

**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

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

Docket No. E-002/M-13-867

Date: 4/28/2015

**INITIAL REPLY COMMENTS OF THE MINNESOTA
SOLAR ENERGY INDUSTRY ASSOCIATION
RE: PROGRAM IMPLEMENTATION ISSUES**

The 2015 Community Solar Gardens (CSG) construction season is in jeopardy. Xcel Energy's ("Xcel") distribution and transmission departments have initiated significant delays and provided a lack of process clarity.

In these comments, we recap the CSG program timeline to date, explain why a successful 2015 construction season hinges on Xcel's ability to meet its interconnection obligations, and offer solutions to encourage Xcel to meet its obligations as reasonably necessary to enable 2015 construction.

SUMMARY OF COMMENTS

MnSEIA requests that the Commission move as quickly as possible to direct Xcel to:

- a) Ensure fair and transparent Preliminary Review under Section 10, Step 2 (as described in Section III(1) below);
- b) meet or exceed the expected 40-working-days timeline for engineering study completion under Section 10, Step 4 (as described in Section III(2) below);
- c) provide bankable interconnection-cost estimates under Section 10, Step 5 (as described in Section III(3) below); and
- d) provide improved timeline transparency and optional parallel processing for CSG applications that are not first in a given substation queue (as described in Section III(4) below); and

- e) show cause as to why it is not in violation, or about to be in violation, of the Commission's April 7, 2014 Order (as requested in Section IV below).

I. Background regarding 2015 CSG Construction timeline

Minnesota's pioneering Community Solar statute was signed into law in May 2013.¹ In response, Xcel proposed CSG program rules by September 30, 2013. The proposed program rules unfortunately fell short of the statutory requirements, necessitating a second round of rule drafting, stakeholder comments, and Commission decision-making. This resulted in a five-month delay in the market opening and eliminated 2014 CSG interconnection work.²

On December 5, 2014, Xcel published new interconnection "business rules" for CSG projects over 250 kW in size, including new penalties on interconnection applicants that miss a Section 10 deadline.³ On December 12, 2014, Xcel timely began accepting CSG project applications.⁴ Under a later Commission order, that was also the start date for submitting CSG interconnection applications.⁵

At that point, solar developers had already lost the 2014 CSG construction season. But MnSEIA and the installer community were optimistic that the program rules, now finalized, would enable a significant level of 2015 CSG construction. Even allowing approximately six months for Xcel's internal application processing, installers would still have the full second half of the year to close project financing, order equipment, and build projects.

Unfortunately, Xcel's February 10, 2015 Comments created a significant degree of market uncertainty, leading to perceived higher levels of subscriber and project-finance risk.⁶

¹ Minn. Stat. 216B.1641.

² The five months being those between the Commission's April 7 and September 17, 2014 orders.

³ If the applicant fails to make a requested payment to Xcel within 30 days, the applicant must exit the interconnection process (effectively delaying or terminating the CSG project). *See* Xcel Energy's December 5, 2014 Implementation Update, Attachment B, at 1-2. Unfortunately, the new business rules did not address predictable CSG-specific interconnection issues around co-located projects, queue congestion, affected system studies, etc.

⁴ Minn. Stat. 216B.1641(a).

⁵ Commission February 13, 2015 Order at 7.

⁶ *See* Solar Garden Community Feb. 24, 2015 Comments at 2 (expressing their concerns that "Xcel's Letter could upend expectations and stifle development through unwarranted delay. Time is of the essence to capture sunseting federal tax benefits, and any delay at this juncture could wilt the CSG Program before it has had a chance to sprout.").

Xcel then compounded this harm with its March 4th proposal to retroactively impose a 1-MW cap on CSG project co-location.⁷

Equally troubling, MnSEIA is hearing complaints from members that are experiencing delays within Xcel’s interconnection process that could lead to the loss of the 2015 construction season.

II. A successful 2015 CSG construction season hinges on Xcel’s ability to meet its Section 10 interconnection timelines.

As MnSEIA said in our March 2nd Comments, “Our installers are expecting significant interconnection delays.”⁸ Six weeks later, we can confirm that there is now mounting evidence that Xcel’s internal interconnection-engineering processes appears to be progressing too slowly. Indeed, unless the company immediately improves its performance, it is unlikely to provide interconnection approval and cost estimates in time to allow for any significant level of 2015 construction.

In order to illustrate this concern, we have we worked with industry participants to create a reasonable, representative 2015 development timeline – see Exhibit A, attached.

While this timeline does not show every step in the development process, it does reflect the major engineering, financing, equipment procurement, and construction tasks.⁹ As the timeline in Exhibit A illustrates, each of these four steps must generally be completed before the next can begin in earnest: Once system and interconnection engineering are completed capital decisions can then be finalized.¹⁰ Once capital is approved, equipment procurement can begin, after that the CSG can be built and interconnected to Xcel’s distribution system.

In this timeline, Xcel is assumed to meet its Section 10 deadlines for each step in the interconnection process – as shown in Line 1 (Section 9 deemed complete), Line 2 (Section 10

⁷ Xcel Energy, March 4, 2015 Comments, at 6 (“Based on the applications received to date, applying our statutory interpretation will result in up to 80 MW of community solar gardens once the initial set of gardens are operational.”).

⁸ MnSEIA Mar. 2, 2015 Comments at 9.

⁹ For purposes of this exhibit, the applicant is assumed to have obtained all necessary non-utility permits in a timely manner.

¹⁰ See Solar Garden Community Feb. 24, 2015 Comments at 5 (“Any delay in CSGs interconnecting to Xcel’s system, intentional or not, could hurt financing for CSG projects”).

steps 1 and 2 complete), and Line 4 (Section 10, steps 4 and 5 complete).¹¹ Some time is built in to assume for winter weather.

If Xcel can meet those timelines, then starting in May MnSEIA would expect utility engineering studies for the first set of CSG projects to be completed. In turn, we believe that would allow for the 2015 construction of at least a few ground-mounted, community-scale solar projects before the ground freezes for the winter. More important, enabling 2015 construction of CSGs would protect the subscribers' interests and not subject them to unnecessary delay in the receipt of beneficial services.

On the other hand, if Xcel takes longer to complete its engineering studies, construction start dates could be delayed well past July 1st, putting the 2015 construction season into serious doubt.

III. Detailed concerns re: Xcel's timely completion of its CSG interconnection obligations.

1. Xcel's Preliminary Review under Section 10, Step 2

A number of MnSEIA installer members have - or still are - experiencing difficulty in conforming their initial engineering diagrams to meet Xcel's internal and unpublished standards. The opaque process results in frustrating, unnecessary engineering delays at the front end of Xcel's interconnection analysis process.

In order to enable and facilitate CSG applicants' ability to provide the required materials to participate, we suggest that Xcel must publish and provide precise engineering requirements. In addition to allowing for more timely completion of preliminary review under Step 2, this would help reduce the clerical workload on Xcel's distribution engineers, enabling them to more efficiently process CSG interconnection applications overall. Xcel must also meet its tariffed Step 2 timeframes, along with its Step 4 timeframes as discussed next.

2. Timing of Xcel's Engineering Study Completion under Section 10, Step 4

As the Commission's April 7, 2014 Order makes clear, Xcel is expected to complete its interconnection engineering studies within the timeframes set forth in the Commission's 2004 Interconnection Order:

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

¹¹ We understand that certain 1-MW CSG applications may require additional time for Xcel engineering studies, beyond the standard 40-working-day timeline under Section 10. But we would still expect near-term completion of engineering studies for the bulk of the more straightforward 1-MW applications.

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

. . . As recommended by the Department, the Commission will require Xcel to complete engineering studies and interconnection cost estimates for solar-garden applicants within the timeframes set forth in the Commission’s September 28, 2004 order.¹²

Because the statute limits CSG project sizes to 1 MW, Xcel is expected to complete the engineering study for a given CSG interconnection application within 40 working days, or approximately 8 weeks.¹³ According to the Commission’s controlling 2004 Order, Xcel shall also “make all reasonable efforts to complete the Engineering Studies within the [allotted] timeframe.... If additional time is required to complete the engineering studies, [Xcel] shall notify the Applicant and provide the reasons for the extension.”¹⁴

Unfortunately, we are now hearing from our members that Xcel is quoting a 90-working-day Step 4 turnaround for most, if not all, 1-MW CSG interconnection applications. We believe that this information may also be reflected in Xcel responses to Information Requests filed by the Office of the Attorney General, the Department of Commerce, or other stakeholders in this docket.

We understand that co-located 1-MW CSG interconnection applications may occasionally increase the complexity of Xcel’s engineering studies. But that doesn’t obviate the requirement that Xcel “make all reasonable efforts” to complete the Engineering Studies for each 1-MW application within the allotted 40-working-day timeframe.

As a practical matter, Xcel should be able to analyze the distribution impact of subsequent second, third, etc. co-located 1-MW CSG projects fairly quickly. At that point Xcel will already have the relevant system model ready for use.

Under the Commission’s 2004 Order, Xcel must also notify the CSG interconnection applicant if the company needs any additional time to complete the engineering study of a given 1-MW CSG interconnection application – along with the estimated length of time and reasonable

¹² See April 7, 2014 Commission Order at 11 (referencing September 28, 2004 Commission Order in Docket No. E-999/CI-01-1023).

¹³ See Minn. Stat. 216B.2641(b) (each “solar garden must have a nameplate capacity of no more than one megawatt”).

¹⁴ September 28, 2004 Commission Order (Docket No. E-999/CI-01-1023) at Attachment 1 page 11. See also Xcel Energy Ratebook, Section 10, at Sheet No. 95.

explanation for the delay.¹⁵ For example, if Xcel determines that it will take more than 40 working days to analyze the fourth and fifth 1-MW application for a given CSG site, Xcel should notify the developer of Xcel's need for more time as to those specific 1-MW applications.

That said, any such delays should be an exception, not the rule. If Xcel does not have the engineering resources or urgency necessary to meet the standard 40-day timeline for the current volume of 1-MW applications, it must mobilize resources and develop that urgency as soon as possible. This is necessary to comply with the Commission's 2004 order.

As discussed in Sections II and III above, any avoidable interconnection delays will have a direct negative impact on the 2015 construction season.

3. Enabling financeable interconnection-cost estimates under Section 10, Step 5

In addition to Xcel providing timely interconnection cost estimates as a result of its engineering analysis in Step 4, it is important that Xcel provide accurate, "bankable" interconnection cost numbers during Step 5. That is because this cost number is a key element in defining the project's financial *pro forma*, and thus the project's final feasibility.

Capital providers are aware that interconnection costs can vary quite widely across solar projects, and that the magnitude of these costs can make or break the profitability of a given project. For this reason, capital partners typically require firm interconnection-cost estimates before they agree to help underwrite the project. Thus, apart from timeliness, it is also important for CSG financing that Xcel provide accurate cost estimates.

For this reason, MnSEIA suggests that the Commission adopt a clear rule holding Xcel to its best interconnection-cost estimate available at the end of the Step 4 timeline – as necessary to reasonably allow for the creation and financing of CSGs in 2015 and beyond.¹⁶ By helping to "establish uniform standards [and] fees" for the interconnection of CSGs, this rule would also encourage the company to devote sufficient engineering resources to the project early enough to provide an accurate, reliable CSG interconnection-cost estimates on or before their Step 4 deadline.¹⁷

4. Addressing Substation Queue Congestion

¹⁵ September 28, 2004 Commission Order at Attachment 1, at 11 (requiring both notice and a reason).

¹⁶ See Minn. Stat. 216B.1641(e) ("Any plan approved by the commission must: ... reasonably allow for the creation [and financing] of community solar gardens"). Note, Xcel could later exceed this cost estimate by up to 25% without violating the tariff. See also Xcel Energy Ratebook, Section 10, at Sheet No. 95-96.

¹⁷ See Minn. Stat. 216B.1641(e) ("Any plan approved by the commission must: ... establish uniform standards, fees, and processes for the interconnection of community solar garden facilities.").

We have heard from multiple MnSEIA members who Xcel has notified that they are behind another project already in a given substation queue. They are in project limbo. Of concern, Xcel has so far been unable to clearly articulate a concrete timeline for performing its Section 10 Step 4 engineering studies for projects in this position, despite developer requests for this information. It has also been difficult for project applicants to determine Xcel's anticipated date that the company will complete their basic Step 4 engineering studies for projects ahead in the queue.

Unfortunately, this places the many affected projects at risk of being delayed into late 2016 or beyond, due to internal company procedures that appear inadequate for meeting the standard timelines established by the Commission's 2004 Order.

For projects in this "limbo" zone, we request that the Commission direct Xcel to at least:

- (1) provide more timeline transparency, including the anticipated date by which Xcel will complete its basic Step 4 engineering analysis for the senior project(s); and
- (2) offer to proceed with the necessary Step 4 engineering studies for the project in "parallel" with the project(s) ahead in the queue. If the junior CSG applicant agrees (or has already requested parallel study), Xcel would have 40 working days to complete the necessary Step 4 analysis.¹⁸

IV. The Commission should direct Xcel to bring its CSG interconnection process into compliance and to demonstrate said compliance.

After already missing the 2014 construction season, it goes without saying that missing the 2015 CSG construction season would be unfortunate and harmful. Among other things, losing the 2015 season due to interconnection delays would unreasonably restrict or prevent the delivery of subscriber benefits, CSG-related job growth, economic development, and all the other benefits that flow from locally generated clean solar energy.¹⁹

It is thus no surprise that numerous stakeholders have expressed the urgency of resolving outstanding interconnection and other similar issues in a way that doesn't delay or harm CSG developers' ability to build project and start delivering subscriber value in 2015.²⁰

¹⁸ Under this scenario, the applicant might have to request a second engineering study if the senior project application were to leave the substation queue.

¹⁹ See e.g., SunShare Feb. 24, 2015 Comments at 1.

²⁰ SunShare Feb. 24, 2015 Comments at 1-2; IREC Feb. 24, 2015 Comments at 2; MnSEIA Feb. 24, 2015 Comments at 4, 8; Novel Energy Feb. 24, 2015 Comments at 6; Solar Garden Community Feb. 24, 2015 Comments at 2; and Joint Commenters Feb. 24, 2015 Comments at 2 ("the long-term success of this program may hinge on the Commission's

Indeed, as the Commission has established, “[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.”²¹ Note, however, that relying on the hope of a robust 2016 CSG construction season to make up for the lack of 2015 construction would not be prudent nor reasonable. As the Solar Garden Community has explained:

Minnesota’s construction season is very short and the competition for product, labor and resources to build solar projects in 2016 is going to be extraordinary. If the State of Minnesota is truly serious about growing solar and seeing CSGs built reasonably affordably, *time is of the essence*.²²

For this reason, multiple stakeholders have called on the Commission to direct Xcel as necessary to take all due action to ensure timely completion of its Section 10 interconnection obligations. For example, the Solar Garden Community - an *ad hoc* group of CSG developers comprised of both MnSEIA and non-MnSEIA members - has stated that:

[W]e need the Commission to corral a willing partner in Xcel Energy to move developers through the application process as efficiently as possible in order to capture the federal tax benefits and thus be reasonably financeable at the current rate and per the statutory guidance. Missing this window through unwarranted delays to implementation would be a hugely unfortunate consequence²³

We thus believe it is appropriate for the Commission to order Xcel to show cause as to why it is not in violation - or about to be in violation - of the Commission’s April 7, 2014 Order requiring Xcel to, among other things, “complete engineering studies and interconnection cost estimates for solar garden applicants” within 40 working days, or take an equivalent action to bring Xcel’s interconnection processes into compliance.²⁴ Preferably, this would be done soon enough to allow for 2015 CSG construction, per Exhibit A.

To enable a significant portion of the initial CSG applications to be built in 2015, the Commission should also direct Xcel to: (1) Ensure fair and transparent Preliminary Review; (2)

responses to the interconnection ... challenges that will likely arise in the first year of the program.”).

²¹ April 7, 2014 Commission Order, at 7.

²² Solar Garden Community Apr. 2, 2015 Comments, at 4 (emphasis added).

²³ Solar Garden Community Apr. 2, 2015 Comments, at 4. *See also* Fresh Energy, Environmental Law & Policy Center, Institute for Local Self-Reliance, and Izaak Walton League of America Feb. 24, 2015 Comments, at 2 (“the long-term success of this program may hinge on the Commission’s responses to the interconnection . . . challenges that will likely arise in the first year of the program.”).

²⁴ *See* April 7, 2014 Commission Order, at 11, 27. *See also* Minn. Stat. §216B.54 *et seq.*

meet or exceed the Section 10 deadlines for engineering study completion; (3) provide bankable interconnection-cost estimates; and (4) provide improved timeline transparency and parallel processing for CSG applications that are not first in a given substation queue, as described in Section III(4) above.

Sincerely,

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Exhibit A

Garden Program 1 MW Project Schedule - Based on First Public Notice of Garden Application Completeness

Xcel Activities ■
 Applicant Activities ■

	Item	Start Date	End date	December				January				February				March				April				May				June				July				August				September				October				November				December							
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
1	Garden Applications - Xcel Initial Review until Deemed Complete	12/12/14	2/18/15																																																								
2	Engineering Steps 1 & 2 - Initial Review until SOW Statement Issued	2/18/15	3/11/15																																																								
3	Applicant Review SOW and Pay Study Fee - Step 3	3/11/15	3/18/15																																																								
4	Xcel Engineering Studies & Reports IC Cost & Timing (40 days)- Step 4 & 5	3/18/15	5/13/15																																																								
5	Finalize Financing Agreements based on Interconnection Costs	5/13/15	7/1/15																																																								
6	EPC Contractor Issued Final Notice to Proceed	7/1/15																																																									
7	Procure Panels	7/1/15	10/15/15																																																								
8	Procure Racking	7/7/15	9/30/15																																																								
9	Procure Inverters	7/1/15	10/15/15																																																								
10	Procure Medium Voltage equipment	7/1/15	11/15/15																																																								
11	Procure Transformer	7/1/15	12/15/15																																																								
12	Procure Medium Voltage Cable	7/1/15	10/15/15																																																								
13	EPC subcontractor RFP & Final Contracts	7/1/15	8/31/15																																																								
14	Obtain Building Permits	9/1/15	9/30/15																																																								
15	Site Mobilization	10/1/15	10/7/15																																																								
16	Site Preparation & Civil Work	10/7/15	10/23/15																																																								
17	Install Racking System	10/23/15	12/7/15																																																								
18	Install Modules	11/1/15	12/15/15																																																								
19	Install Medium Voltage Equipment	11/15/15	12/15/15																																																								
20	Install Transformer	12/15/15	12/21/15																																																								
21	Xcel Testing and Start up	12/21/15	12/30/15																																																								

Note 1: Line 3 assumes a quick 1 week response by Applicant
 Note 2: Lines 17 through 21 do not consider delays that may be caused by winter weather.