

**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

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Daniel Lipschultz	Commissioner
Matt Schuerger	Commissioner

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

**MINNESOTA SOLAR ENERGY INDUSTRIES ASSOCIATION'S
REPLY COMMENTS ON XCEL ENERGY'S CSG PROGRAM**

April 29, 2016

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

**REPLY COMMENTS OF THE MINNESOTA
SOLAR ENERGY INDUSTRIES ASSOCIATION**

COMMENTS

I. We Believe The Best Way To Ensure That The Statute Is Applied As Intended Is To Move To The VOS, Allow Up To 5MW Of Colocated Gardens And To Implement An Incentive Structure That Mimics The Applicable Retail Rate.

Through continuing conversations with our developers and the concerns raised by commenters, we believe that the best course of action for this program is to adopt the VOS and allow up to 5MW of colocation. But to ensure residential participation, we believe that the Commission should create an incentive program that mimics that Applicable Retail Rate (ARR). This will ensure diversified program participation, as the ARR already does that.

Shifting to our approach to the VOS would provide developers and their subscribers with a locked-in escalator, would ensure that the statutorily required transition to VOS occurs, reduces the need to annually discuss this program, and ensures that the program works. It would also help ratepayers by reducing volatility in the fuel cost rider, as fixed escalator solar should be a good hedge against natural gas.

We also recently requested information agreements (IAs) from our developers to help better determine what an incentive should look like. The data from the four developers indicates an extreme need for a high incentive if colocation is not permitted. A more moderate incentive, like an ARR equivalent, would be required if colocation up to 5MW is allowed.

Four different developers submitted information about their IAs. The aggregated IA data suggests that the average price for interconnection costs is \$.12/wdc. The median amount is also \$.12/wdc. The range starts at \$.061/wdc and goes up to \$.285/wdc. The projects with the highest \$/wdc are all projects that have been cancelled, because they are currently unfinanceable.

These numbers are spread out across all different project sizes from 250kW to 5MW. Approximately 70% of the gardens are for 5MW gardens, and nearly all of them are for gardens greater than 1MW. While this \$.12/wdc number is higher than expected, it is not an insurmountable obstacle for financing. That is why we are seeing projects go forward at 5MW.

A striking comparison with the data is apparent when the averaged \$/wdc data is contrasted with the \$/wdc of the first 1MW. The average of these is \$.335/wdc.

This indicates that a significant – in some cases over 90% of the projects interconnection costs – are attributable to the first MW. This number is extremely difficult, if not impossible, to finance with the rate set where it is today. This also indicates that the MWs applied for after have very low interconnection costs and help offset the initial costs associated with line extension, distribution rebuilds and substation upgrades.

All of the above information indicates that some level of colocation is necessary. This is why we have not seen any real volume of applications filed since September.

Of course, our data is limited, so we suggest that the Commission request Xcel to provide all of their IAs for similar evaluation. This information is necessary to determine an appropriate incentive amount and the correct number of colocated gardens, but it clearly shows there is a need for 5MW of colocation.

II. Application Suspensions, Creating A Competitive Bidding Process And Other Radical Shifts To The Program Are Unnecessary Changes To A CSG Program That Has Been Developed Over A Three Year Period.

Three different stakeholders - Xcel Energy (Xcel), the Office of Attorney General (OAG) and Energy CENTS - have offered up various proposals to radically change the CSG program to address concerns that were already determined in the three years it has taken to implement this program.

The parties want to make these changes primarily because of two easily addressable issues: 1) consumer protection concerns; and 2) ratepayer impact fears. We will speak to each issue in turn.

i. The consumer protection measures are currently adequate, and the industry is working to make them even better.

On April 7, 2014, the Commission Ordered twenty-seven different consumer protection requirements to be integrated into the contract between developers and the utility.¹ In response, MnSEIA, along with the Clean Energy Resources Team (CERTS) and the Department, have developed a checklist that all of our members and many of our non-members have used as a model when drafting their contracts.² To date, hundreds of thousands of potential residential subscribers have been marketed to by various CSG developers. But only a handful of very minor growing pains have arisen.

The industry takes all complaints very seriously. The identified consumer protection goals and concerns through currently existing processes. Therefore, no radical program alteration or application suspension is warranted.

The OAG made several recommendations and energy CENTS made similar points. The OAG's recommendations are provided here:

- Require solar garden developers to use uniform standards to estimate the production of their facilities;
- Require Xcel and solar garden operators to submit all marketing and promotional materials to the Commission and to periodically update their marketing plans;
- Develop standards by which solar gardens can explain Xcel's role in the CSG program;
- Develop standards to prohibit solar gardens from marketing their products as providing "clean," "renewable," "sustainable" energy, or in otherwise promoting environmental benefits to subscribers, if solar gardens have elected to sell the RECs to Xcel;
- Develop uniform standards for how solar gardens may project future utility rate increases in their marketing materials for consumers;
- Require Xcel and solar garden operators to inform the Commission of their customer complaints;

¹ See ORDER REJECTING XCELS SOLAR-GARDEN TARIFF FILING AND REQUIRING THE COMPANY TO FILE A REVISED SOLAR-GARDEN PLAN, MINNESOTA PUBLIC UTILITIES COMMISSION, Docket No. E-002/M-13-867, Doc. ID 20144-98041-01 at 28-30 (April 7, 2014).

² See APPENDIX.

- Require solar garden operators to warrant a minimum level of production for the subscriptions they sell, unless the amount paid by the consumer is based directly on the solar garden’s production;
- Require that solar gardens make up-front deposits or to put money in escrow accounts to compensate consumers for any advance payments for projects that fail or do not meet the operator’s initial claims;
- and Standardize how consumers will be refunded for cancelled subscriptions.³

The OAG’s requests fall into one of two buckets. Either the issues are already being fleshed out in other spaces and do not require Commission intervention at this time, or they are overly onerous and not sufficiently beneficial to overcome the negative effects they would have on the program’s ability to create, finance and make CSGs accessible.

Many of the above issues are already being discussed in other forums. For instance, through our membership and the SRC Workgroup we have begun a process where we will work with our members to update the CERTs checklist to comply with current financing techniques, like “pay-as-you-go models,” and we are seeking to have the checklist submitted to each prospective subscriber when the developer’s contract is delivered.⁴ The checklist will flag for subscribers where each of the PUC Ordered consumer protection requirement is located in the contract, because the page-number will be listed on the checklist. We hope to have the checklist required through a traditional voting process in the next SRC Workgroup on May 4th, but if the Commission wants to order its utilization, that is fine with us as well.

We have also already addressed several of the OAG’s issues in the CSG work group. Concerns around using Xcel’s logo and explaining the developer’s relationship with the utility are now thoroughly vetted through Xcel’s staff.⁵ So there is no need to “Develop standards by which solar gardens can explain Xcel’s role in the CSG program.” The program already has them.

In the workgroup we’ve also touched upon appropriate phraseology around SREC ownership, and the ability of developers to sell green-energy. But we are still looking to have more conversations

³ COMMENTS, OAG-RUD, Docket No. E-002/M-13-867, Doc. ID 20164-119693-01 at 26-27 (April 1, 2016).

⁴ See COMPLIANCE FILING – STAKEHOLDER MEETING MINUTES, XCEL ENERGY, Docket No. E-002/M-13-867, Doc. ID 20161-117577-01 at 4-5 (Jan. 22, 2016); See also COMPLIANCE FILING – STAKEHOLDER MEETING MINUTES, XCEL ENERGY, Docket No. E-002/M-13-867, Doc. ID 20163-119022-01 at 3-4 (Mar. 9, 2016).

⁵ *Id.*

around those issues, so that we may alleviate all consumer concern over inappropriate SREC solicitation.⁶ Furthermore, CERTs also has consumer information aides for these very purposes. These issues are being integrated into the program and consumers will be fairly protected.

Having said all of that, we understand that the OAG wants several of these programmatic changes to be authorized via Commission order. While we disagree, if the Commission seeks to formalize many of these issues that are being handled in other venues through an order, we submit the following:

- In response to requesting a standard for facilities production estimates, we suggest the use of PV Watts.
- In response to requiring Xcel and Solar Garden Operators to submit all marketing and promotional materials to the Commission and to periodically update their marketing plans, we endorse the usage of either trade-secret submission to the Commission or cover sheets that provide only key contract details.
- In response to the request to develop standards to explain Xcel's role in the CSG program, Xcel has already requested this from developers and we support the adoption of Xcel's rules as is.
- In response to the request to develop standards to prohibit solar gardens from marketing the environmental benefits in inappropriate ways, we support the Commission adopting the current Federal Trade Commission standards on green claims.
- In response to the request to develop uniform standards for how solar gardens may project future utility rate increases, we support moving to the VOS so this no longer becomes an issue. But if that is an insufficient solution, we support requiring Xcel to publish their historic bill credit rate increase and to make that information publicly available. This will ensure developers are all using the same set of data.

The rest of the other OAG issues are completely unnecessary, or they are overly detrimental to the program and the OAG has failed to articulate a sufficient need for them. For example, requiring developers to be on the hook for gardens that do not meet their claims is a challenge to place upon our industry. Establishing an escrow account with adequate funds to refund each subscriber is equally onerous. Warranties and protective escrow accounts are best created through economic processes and not state mandates. Requiring warranties or escrows could result in freezing hundreds of millions of dollars that would otherwise go towards developing more solar gardens in Minnesota.

⁶ While note denoted in the minutes there was a discussion during the Marketing Concerns portion about SREC marketing. *See* COMPLIANCE FILING – STAKEHOLDER MEETING MINUTES, XCEL ENERGY, Docket No. E-002/M-13-867, Doc. ID 20163-119022-01 at 3-4 (Mar. 9, 2016).

The OAG's concerns are also misplaced on this issue. If a garden fails to meet its assigned expectations, it is likely not because of the solar developer. It could be an installation mistake, a product malfunction or an unusual amount of snow fall or cloud cover over a twenty-five-year period. The vast majority of ways that the system or a system model could go awry have nothing to do with a developer. So requiring that the entire industry freeze their funds in escrow, so that they can compensate subscribers for things that are outside of their control is overly onerous.

What's more, CSG developers have a strong incentive to increase production. The way developers make money is from the production of their system directly. It is their form of revenue. No other safeguards are required to ensure productive systems, because the market will take care of it directly.

We don't believe there will be any bad actors in Minnesota's CSG market, but if there were, it seems that the public interest would be best suited by letting subscribers flag the issues with the OAG itself and to then have the OAG take corrective action. This is the best way to incentivize proper industry-wide action, and it only holds those bad, responsible parties liable. Creating an escrow account is an excessive regulatory approach that requires so much from developers that it will substantially hamper the program, and it will only be useful in a handful of circumstances. Further, customers are free to contract with any developer that seeks to implement this themselves. Subscribers are free to vote with their dollar and to only subscribe to those gardens that have the attributes they deem useful or appropriate. For the foregoing reasons, the Commission should avoid such a program change.

a. By Switching to VOS as is the Commission Can Directly Control Any Ratepayer Impact Associated With This Program.

We contest Xcel's estimations on whether, and to what extent, there will be ratepayer impact given the very high level of Xcel system upgrade costs borne by each CSG. We believe the CSG program reduces costs for both the ratepayers who are participating in the program and those who are not. In any event the statute authorizes some level of increased rates as the Commission is required to develop the program in a manner that makes CSGs financeable.⁷

We advocate for a transition to the VOS will eliminate ratepayer harm for commercial industrial subscribers. It will also allow the Commission to directly control the impacts of gardens composed of residential subscribers by setting an appropriate incentive.

Any residential incentive could also be phased out overtime as the price of panels and soft costs continue to decrease. Each year the amount of ratepayer impact would lower, but the viability of residential CSGs would stay the same.

⁷ See Minn. Stat. § 216B.1641, subd. (e)1 (stating "Any plan approved by the Commission must: (1) reasonably allow for the creation, financing, and accessibility of Community Solar Gardens.").

The VOS methodology was designed to eliminate these very things.⁸ It is scientifically designed to do so. Switching to the VOS, therefore, should mitigate any concerns around ratepayer impact.

The OAG has articulated that it believes the VOS is an insufficient rate for CSGs, because it is unclear how scientifically sound its methodology is.⁹ This, contradicts what the OAG has stated in docket 15-773. In that docket, the OAG has advocated for Minnesota Power to use the VOS, because "it provides the best available proxy or the value that the commission and Department have determined Camp Ripley will provide to the system."¹⁰

The VOS is not an arbitrary rate. It was developed through a stakeholder process that was conducted by the Department of Commerce, calculated by an independent consulting company, and approved by the Commission. The VOS is not a 100% perfect rate. It includes assumptions and we believe distributed solar contributes far more system benefits than those included in the VOS methodology. At present, however, it is the best and most vetted valuation possible.

The OAG also contends that the VOS also requires locational benefits to be integrated into its methodology before the rate can be accurate enough to apply. This, however, is only true if the VOS was to be used in small increments. If enough gardens, or other solar projects over a long period of time can be deployed, then the VOS can be averaged across the multitude of projects and an average rate of locational benefits can be applied or estimated. We support this approach.

Transitioning to the VOS makes the OAG's request for a competitive procurement approach extraneous. Changing the CSG program at this time is both unneeded and upends three years' worth of program development for little to no public benefit.

Xcel Energy also contends that proximity to load has been an issue with CSGs. The utility argues that the VOS may need to be adjusted in order to make the rate more congruent with reality. This

⁸ Minn. Stat. § 216B.164, subd. 10 (stating "[...]an alternative 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.).

⁹ COMMENTS, OAG-RUD, Docket No. E-002/M-13-867, Doc. ID 20164-119693-01 at 6 (April 1, 2016) (stating "It is important to note, however, that numerous studies have been conducted nationwide on the various estimates of the value of solar. The methods and results of these studies have varied greatly, which calls into question the accuracy and confidence one should put into long-term rate impact calculations that utilize the VOS").

¹⁰ REPLY COMMENTS, OAG-RUD, Docket No. E015/M-15-773, Doc ID. 201510-115047-01 at 3 (Oct. 23, 2015).

argument, however, cuts both ways. The VOS is a good estimation for the value solar provides to the grid, but there will always be certain variables not included in the rate.

For instance, under the current tariff, solar projects pay for 100% of distribution system upgrade costs that are implemented as part of the CSG interconnection process. In many cases, these upgrades are long-overdue improvements to distribution substations and avoid substation future costs for all ratepayers. Currently, developers are not compensated through the VOS for cross subsidizing other ratepayers when they upgrade substations with their own money. Some substation upgrades are solar specific. But other upgrades are needed for future infrastructure and developers are paying for those upgrades today. They need to in order to get their projects online.

If Xcel wants to start fine-tuning the VOS's methodology down in price, then there are just as many factors developers can assert to show additional values not encapsulated. The VOS currently gives a strong and reasonable estimate for what the true value of solar is and should be adopted without modification.¹¹

Furthermore, the contention that distance is not adequately encapsulated in the current VOS methodology as it applies to CSGs is only predicated on the initial round of applications. According to our developers, they went to the fringes of Xcel Energy's service territory, because that is where land is cheapest. As that cheap, available land is converted into solar gardens, it will slowly drive the program closer to the high load areas. This will in turn increase the average locational value of CSGs.

Additionally, several community groups and various developers are working on Hennepin County projects as we speak. But those projects are considerably more difficult to put together and therefore are more likely to come online in years to come. As such, Xcel Energy's current data set is skewed against developers and should not be weighed without the aforementioned considerations in mind. As time goes on, the locational value of CSGs will increase.

If Xcel would like to facilitate the valuation of precise locational benefits of distributed solar, the industry would welcome that. To date, Xcel has refused to provide any insight into where its grid would most benefit from distributed solar.

III. The Onus Of Ensuring The Program Has A Sufficient Amount Of Low-Income Individuals, Localized Or Rooftop Arrays Should Not Be Placed On The Development Community.

Another topic that has arisen during the initial comment period is the concept of requiring a specific percentage of residential subscribers. The best way to encourage low-income participation,

¹¹ MnSEIA is not against re-evaluating the VOS as more variable and data becomes apparent. But this should not delay the transition to the VOS. The VOS is currently close enough. Such an inquiry into the VOS's efficacy should be done in the VOS docket, instead of in this CSG venue.

localized or rooftop arrays is to simply transition to the VOS rate, because it has a financeable, fixed escalator that ensures that rates go up with inflation. As we mentioned in our previous comments this creates more rate certainty for financiers, and allows shorter contract periods.¹² This, in turn, increases developers' ability to enter the low-income subscriber market, and it will result in higher percentages of the desired subscriber class.

We do not believe that the "Community Solar Garden" is a one-size-fits-all model, as evidenced by our members. Various companies engage in different sectors of Minnesota's solar community. Some developers prefer to work solely with residential customers, some work only with commercial and industrial customers, and the majority use a blended composite of residential and commercial subscribers. Members also differ on financing options, some use upfront financing and other do a "pay-as-you-go" model.

We have members that are trying to fill all the different economic niche space available. This suggests to us, that if a community group is underrepresented in CSGs, it is because it is difficult to currently include that market segment while retaining the project's financial viability. There is a lot of current diversity in the program already, and if there isn't enough of a particular class it is because the economics aren't there to facilitate gardens, not because the developers are trying to avoid servicing the class of customer.

If the commission wants to evaluate subscriber requirements - like low-income participation, proximity of gardens to subscribers or rooftop arrays - then the onus for paying for the increased costs associated with adding more low income customers should not fall on the developer. Instead, the statute requires that the program create CSGs, ensure they are financeable and accessible.¹³ Instituting a subscriber requirement - especially for low-income subscribers with low FICO scores - will have a detrimental impact on garden financeability.

If a requirement to have low-income participants results in fewer gardens, then the requirement is doing a disservice to the very class it is trying to help. Fewer gardens likely means fewer low-income participants in the program, even if the percentage of low-income participants goes up on a per-garden basis. Conversely, more gardens equates to more low-income subscriber access. As such, the funding for the low-income subscribers should come from statewide funds that are previously allocated for low-income individuals and not the development community.

¹² COMMENTS, MINNESOTA SOLAR ENERGY INDUSTRIES ASSOCIATION, Docket No. E-002/M-13-867, Doc. ID 20164-119696-01 at 7-8 (APR. 1, 2016).

¹³ See Minn. Stat. § 216B.1641, subd. (e)1 (stating "Any plan approved by the Commission must: (1) reasonably allow for the creation, financing, and accessibility of Community Solar Gardens.").

SUMMARY

1. The commission should not make any programmatic changes at the request of the OAG, Xcel or Energy CENTs that may require a competitive bidding process, additional consumer standards or a program freeze.
2. If the commission decides that it must address consumer protection issues, then we believe the Commission should adopt standards listed above or that are minimally intrusive for developers and avoid any requests for warranties or escrow accounts.
3. The best way to ensure low-income participation is to move to the VOS with an appropriate residential adder and colocation up to 5MW.
4. If the Commission seeks to require stricter requirements to encourage low-income participation in the program, then the onus should not be on the developers to finance their inclusion.
5. The best way for this program to move forward is to allow colocation up to 5MW, move to the VOS and create an ARR-like incentive structure to encourage the creation and accessibility of CSGs for all subscriber classes.
6. The Commission should request that Xcel provide data that illustrates the interconnection costs associated with the first MW of gardens, as well as, the average costs associated with increased colocation amounts.

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Minnesota Solar Energy Industries Association

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

121 Seventh Place East, Suite 350

St. Paul, MN 55101-2147

4/29/2016 Docket

No. E002/M-13-867

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

AFFIDAVIT OF DAVID SHAFFER

I, David Shaffer, affirm that I have personal knowledge of the contents of these **REPLY COMMENTS OF THE MINNESOTA SOLAR ENERGY INDUSTRIES ASSOCIATION** and their attachments, appendices, and preceding comments, which are to the best of my knowledge, true and accurate.

Dated: 4/29/2016



David Shaffer
Development Director and Counsel
MnSEIA

State of Minnesota
County of Hennepin

Subscribed and Sworn before me this day of April 29, 2016



