                    | 7650 Edinborough Way Suite 725<br>Edina, MN 55435   | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Hal        | Galvin    | halgalvin@comcast.net            | Provectus Energy Development llc   | 1936 Kenwood Parkway<br><br>Minneapolis, MN 55405   | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Timothy    | Gulden    | info@winonarenewableenergy.com   | Winona Renewable Energy, LLC       | 1449 Ridgewood Dr<br><br>Winona, MN 55987   | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |

| First Name | Last Name | Email                                | Company Name                                  | Address   | Delivery Method    | View Trade Secret | Service List Name                           |
|------------|-----------|--------------------------------------|---|---|--------------------|-------------------|---|
| Lynn       | Hinkle    | lhinkle@mnseia.org                   | Minnesota Solar Energy Industries Association | 2512 33rd Ave South #2<br><br>Minneapolis,<br>MN<br>55406                   | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Jan        | Hubbard   | jan.hubbard@comcast.net              |   | 7730 Mississippi Lane<br><br>Brooklyn Park,<br>MN<br>55444                  | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Tiffany    | Hughes    | Regulatory.Records@xcelenergy.com    | Xcel Energy                                   | 414 Nicollet Mall FL 7<br><br>Minneapolis,<br>MN<br>554011993               | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| John S.    | Jaffray   | jjaffray@jrpowers.com                | JJR Power                                     | 350 Highway 7 Suite 236<br><br>Excelsior,<br>MN<br>55331                    | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Eric       | Jensen    | ejensen@iwla.org                     | Izaak Walton League of America                | Suite 202<br>1619 Dayton Avenue<br>St. Paul,<br>MN<br>55104                 | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Michael    | Kampmeyer | mkampmeyer@a-egroup.com              | AEG Group, LLC                                | 260 Salem Church Road<br><br>Sunfish Lake,<br>Minnesota<br>55118            | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Brad       | Klein     | bklein@elpc.org                      | Environmental Law & Policy Center             | 35 E. Wacker Drive, Suite 1600<br><br>Suite 1600<br>Chicago,<br>IL<br>60601 | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| John       | Kluempke  | jwkluempke@winlectric.com            | Elk River Winlectric                          | 12777 Meadowvale Rd<br><br>Elk River,<br>MN<br>55330                        | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Jon        | Kramer    | jk2surf@aol.com                      | Sundial Solar                                 | 4708 york ave. S<br><br>Minneapolis,<br>MN<br>55410                         | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Rebecca    | Lundberg  | rebecca.lundberg@powerfullygreen.com | Powerfully Green                              | 11451 Oregon Ave N<br><br>Champlin,<br>MN<br>55316                          | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |

| First Name | Last Name | Email                              | Company Name                | Address  | Delivery Method    | View Trade Secret | Service List Name                           |
|------------|-----------|------------------------------------|-----------------------------|--|--------------------|-------------------|---|
| Casey      | MacCallum | casey@appliedenergyinnovations.org | Applied Energy Innovations  | 4000 Minnehaha Ave S<br><br>Minneapolis,<br>MN<br>55406                  | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Erica      | McConnell | emcconnell@kfwlaw.com              | Keyes, Fox & Wiedman LLP    | 436 14th Street, Suite 1305<br><br>Oakland,<br>California<br>94612       | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Thomas     | Melone    | Thomas.Melone@AllcoUS.com          | Minnesota Go Solar LLC      | 222 South 9th Street<br>Suite 1600<br>Minneapolis,<br>Minnesota<br>55120 | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Andrew     | Moratzka  | apmoratzka@stoel.com               | Stoel Rives LLP             | 33 South Sixth Street<br>Suite 4200<br>Minneapolis,<br>MN<br>55402       | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Martin     | Morud     | mmorud@trunorthsolar.com           | Tru North Solar             | 5115 45th Ave S<br><br>Minneapolis,<br>MN<br>55417                       | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Rolf       | Nordstrom | rnordstrom@gpisd.net               | Great Plains Institute      | 2801 21ST AVE S STE 220<br><br>Minneapolis,<br>MN<br>55407-1229          | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Jeffrey C  | Paulson   | jeff.jcplaw@comcast.net            | Paulson Law Office, Ltd.    | 7301 Ohms Ln Ste 325<br><br>Edina,<br>MN<br>55439                        | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Donna      | Pickard   | dpickard@aladdinsolar.com          | Aladdin Solar               | 1215 Lilac Lane<br><br>Excelsior,<br>MN<br>55331                         | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Gayle      | Prest     | gayle.prest@minneapolismn.gov      | City of Mpls Sustainability | 350 South 5th St, #315<br><br>Minneapolis,<br>MN<br>55415                | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Dan        | Rogers    | drogers@sunedison.com              | SunEdison                   | N/A  | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |

| First Name | Last Name      | Email                           | Company Name                            | Address   | Delivery Method    | View Trade Secret | Service List Name                           |
|------------|----------------|---------------------------------|---|---|--------------------|-------------------|---|
| Matthew J. | Schuerger P.E. | mjsreg@earthlink.net            | Energy Systems Consulting Services, LLC | PO Box 16129<br><br>St. Paul,<br>MN<br>55116                              | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Doug       | Shoemaker      | dougs@mnRenewables.org          | MRES                                    | 2928 5th Ave S<br><br>Minneapolis,<br>MN<br>55408                         | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Eric       | Swanson        | eswanson@winthrop.com           | Winthrop Weinstine                      | 225 S 6th St Ste 3500<br>Capella Tower<br>Minneapolis,<br>MN<br>554024629 | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Thomas P.  | Sweeney III    | tom.sweeney@easycleanenergy.com | Clean Energy Collective                 | P O Box 1828<br><br>Boulder,<br>CO<br>80306-1828                          | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Pat        | Treseler       | pat.jcplaw@comcast.net          | Paulson Law Office LTD                  | Suite 325<br>7301 Ohms Lane<br>Edina,<br>MN<br>55439                      | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |
| Daniel     | Williams       | DanWilliams.mg@gmail.com        | Powerfully Green                        | 11451 Oregon Avenue N<br><br>Champlin,<br>MN<br>55316                     | Electronic Service | No                | SPL_SL_13-867_Community Solar Garden - Xcel |