STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger Chair

David C. Boyd Commissioner
Nancy Lange Commissioner
J. Dennis O'Brien Commissioner
Betsy Wergin Commissioner

In the Matter of Xcel Energy's Plan for a Docket No. E-002/M-13-867

Community Solar Garden Program

Pursuant to Minn. Stat. §216B.1641 Date: 12/17/2013

COMMENTS OF THE MINNESOTA SOLAR ENERGY INDUSTRY ASSOCIATION

We provide these comments on behalf of the Minnesota Solar Energy Industry Association (MnSEIA). As a membership association comprised of 58 organizations involved in photovoltaic and solar thermal energy production, MnSEIA promotes the development and use of solar energy to create a sustainable future for the state.

Background

Throughout the community solar garden ("CSG") docket and the Value of Solar Tariff ("VOST") docket MnSEIA has retained a similar position. Primarily we've sought a rate that will promote solar generation, and that best illustrates the real value of solar energy to the utility.

In our VOST comments we've advocated for an approach similar to the one advocated in the Mid-Atlantic Solar Energy Industries Association's document entitled "The Value of Distributed Solar Electric Generation to New Jersey and Pennsylvania." We feel that approach best calculates all of the value solar energy generates for the utility, ratepayers, and society.

Similarly, in the CSG docket we've advocated for an interpretation of the term "Applicable Retail Rate" (ARR) that facilitates solar energy growth. An ARR that facilitates solar growth provides an escalator rate, an environmental value, a locational benefit, and an economic benefit.

Intro

In response to our previous comments, the initial comments of others and Xcel's plan, the Attorney General's ("AG") Office and Department of Commerce (the "Department") have since filed their own comments and supplemental comments respectively.

Today we will address several points within their comments and supplementary comments. We will also further develop our discussion on an alternative ARR to the one Xcel proposed in their plan.

Furthermore, we seek to expound on what we said in our previous comments in this docket. Changes in other dockets and agency proceedings require us to update our position in several areas. Specifically, we will retouch upon the Locational Benefit adder, the Environmental Benefit adder, an ELCC value, and an Escalation Rate for the entire ARR. Moreover, we will introduce an Economic Benefit adder into the potential list of adders that the Minnesota Public Utilities Commission (the "Commission") could adopt in order to make the rate conducive to the CSG statute's intent.

Comments

I. MnSEIA's Response to the AG's Office's Privacy Concerns

The first response we have is to the Attorney General's Office, regarding their consumer protection concerns. MnSEIA also has the AG's concern for strong consumer protection, but we believe Xcel's current plan combined with our industry's performance standards will sufficiently protect consumers. But if the Commission disagrees, we've detailed some further consumer protection plans below.

Currently, all of our installers have staff members that are North American Board of Certified Energy Practitioners certified. According to their website, "NABCEP is the most respected, well-established, and widely recognized certification organization for North American solar professionals in the field of renewable energy." This certification for solar installers is rigorous, science-based and designed to provide subscribers the utmost accuracy in solar electric output, safety and long term durability for subscribed installations.

But it is not just our industry's protections that should help mitigate the AG's office's concerns, also Xcel's comments detail several disclosure requirements that will further protect consumers. In their original petition to the Commission Xcel requires a warranty of production subscription, a warranty for compensation for underperformance

2

ABOUT US. THE NORTH AMERICAN BOARD OF CERTIFIED ENERGY PRACTICIONERS. http://www.nabcep.org/ (last viewed: Dec. 17. 2013).

of solar panels, proof of insurance, proof of long-term maintenance, and a copy of the contract between Xcel and the CSG provider.²

We also seek to highlight that Xcel requires energy analysis, or production analysis, as part of their application process.³ Xcel makes sure that the CSG procures power at the expected rate. To do this, Xcel plans to work with installers in a collaborative venture. Both parties will monitor the energy production by using the PV Watts calculator that the National Resource Energy Lab developed.⁴

Further consumer protections in Xcel's plan are their fees. While several of Xcel's fees are unnecessarily high, Xcel's intended purpose for their escrow fee is to help protect consumers from exploitation.⁵

We believe Xcel's proposed protections combined with our industry's standards are sufficient to meet the AG's needs. MnSEIA has actively engaged Xcel, DER, and other stakeholders in the development of these standards for consumer protection over the last two years in the context of shifting from incentives for nameplate capacity to performance. Consumer protection has been, and always will be, one of the industry's chief concerns. But, we are confident that Xcel's plan combined with our industry's standards will sufficiently protect CSG subscribers.

In the event that the AG and the Commission do not believe that sufficient consumer protections are in place, however, MnSEIA is willing to consider two additional components.

First, Xcel has already proposed submission of a one year evaluation of the CSG program to the Commission and we would suggest at least a quarterly stakeholder review that involves the AG.6 This quarterly review should evaluate and track subscriber satisfaction, and alleviate the AG's consumer protection concerns.

Second, we agree with IREC's current comments concerning developer CSG project viability requirements that should also include proof of site control, such as evidence of direct ownership, a lease or an option to lease or purchase that may be exercised upon award of a CSG contract. Site control is another way to demonstrate that a proposed CSG is not merely speculative.

5 See Xcel Petition at 13.

² See Xcel Petition at 16.

³ Nov. 5. 2013. Attorney General's Office's IR, No. 107.

⁴

⁶ *Id.* at 9.

⁷ IREC Comments (currently unpublished).

Overall we believe that our industry's standards and practices combined with Xcel's consumer protections plans are sufficient to provide excellent consumer protections. But, in the event the Commission disagrees, our two additional components should enhance CSG consumer protection.

II. MnSEIA's Endorsement of the Department's Comments.

MnSEIA seeks to highlight and endorse most of what the Department said in their reply comments. While we think that Xcel's plan requires additional changes than the alterations the Department seeks, we do endorse the Department's supplemental comments in near totality. In those comments the Department bulleted several points:

- Xcel's proposed application process set unreasonable [limitations] on the amount of [CSGs installations] it would permit in a year;
- The Company's definition of capacity does not conform to Minn. Stat. §216B.164, Subd. 10;
- The Company's proposal to fix the applicable retail rate for the duration of the contract, the presumed inability of a subscriber to switch to the Value of Solar rate once it is developed, and the treatment of unsubscribed energy require modification;
- The length of the proposed contract may not conform to the term expected to be used in the Value of Solar methodology; and
- Xcel's proposed treatment of Renewable Energy Certificates (RECs) prior to the approval of the Value of Solar rate may not be reasonable.⁸

We are in agreement with all of the above bullet points. Our only concern is the Department silent on the ARR. We believe the ARR must be higher in order to properly create, or finance CSGs.

Of the remaining points, we only like to further emphasize the importance of REC retention. The VOST requires that the Solar Renewable Energy Credits ("SREC") are transferred, and we believe that is because ideally the VOST implicitly compensates installers for SREC values.⁹ But in our last round of VOST comments, which we submitted last week, we argued that the Department's draft methodology was not providing just compensation to installers for the full value of an SREC.

Dec. 2. 2013. COMMENTS OF THE MINNESOTA DEPARTMENT OF COMMERCE, DIVISION OF ENERGY RESOURCES. Docket No. E002/M-13-867. Doc. ID. 201312-94201-01, p. 4.

⁹ Minn. Stat. $\S 216B.164$, subd. (k) – (l).

SRECs are comprised of environmental values and compliance values. We believe the Department's draft VOST methodology is not justly compensating for the compliance value. Here, however, we believe the CSG law does not authorize any transfer of SRECs from installers to Xcel, unless Xcel purchases the SRECs for their full value.

In the event the Commission disagrees with our interpretation, and believes a transfer is authorized or required, we seek to have the SREC transferred in exchange for **just compensation**. That is compensation adequate to account for both the environmental and compliance portions of the SREC.

We seek to reinforce the Department's position that any transfer of SRECs without the VOST in place is unauthorized by the statute. But, we also seek to state, that in the event a transfer is allowed or required, just compensation should be provided to the installer for the value of the SREC.

III. The Applicable Retail Rate Needs To Be Escalated and Should Include Xcel's A50 Rate, an ELCC credit, an Environmental Benefit, an Economic Benefit and a Locational Benefit Adder.

The ARR is an ambiguous term. MnSEIA urges the Commission to look to the Legislature's intention when determining the ARR, which the remainder of the statute illustrates. The correct standard the Commission should use when determining the ARR is whether the rate will allow for the "creation, financing, and accessibility of community solar gardens" that are "consistent with the public interest." ¹⁰

Xcel's A50 Energy Rate is "available to any small qualifying facility (SQF) of less than 40 kW capacity who receives non-time of day retail electric service from Xcel and offsets energy delivered by Company." CSG developers, however, expect most CSGs will be larger than 40kW. Therefore, the rate alone does not represent the financial value of the large scale generated KWh, nor does it reflect CSGs' additional societal benefits. Xcel's A50 rate is a reasonable starting point because the rate does represent the current basic energy charge. A reasonable starting point value is \$0.07506/KWh.

But a \$0.07506/KWh rate is insufficient to create, finance or make CSGs accessible. The A50 rate is too low to meet the statute's needs.

But even if a garden could be created using the A50 rate, that garden would be adverse to the public interest. Assuming an installer could develop a CSG using the A50 rate, we would expect the CSG to have one or more of the following adverse effects on

_

¹⁰ Minn. Stat. § 216B.1641.

Minnesota Electric Rate Book, Northern States Power, (Dec. 10, 2013), §9 p. 3, http://www.xcelenergy.com/staticfiles/xe/Regulatory/Regulatory%20PDFs/rates/MN/Me_Section_5.pdf

the public interest:

- Use out of state, or out of country manufacturers and parts.
- Use of cheap products that may not last the 20-25 year term.
- Use of cheap and poorly trained labor, resulting in faulty systems.

In order to develop a rate that will create CSGs that are consistent with the public interest the ARR needs to include some of the elements of the VOST that the Department has already included in its draft methodology.

While the ARR should not be a direct reflection of the VOST, it should use all the recommended VOST components necessary to get the rate to a level where CSGs can be created. After discussing with the CSG installers within our organization, we submit that an ARR that can develop CSGs must fall within the 15-20 cent per kWh range. Anything less will be too low to develop CSGs that are consistent with the public interest, and may prevent CSG development entirely.

It is indisputable that the purpose of this statute is to help Minnesota develop CSGs. In order to meet the statutory intent the Commission must adopt an ARR that meets the 15-20 cents per kWh threshold. We believe an ARR that includes some combination, or all, of our proposed adders will allow Xcel's currently proposed A50 rate to meet the statutory intent. We will discuss our adders below, and they are a Locational Benefit, an Environmental Benefit, an ELCC value, an Economic Value and an Escalation Rate that corresponds with inflation.

Locational Benefit

In our previous comments we discussed an ARR that includes a Locational Benefit adder. ¹² This is a value to the utility relative to the benefit of a CSG's grid distribution value, as certain areas of the grid benefit from distributed generation. This benefit is known, measureable, and since our last comments in this docket the Locational Benefit has been included into the Department's draft methodology for the VOST. ¹³

The Commission itself has already required utilities to compile distribution data. According to the Commission, "[e]ach utility should provide, upon request, a list of substation areas or feeders that could be likely candidates for distribution credits as

Oct. 31. 2013. IN THE MATTER OF XCEL ENERGY'S PLAN FOR A COMMUNITY SOLAR GARDEN PROGRAM PURSUANT TO MINN. STAT. §216B.1641. Docket No. E-002/M-13-867, Doc. ID. 201311-93423-01, p.11.

Clean Power Research. MINNESOTA VALUE OF SOLAR: METHODOLOGY. Prepared for Minnesota Dept. of Comm. Div. of Energy Resources, p. 40. (Hereinafter, *VOST methodology*).

determined through the utility's normal distribution planning process." This required distribution data is easily convertible into locational benefits for grid stabilizing, distributed generation.

The Department has shown a willingness to incorporate this value into the VOST, because the value is an important value to the utility. Because the value is also easy to recognize and the distribution data is already compiled, the Commission should incorporate this value into the ARR in order to help reach the 15-20 cent kWh threshold to develop CSGs. We suggest the Commission adopt a \$.03/KWh Locational Benefit.¹⁵

Environmental Benefit

Since our last round of comments in this docket, the Department has also figured out a way to successfully, and easily, incorporate an environmental benefit into the VOST. ¹⁶ We advocate the same or similar approach to the ARR.

The Department's approach incorporates the "federal social cost of CO2 emissions plus the Minnesota PUC-established externality costs for non-CO2 emissions." Neither of these numbers are difficult to discern as they are both credible studies.

Further supporting a need to incorporate environmental values into rate structures is Xcel's recent desire to include an environmental value to defend their own nuclear plant cost overrun. As Xcel has argued themselves, reduction in CO2 emission is a benefit to the utility because it reduces environmental compliance costs. But a CO2 reduction also benefits society, because of reduced mitigation costs.

All parties have agreed in this docket, or elsewhere, that environmental values should be included in utility costs. An environmental value for solar energy should be an

VOST methodology, supra note 12 at 41.

Oct. 18. 2013. Direct Testimony and Schedules Timothy J. O'Connor, IN THE MATTER OF A COMMISSION INVESTIGATION INTO XCEL ENERGY'S MONTICELLO LIFE CYCLE MANAGEMENT/EXTENDED POWER UPRATE PROJECT AND REQUEST FOR RECOVERY OF COST OVERRUNS, Docket No. E002/CI-13-754, p. 8.

See DER Initial Comments at 7, 16-17 (referring to Order in Docket No. E999/CI-01-1023, at 24 (Sept. 28, 2004)).

See Appendix.

¹⁷ *Id*

acceptable option to raise the ARR to the rate necessary to attain statutory requirements. We suggested using \$0.02930/KWh for the environmental value.¹⁹

ELCC Value

During our last submitted comments we recommended including the interim ELCC value of \$5.15 per kW-month, because a capacity value was included in Xcel's own Slayton report.²⁰ Since that time the discussion about the final ELCC value has developed further, and we now endorse, and expect the Commission to adopt a final ELCC value more akin to \$8.35 per kW-month.

The previous \$5.15 value was based on a compromise, instead of science.²¹ The \$8.35 per kW-month value is a more credible, and supportable value that the Commission should look to integrate into the ARR. We suggest the Commission use an ELCC value of \$0.08366/KWh.²²

Economic Development Benefit

While we did not include this potential adder in our last round of CSG comments, today we introduce an Economic Development Benefit into the ARR discussion. An Economic Development Value is a value formulated around the increased tax revenues, reduced unemployment, and an increase in general confidence conducive to business development that CSG development would provide.²³

Although not currently integrated into the VOST methodology, during the last round of VOST comments we submitted to the department that an economic development benefit should be included into the VOST. We think a similar value applies here today, and should be included in the ARR.

An Economic Development Benefit is valuable to both society and the utility. It has a direct benefit to society because it aides the local economy via increased business

Oct. 31. 2013. In the Matter of Xcel Energy's Plan for a Community Solar Garden Program Pursuant to Minn. Stat. §216B.1641. Docket No. E-002/M-13-867, Doc. ID. 201311-93423-01, p.9.

See Appendix.

May 1, 2013. SOLAR EFFECTIVE LOAD CARRYING CAPABILITY (ELCC) STUDY, Docket No. E002/CI-13-315, Doc. ID. 20135-86585-01, p. 2.

See Appendix.

Perez, Norris, and Hoff, *The Value of Distributed Solar Electric Generation to New Jersey and Pennsylvania*, p. 45, Prepared for: Mid-Atlantic Solar Energy Industries Association and Pennsylvania Solar Energy Industries Association, prepared by Clean Power Research.

and tax revenue.²⁴ But it also has value to the utility because benefiting a local economy is the same thing as benefiting the utility's rate payers. The groups are one and the same.

Historically, Xcel has even provided reduced rates in order to develop economic development zones that aid ratepayers – they call this their Area Development Zone Rider.²⁵ The Development Zones are areas where Xcel is encouraging economic development, and as such, they are offering a reduced rate for ratepayers in Development Zones.²⁶

While we would endorse any Economic Development value created by Clean Power Research or other equally credible sources, today we've used an Economic Development Benefit value derived by the PV JEDI modeling program. According to JEDI, each 1MW CSG is expected to benefit the state \$1.8 Million dollars and created 18 job years (actual model results ranged from \$1.8 – 2.4 Million dollars).²⁷

These "job years" include all jobs that were created in the development and construction of the project including construction, installation, manufacturing, supply, trade, finance, insurance, professional services and development services. According to our models, if a 1MW solar array produced 29,444,000 KWh over 25 years, and benefited the state \$2.4 Million dollars, that per KWh benefit would be about \$0.06/KWh.

We submit to the Commission today that all of the above benefits could be included in developing the ARR. We suggest the Commission adopt an Economic Development Value of \$0.06000/KWh.²⁸

Escalation Rate

All parties have expressed that they believe the VOST is right around the corner, and, as such, we understand some hesitancy to include an escalation on top of the ARR. But if Xcel does not choose to adopt the VOST, the CSG rate could be permanently fixed.

Minnesota Electric Rate Book, Northern States Power, (Dec. 10, 2013), §5 p. 149, http://www.xcelenergy.com/staticfiles/xe/Regulatory/Regulatory%20PDFs/rates/MN/Me_Section_5.pdf

Jobs and Economic Development Impact Model – http://www.nrel.gov/analysis/jedi/ (release number PVS 12.13.12)

²⁴ *Id*.

²⁶ *Id*

See Appendix.

Without an Escalation Rate, over time, the consumption meter's rate will outpace the production meter. This "outpacing" will cause a depreciation in the value of CSG created solar energy.

Our position, however, on integrating an Escalation Rate has changed. While the alteration is basically irrelevant in terms of rate differences, we seek to alter our position to align with the Department's. In our previous comments we sought to integrate Escalation Rates into each value included into the ARR.

Whereas the Department is seeking to add an escalation rate on top of the ARR.²⁹ The ARR and Escalation rate would be separate rates. The Department's plan would add an Escalation Rate that uses the whole ARR, instead of each value in the ARR.³⁰ Today, we endorse the Department's position. The Department's approach simplifies the process, but yields very similar results. Moreover, it ensures the production and consumption meters increase at the same rate, preserving the value of solar.

As we may never use the VOST, ensuring an escalation rate is affixed to the ARR is extremely important. If no VOST is or adopted the CSG rate will already not reflect the true value of solar. But with an added Escalation Rate it at least will reflect inflation and other similar price influencing factors.

Conclusion

Throughout this document we have responded to the AG's office by indicating that we believe consumer protections are already sufficient, but we also provided additional options to further protect consumers. We also agreed and endorsed all of the Department's comments except their silence on the ARR. We contend that the ARR should include a **Locational Benefit**, an **Environmental Benefit**, an **ELCC Value**, an **Economic Benefit** and an **Escalator Rate** that corresponds to inflation.³¹

See Appendix.

Nov. 6. 2013. COMMENTS OF THE MINNESOTA DEPARTMENT OF COMMERCE, DIVISION OF ENERGY RESOURCES, Docket No. E002/M-13-867, Doc. ID. 201311-93405-01, p.11.

³⁰ *Id*.

APPENDIX

YEAR		PER KWH RATES					
Year	Xcel A50 Rate per KWh (Seasonal Average)	ELCC KWh Rate	REC Value	Updated Externalities Value @ \$36/ton	Economic Development Value	Locational Benefit Adder	Combined Rate
Formula/Source:	From A50 Rate Code	From ELCC Worksheet	Stays with Developer	From Externalities Worsheet	JEDI Model	Holy Cross, CO	B+C+D+E+F
Annual Change:	2.36%	2.36%	NA	2.36%	2.36%	2.36%	
1	\$ 0.06093	\$ 0.08016	\$ -	\$ 0.02930	\$ 0.06000	\$ 0.03000	\$ 0.2303
2	\$ 0.06237	\$ 0.08246	\$ -	\$ 0.03000	\$ 0.06142	\$ 0.03071	\$ 0.2362
3	\$ 0.06384	\$ 0.08483	\$ -	\$ 0.03070	\$ 0.06287	\$ 0.03143	\$ 0.2422
4	\$ 0.06535	\$ 0.08727	\$ -	\$ 0.03143	\$ 0.06435	\$ 0.03217	\$ 0.248
5	\$ 0.06689	\$ 0.08978	\$ -	\$ 0.03217	\$ 0.06587	\$ 0.03293	\$ 0.254
6	\$ 0.06847	\$ 0.09236	\$ -	\$ 0.03293	\$ 0.06742	\$ 0.03371	\$ 0.261
7	\$ 0.07008	\$ 0.09502	\$ -	\$ 0.03371	\$ 0.06901	\$ 0.03451	\$ 0.267
8	\$ 0.07174	\$ 0.09775	\$ -	\$ 0.03450	\$ 0.07064	\$ 0.03532	\$ 0.274
9	\$ 0.07343	\$ 0.10056	\$ -	\$ 0.03532	\$ 0.07231	\$ 0.03615	\$ 0.281
10	\$ 0.07516	\$ 0.10345	\$ -	\$ 0.03615	\$ 0.07402	\$ 0.03701	\$ 0.288
11	\$ 0.07694	\$ 0.10642	\$ -	\$ 0.03700	\$ 0.07576	\$ 0.03788	\$ 0.296
12	\$ 0.07875	\$ 0.10948	\$ -	\$ 0.03788	\$ 0.07755	\$ 0.03878	\$ 0.303
13	\$ 0.08061	\$ 0.11263	\$ -	\$ 0.03877	\$ 0.07938	\$ 0.03969	\$ 0.311
14	\$ 0.08251	\$ 0.11586	\$ -	\$ 0.03968	\$ 0.08125	\$ 0.04063	\$ 0.319
15	\$ 0.08446	\$ 0.11920	\$ -	\$ 0.04062	\$ 0.08317	\$ 0.04159	\$ 0.327
16	\$ 0.08645	\$ 0.12262	\$ -	\$ 0.04158	\$ 0.08513	\$ 0.04257	\$ 0.335
17	\$ 0.08849	\$ 0.12615	\$ -	\$ 0.04256	\$ 0.08714	\$ 0.04357	\$ 0.344
18	\$ 0.09058	\$ 0.12977	\$ -	\$ 0.04357	\$ 0.08920	\$ 0.04460	\$ 0.353
19	\$ 0.09272	\$ 0.13350	\$ -	\$ 0.04459	\$ 0.09131	\$ 0.04565	\$ 0.362
20	\$ 0.09491	\$ 0.13734	\$ -	\$ 0.04565	\$ 0.09346	\$ 0.04673	\$ 0.371
21	\$ 0.09715	\$ 0.14129	\$ -	\$ 0.04672	\$ 0.09567	\$ 0.04783	\$ 0.380
22	\$ 0.09944	\$ 0.14535	\$ -	\$ 0.04783	\$ 0.09792	\$ 0.04896	\$ 0.390
23	\$ 0.10179	\$ 0.14953	\$ -	\$ 0.04895	\$ 0.10023	\$ 0.05012	\$ 0.400
24	\$ 0.10419	\$ 0.15382	\$ -	\$ 0.05011	\$ 0.10260	\$ 0.05130	\$ 0.410
25	\$ 0.10665	\$ 0.15825	\$ -	\$ 0.05129	\$ 0.10502	\$ 0.05251	\$ 0.421
t Present Value:	\$ 0.83225	\$ 1.14894	\$ -	\$ 0.40027	\$ 0.81955	\$ 0.40977	\$ 3.610
Levelised Cost:	\$ 0.07506	\$ 0.10362	\$ -	\$ 0.03610	\$ 0.07391	\$ 0.03695	\$ 0.325