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March 20, 2015

VIA ELECTRONIC FILING

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

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

Dear Dr. Haar,

SunShare, LLC respectfully submits the attached *Amended Reply Comments by SunShare, LLC in Response to the February 10 Comments Made by Northern States Power ("Xcel Energy")* regarding Xcel Energy's Comments filed in the above-mentioned docket. We originally submitted these comments on March 4, 2015 with two numbers marked as trade secret to allow time for review by Xcel Energy. With Xcel Energy's permission we are now resubmitting this filing with all numbers included.

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

Sincerely,

s/ Ross Abbey

Ross Abbey

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Director of Business Development and
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On behalf of SunShare, LLC

Cc: Appended Service List

**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

Beverly Jones Heydinger	Chair
Nancy Lange	Commissioner
Dan Lipschultz	Commissioner
John Tuma	Commissioner
Betsy Wergin	Commissioner

March 4, 2015

**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

**REPLY COMMENTS BY SUNSHARE, LLC IN RESPONSE TO THE
FEBRUARY 10, 2015 COMMENTS BY NORTHERN STATES POWER (“XCEL ENERGY”)**

SunShare, LLC respectfully submits these Reply Comments in response to the Commission's February 13, 2015 Notice of Comment Period in this docket.

Rather than restate the content of our Initial Comments in this reply, SunShare confirms that the items in our Initial Comments, filed just last week, continue to require urgent action by the Commission.¹

*S*RC site definition and co-location*

As evident by our Initial Comments, we respectfully disagree with the suggestion that the Commission should articulate a new 10-MW cap on co-located CSGs.² Here we make three additional points.

First, a 10-MW cap would not address Xcel's alleged concerns with transmission impacts. As Minnesota Community Solar pointed out, transmission back-feed can occur with systems much smaller than 10 MW.³ (And transmission back-feed itself is not problematic, as long as the interconnection is engineered to avoid triggering NERC reliability concerns.)⁴ By the same token, some substations can easily accommodate more than 10 MW of distributed solar (from an engineering perspective). A one-size-fits-all limit on CSG co-location would thus result in economic waste, whereby a willing solar developer with customers is prevented from using the available engineering-level capacity.

Second, a 10-MW cap on co-location would not address Xcel's alleged concerns regarding impact on fuel-cost payers. Developers can (and probably should) distribute their projects more widely, but there's no evidence in the record that doing so would lead to less CSG generation or

¹ SunShare Feb. 24, 2015 Comments, 13-867.

² SunShare Feb. 24, 2015 Comments at 7-8.

³ Minnesota Community Solar, Feb. 24, 2015 Comments, 13-867, at 2.

⁴ See SunShare Feb. 24, 2015 initial comments at 3, n.5.

subscriber demand. To the extent that Xcel's February 10 Comments regarding co-location were intended to degrade the cost-economics of CSG projects (thus leading to a smaller overall CSG market), we do not see that as a legitimate policy goal.

Finally, as mentioned in our initial comments, Xcel could also restructure its engineering-study fees to stop disadvantaging smaller CSG project sites on cost.⁵ For example, rather than scaling the cost of its scoping-study fee according to total site capacity, Xcel appears to be charging the same \$22,000 fee for all CSG sites with a combined capacity of 1 MW or above. All else equal, this fee structure would tend to encourage CSG co-location.

Xcel Colorado S*RC business rules

As described in our Initial Comments, Xcel Energy has two business rules, already applicable to Solar*Rewards Community projects in Colorado, that could help manage and mitigate the company's concerns regarding over-concentration of Community Solar Gardens in Minnesota.

First, Xcel Colorado has a useful pre-screen feasibility study process.⁶ If adopted here, this process would allow CSG developers to more-easily identify available interconnection capacity, increasing transparency and enabling developers to more-easily spread out their project sites (e.g., in response to Xcel's concerns regarding over-concentration). The Colorado rule would also help reduce and avoid wasteful feeder-queue congestion that slows down solar development. We note that MnSEIA, IREC, and Solar Garden Community all support the near-term adoption of this important tool.⁷

Second, under Xcel Minnesota's current S*RC business rules, it is costly and difficult for CSG developers to change the site location for a given CSG application.⁸ But under the Colorado rule, projects can change sites once without having to submit a new S*RC application, program deposit, and application fee.⁹ If adopted here, this rule would enable developers to more-easily spread out their current S*RC projects (e.g., in response to Xcel's stated concern regarding over-concentration).

Threshold test for Xcel consideration of transmission impacts

As signaled in our initial comments, SunShare is concerned that Xcel may be using a too-conservative methodology for calculating the "transformer minimum daytime load" ("TMDL") as a threshold test for conducting transmission-level studies (or worse, as a test to unilaterally delay or disqualify CSG interconnection requests by "referring" the developer to MISO).^{10, 11}

Recent information provided to SunShare by Xcel Energy indicates that the substation TMDL value, calculated using Xcel's as-yet-unknown internal methodology, can be as low as 17 percent of

⁵ See SunShare Feb. 24, 2015 Comments at n.23.

⁶ SunShare Feb. 24, 2015 Comments at 5.

⁷ MnSEIA Feb. 24, 2015 Comments at 9; IREC Feb. 24, 2015 Comments at 11-12; and Solar Garden Community Feb. 24, 2015 Comments at 13-14.

⁸ SunShare Feb. 24, 2015 Comments at 5 (because any move requires project cancellation).

⁹ SunShare Feb. 24, 2015 Comments at 5 (the developer likely would have to submit a new interconnection application and fee).

substation peak load. This is a fairly limiting parameter, and if applied at a similar level for all S*RC applications, could have a significant adverse impact on aggregate CSG capacity.

As IREC has explained, “recent studies have shown that penetrations up to and even exceeding 100% of minimum load can be safely accommodated. . . . recent analysis in Hawaii led the utility there to voluntarily propose a limit of 250% of minimum load where certain additional inverter functions are adopted.”¹²

As noted earlier, SunShare believes Xcel should provide the Commission and all parties with its calculation methodology for determining this critical TMDL parameter.¹³

Regulatory process and timeline

We understand that the engineering issues raised by Xcel’s February 10, 2015 Comments may appear to relate to both CSGs and other types of distributed generators. For this reason, the Commission might be tempted to delay addressing these issues until it can arrange for a separate docket on Section 10 issues.

But as IREC has explained, “we continue to believe that the long-term success of this program hinges on the Commission’s responses to issues arising as the program is implemented, including specifically challenges associated with interconnection.”¹⁴

As many stakeholders have stated, there is also a real urgency to resolving these issues quickly in a way that doesn’t delay the market or harm CSG developers’ ability to build project and start delivering subscriber value in 2015.¹⁵

For this reason, the Commission may choose to issue an Interim Order, specific to CSGs under Section 9, that directs Xcel Energy to, among other things:

- work with MISO as necessary to process CSG interconnection applications in a timely manner while maintaining interconnection jurisdiction;¹⁶
- adopt the Xcel Colorado business rules that allow CSG developers to request a pre-interconnection feasibility study;

¹⁰ See SunShare Feb. 24 Initial Comments at 2, 4.

¹¹ Correction: In our Feb. 24 Initial Comments, SunShare mistakenly referred to “transformer minimum daytime load” as “transfer minimum daytime load.” *Id.* at 1, 4.

¹² IREC Feb. 24, 2015 Comments at 10.

¹³ SunShare Feb. 24 Initial Comments at 1, 4.

¹⁴ IREC Feb. 24, 2015 Comments at 2.

¹⁵ SunShare Feb. 24, 2015 Comments at 1-2; IREC Feb. 24, 2015 Comments at 2; Joint Commenters Feb. 24, 2015 Comments at 2; MnSEIA Feb. 24, 2015 Comments at 4, 8; Novel Energy Feb. 24, 2015 Comments at 6; and Solar Garden Community Feb. 24, 2015 Comments at 2 (“Time is of the essence to capture sunset federal tax benefits”).

¹⁶ See *also* IREC Feb. 24, 2015 Comments at 5 (“IREC does not believe that a project . . . should exit the distribution-level Section 10 review process if they require additional review for transmission system impacts”).

- adopt the Xcel Colorado business rule that allow a CSG application to change project sites once; and
- enable the financing of Xcel’s costly Section 9 deposits by allowing for return assignment to the lender.¹⁷

Subscriber diversity

A number of stakeholders pointed out that there is value in encouraging and serving a healthy mix of subscriber classes and categories.¹⁸

SunShare agrees. And so we continue to encourage the Commission to seek out and employ “cost- or market-based mechanisms” to help achieve subscriber diversity.¹⁹ Indeed, the Commission has already established a powerful signal to CSG developers through the current three-tiered CSG bill credit rate, which enables gardens with more subscribers to make more money.²⁰

Very truly yours,

/s/ Ross Abbey
Ross Abbey

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On behalf of SunShare, LLC

¹⁷ See SunShare Feb. 24, 2015 Comments at 1-2 (for a more complete list).

¹⁸ SunShare Feb. 24, 2015 Comments at 8-9; Fresh Energy Feb. 24, 2015 Comments at 2-3; Clean Energy Collective Feb. 24, 2015 Comments at 1-2; MN Community Solar Feb. 24, 2015 Comments at 3-4; MnSEIA Feb. 24, 2015 Comments at 3-4; Novel Energy Feb. 24, 2015 Comments at 4; and Solar Garden Community Feb. 24, 2015 Comments at 7-9.

¹⁹ SunShare Mar. 2, 2015 Reply Comments at 2-3 (“the Commission should bolster residential-customer accessibility by preserving the relatively higher bill-credit rate currently available to residential subscribers.”).

²⁰ SunShare Mar. 2, 2015 Reply Comments at 2-3.

CERTIFICATE OF SERVICE

I, Ross Abbey, hereby certify that on March 20, 2015, 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.

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

Docket No. E002/M-13-867

Certified this 20th day of March, 2015

s/ Ross Abbey

Ross Abbey

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On behalf of SunShare, LLC

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