

414 Nicollet Mall Minneapolis, MN 55401

October 1, 2014

-Via Electronic Filing-

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

RE: COMMENTS COMMUNITY SOLAR GARDENS PROGRAM DOCKET NO. E002/M-13-867

Dear Dr. Haar:

Northern States Power Company, doing business as Xcel Energy, submits the attached Comments in response to the Commission's September 8, 2014 Notice in the above-noted docket.

We have electronically filed this document with the Minnesota Public Utilities Commission, and copies have been served on the parties on the attached service list.

Please contact Holly Hinman at <u>holly.r.hinman@xcelenergy.com</u> or 612-330-5941 if you have any questions regarding this filing.

Sincerely,

/s/

CHRISTOPHER B. CLARK REGIONAL VICE PRESIDENT RATES AND REGULATORY AFFAIRS

Enclosures c: Service List

STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger David C. Boyd Nancy Lange Dan Lipschultz Betsy Wergin Chair Commissioner Commissioner Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF ITS PROPOSED COMMUNITY SOLAR GARDENS PROGRAM DOCKET NO. E002/M-13-867

COMMENTS

OVERVIEW

Northern States Power Company, doing business as Xcel Energy, submits the attached Comments in response to the Commission's September 8, 2014 Notice submitted in the above-noted docket.

This request for comments follows the Commission's September 17, 2014 Order approving with modifications the Company's plan for its community solar gardens (CSG) program, "Solar*Rewards Community." The Commission adopted the Applicable Retail Rate (ARR), as defined in its April 7, 2014 Order, as the bill credit rate to be used in Solar*Rewards Community. The Order was preceded by an extensive dialogue among stakeholders, including the Company, the Department, and solar developers addressing the Company's May 1 Motion to Show Cause and May 7 Compliance Filing. These comments also follow the development of the Value of Solar (VOS)¹ methodology by the Department, its approval by the Commission,² and the Company's submittal of a VOS calculation.³

These comments respond to the Commission's request that parties build the record regarding the design and use of an appropriate adder, if any, for use with the VOS in CSGs, consistent with the requirement that the program plan reasonably allows for the creation, financing, and accessibility of gardens.

¹ See In the Matter of Establishing a Distributed Solar Value Methodology Under Minn. Stat. 216B.164, Subd. 10(e) and (f), Docket No. E999/M-14-65.

² See Order Approving Distributed Solar Value Methodology, April 1, 2014, Docket No. E999/M-14-65.

³ See Xcel Energy Reply Comments, June 19, 2014, Docket No. E002/M-13-867.

We note that we have engaged in informal discussions with a variety of stakeholders on topics related to a financeable rate and a possible incentive. We believe some solar developers can reasonably create and finance gardens without additional incentives, and that if the Commission wishes to pursue other objectives beyond the creation of gardens, it may find that the public interest supports additional incentives. We believe that any ratesetting procedure or evaluation of potential further rate enhancements be guided by market-based principles including finding a "market price," and being responsive to market data over time. We believe the Commission should carefully consider rate impacts to non-participating customers as well as the interest in nurturing the development of a new solar choice for customers.

COMMENTS

In these Comments we provide background on the community solar gardens and VOS statutes. We also offer observations on the reasonable creation, financing, and accessibility of gardens. We note that the Commission's interest may extend beyond the minimum threshold set forth in statute, and it may wish to pursue additional policy objectives beyond "reasonable creation." If the Commission finds it is in the public interest to use the VOS rate and additionally orders the use of further incentives, we offer principles to guide the evaluation of a potential incentive design and level. Finally, if the Commission orders additional incentives for use in Solar*Rewards Community, we describe possible incentive structures that the Commission may wish to consider.

A. Statutory Framework

In 2013, the Legislature passed omnibus energy legislation that set forth a number of new solar energy initiatives. The legislation introduced a new Solar Energy Standard (SES), establishing state goals for solar generation over time. It established two new financial incentive programs, committing nearly \$100 million for small-scale solar projects over the next five years. It also directed the Company to file a CSG program, and it specified some of the program's parameters. Finally, it directed the Department to develop a VOS methodology for approval by the Commission.

The statute permits a utility to file a VOS alternative tariff. It states:

A public utility may apply for commission approval for 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 system⁴.

The Legislature also noted that, absent the filing and approval of an alternative tariff, an "applicable retail rate" be used for CSGs. In its April 7, 2014 Order, the Commission defined an "applicable retail rate" as well as an enhanced "REC value" for use within the context of CSGs.

The CSG statute addresses the Commission's authority to approve, disapprove, or modify a CSG program and notes that "any plan approved by the commission must: reasonably allow for the creation, financing, and accessibility of community solar gardens."⁵ The Commission's present request for comments appears to be driven by this provision.

Should the Commission find that the public interest does support the use of the VOS for CSG, we note that we do not interpret either the CSG statute or the VOS statute to require the utility to file an alternative tariff for CSG projects. As noted in our May 1, 2014 *Motion to Show Cause*, we believe that the utility has discretion in filing an alternative tariff.⁶

We understand the VOS methodology as approved by the Commission to be a fixed methodology, not subject to future changes. Accordingly, we believe it is appropriate that if the Company files a VOS alternative tariff in the future, it is subject to calculating its VOS rate using the currently approved methodology. Any future changes to the methodology should be subject to notice and comment, and the Company should have opt-in discretion to file an alternative tariff under a new methodology.

If the Commission disagrees with this interpretation of statute and orders the Company to file an alternative tariff for CSG, we respectfully request the Commission create a checkpoint to fully evaluate whether the rate remains in the public interest for all customer classes. We are concerned that while the VOS rate is recalculated annually, there is no clear mechanism under which the Commission could review the methodology to determine the appropriateness of the rate over time as circumstances

⁴ Minn. Stat. § 216B.164, Subd. 10(a).

⁵ Minn. Stat. § 216B.164.

⁶ (a) A public utility may apply for commission approval for 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. (b) If approved, the alternative tariff shall apply to customers' interconnections occurring after the date of approval. The alternative tariff is in lieu of the applicable rate under subdivisions 3 and 3a. Minn. Stat. § 216B.164, subd. 10.

change. The Commission may wish to re-evaluate the rate at the one year mark following implementation.

B. Creation, Financing, and Accessibility of CSGs

1. The Company's plan reasonably allows for the creation, financing, and accessibility of gardens.

We believe the Company has complied with the statute by filing a plan which reasonably allows for the creation, financing, and accessibility of CSGs. The Commission found that our plan, as modified, meets this burden and approved it as the basis for the solar gardens program. This decision is supported, in part, by the hearing testimony of some solar developers confirming they believe they can create and finance CSGs based on the rate specified in the Company's June 19, 2014 Show Cause Reply Comments. In fact, the Company is aware that, in the aggregate, solar developers are actively planning CSG projects in excess of 30 MWs in the first year of the program. Additionally, recent media coverage indicates a substantial market interest in developing gardens under the current proposal.⁷

We recognize that solar developers vary in their assessment of what level of utility payment is necessary to finance gardens and appreciate the Commission's interest in developing the record on this question. We believe that the "reasonably allow" language should not be read as a guarantee that every potential solar developer should be successful or that those that are should unduly profit at the expense of other customers. As discussed below, there are a number of factors, beside the compensation level, that will determine who is successful in a competitive market. Thus, it is unclear that additional incentives are required for many solar developers to successfully create and market solar gardens.

2. Financing garden development is not dependent on bill credit rate alone.

Parties' comments in this docket focus on the subscriber's bill credit rate as the sole determinant of whether or not a business owner is able to obtain financing. We take a more expansive view of the important considerations when capitalizing any project, including solar projects.

First, a garden operator's ability to attract financing is dependent on its ability to assure lenders that the operator is a good credit risk. It will do so by demonstrating its

⁷ See "Denver-based SunShare wants to sell Minnesota a share of the sun," by David Shaffer, *Star Tribune*. September 6, 2014.

value to potential investors through its ability to manage costs, provide quality service, attract and retain customers, and market a unique subscription service at a competitive price, among other factors. Some solar developers will be better able to attract both investors and customer-subscribers than others.

Second, a solar garden operator will generate revenue primarily from its subscribers. Operators will make offers to potential subscribers, we presume, in the form of renting, leasing, or selling to a subscriber a portion of a garden or a garden's energy production. When a garden operator needs funds to develop or maintain a garden, its primary source will be the rates it charges its customer-subscribers. While we understand that the bill credit rate available to subscribers is an important component of the operator's ability to communicate a customer's potential return on investment, payback threshold, and to establishing a baseline for general project feasibility, we do not believe the bill credit rate is the sole determinant in the financial success of CSGs.

While we believe we have met the statute's threshold of proposing a plan which "reasonably allows" for garden creation, we understand that the Commission may wish to consider additional objectives. Accordingly, we provide further comments on a financial incentive for use with CSGs. We believe the incentive discussion requires the recognition of certain principles discussed below.

C. Evaluating a Solar Incentive: Market-Based Principles

In the exchange of comments preceding the Commission's approval of the VOS methodology, the Company clearly stated that incentives layered onto the VOS may be necessary to drive market adoption. There, we noted:

"Incentives complement the VOS tariff by providing a flexible mechanism to offset the incremental costs of smaller scale solar installations, while allowing the VOS to serve its intended purpose of reflecting the value of solar energy on the system."⁸

When considering whether it is appropriate to offer an additional incentive to the Solar*Rewards Community program, the Commission might consider the framework set forth in statute, and it might also consider various policy objectives. These policy objectives might include the desired nature and quantity of solar activity driven by the program, the overall capacity of the program, the diversity of the market response to the program, the program's success in achieving the state's solar acquisition targets, and overall budget constraints. We believe an unlimited incentive budget would be

⁸ See Xcel Energy Reply Comments, February 20, 2014, Docket No. E999/M-14-65.

inappropriate, and we think it is appropriate to focus on leveraging the program to meet the state energy goals at a cost-competitive rate. We believe this is best accomplished through market-based strategies which endeavor to find the "market price," and which rely on actual, observed response to the program.

The Commission's exploration of this topic may require it to address the funding source and level of any additional financial incentive, and we offer comments on these topics.

1. Identifying a Funding Source

In order for the Company, the Commission, or any stakeholder to evaluate a potential solar incentive structure, a fundamental component is the identification and approval of an appropriate funding source. The CSG statute contemplates an incentive for use in CSG. It sets forth the eligibility for Solar*Rewards and Made in Minnesota incentive payments to apply to CSGs.⁹ These programs are funded primarily through the Renewable Development Fund (RDF).

While the statute does not identify a funding source for any additional incentives for use with CSGs, we believe the RDF is the most appropriate source for any further incentives ordered by the Commission. We believe the RDF is appropriate for several reasons. First, sourcing incentive dollars from the RDF would provide consistency with existing solar incentive programs. Second, as the RDF is funded by the Company's customers, there is an appealing symmetry to providing the RDF benefits to the Company's customers. Third, the RDF would provide a path for Company cost recovery for incentives paid. Finally, providing support for community solar appears to be within the scope of eligible uses of the RDF, which include

(1) to increase the market penetration within the state of renewable electric energy resources at reasonable costs;

(2) to promote the start-up, expansion, and attraction of renewable electric energy projects and companies within the state;

(3) to stimulate research and development within the state into renewable electric energy technologies; and

(4) to develop near-commercial and demonstration scale renewable electric projects or near-commercial and demonstration scale electric infrastructure delivery projects if those delivery projects enhance the delivery of renewable electric energy.¹⁰

⁹ Minn. Stat. § 216B.164 (d).

¹⁰ Minn Stat. 116C.779, Subd. 1, par. (d)

2. Setting an Incentive Level and other Design Considerations

The level of any potential incentive should be carefully evaluated with attention to possible unintended consequences. For example, by providing incentives that are too rich, the Commission could cause an artificial rush to reserve payments and the rate of program uptake could destabilize the ability to implement the program successfully. The alternative risk, which we believe is unlikely, is that setting an incentive payment too low can result in the installation of insufficient capacity to meet the utility's compliance targets. Clearly, neither of these outcomes is desirable.

In its evaluation of the design of an additional incentive, the Commission could consider a variety of elements beyond the funding source and incentive level. In addition to other key design elements, it may consider to whom the payment is made, the payment term, the overall budget, ratepayer impact, individual project incentive limits, equity among rate classes, and the most appropriate means of responding to changing market conditions.

If the Commission wishes to consider other policy goals beyond "reasonable creation," this will certainly drive its evaluation of various incentive designs. The Commission may wish to balance support for those who need it to become established against the risk of overcompensating all other developers. If the Commission is concerned that larger solar developers or garden operators will displace smaller developers or operators, for example, it may wish to provide incentives which promote market diversity. The Commission may wish to establish an additional incentive available only for smaller projects or smaller organizations.¹¹ Alternatively, it may set forth eligibility criteria based on an overall number of projects a single developer may pursue or maximum incentive dollars a single developer may receive.

We believe the market response in the early years of Solar*Rewards Community will provide the best source of data on the key uncertainties all parties face, including what garden operator business models are most successful, what bill credit rate framework is most appropriate, and whether the Company remains on track to meet its obligations under the SES. In particular, we believe the Commission may be interested in observing the market response to the program under the Applicable Retail Rate from commercial and industrial customers.

¹¹ The Commission may wish to exclude from incentive eligibility projects already funded under Made in Minnesota or Solar*Rewards.

Prior to the availability of actual data on market response to the program, we offer a discussion of possible incentive models. The values in the table below are provided for illustrative purposes. However, if the Commission decides to remain with the currently approved Applicable Retail Rate, the Company would encourage the Commission to consider these comments and the strategies suggested for finding the "market price" as it relates to the current REC incentive option of \$0.02 or \$0.03/kWh.

D. Incentive Structure

There is considerable variety in reported pricing nationwide for the installed costs of PV. Apples-to-apples comparisons are challenging, given the geographic differences in the quality of the solar resource, local labor costs, efficiencies of scale, and other soft costs (such as permitting and interconnection, etc.). Similarly, there is considerable variety in bill credits rates for solar participants, given the disparate treatment of retail electric rates, net metering policies, and distributed generation tariffs. What is not in dispute, however, is that the cost of installed PV has declined in recent years. A key question for regulators, utilities, and other stakeholders considering incentive design is how a design framework best responds to changing market conditions over time. Three possible models are described here.

1. Option 1 – Declining Incentive Schedule

One incentive model sets forth a schedule under which the incentive levels decline over time and/or as capacity or budget targets are met. An incentive program built around a declining schedule (in "steps") tailored to customer class is common in solar programs across the country. The long-term schedule offers the solar industry advantages in planning and managing uncertainty.

This model has disadvantages based on how it might be implemented, however. If the incentive schedule declines prescriptively based on the passage of time alone, it does not react to changing market conditions and it may not find the accurate "market price." Additionally, if the schedule declines based on capacity achievements alone, it creates a race to secure the highest possible incentive level, would not facilitate the moderated flow of program uptake, and would continue to promote artificial price signals. For these reasons, the model works best when the steps are based on both capacity and timing targets. This model could accommodate additional projects from garden operators willing to forego the incentive and to apply to the program outside of the step-down schedule. Table 1 below demonstrates an example declining class-based incentive schedule that brings the bill credit rate to a levelized value of \$.15/kWh for step 1. Not shown is a differentiated step table for other the General Service rate class. Within this model, the incentive modulates based on the actual VOS rate and, when combined with the VOS, equals the total bill credit (levelized) within the step.

Step	Capa	Value of	Incentive	Total bill	VOS	Total bill	25 year
And	city	Solar	(constant)	credit	(year 1)	credit	incentive
Year		(levelize		(Levelized)	~ .	(year 1)	budget
		d)					
ID	А	В	С	D	Е	F	G
Formula			D-B			C+E	A*C*1,400kWh
							/kW*25yrs
1	5MW	\$0.1208	\$0.0292	\$0.15	\$0.0940	\$0.1232	\$5,110,000
2	5MW	\$0.1208	\$0.0242	\$0.145	\$0.0940	\$0.1182	\$4,235,000
3	5MW	\$0.1208	\$0.0192	\$0.14	\$0.0940	\$0.1132	\$3,360,000
4	5MW	\$0.1208	\$0.0142	\$0.135	\$0.0940	\$0.1082	\$2,485,000
5	5MW	\$0.1208	\$0.0092	\$0.13	\$0.0940	\$0.1032	\$1,610,000
6	5MW	\$0.1208	\$0.0042	\$0.125	\$0.0940	\$0.0982	\$735,000
7	5MW	\$0.1208	NA	\$0.1208	\$0.0940	\$0.0940	
Total	35M						
	W						\$17,535,000

Table 1Residential Service Example

2. Option 2 – Competitive Procurement

A second possible incentive model relies on competitive bidding as its market-driven mechanism. Under a competitive procurement model, the utility solicits bids from potential solar developers. Bids could be solicited via a Request for Proposals (RFP), and evaluated on standard selection criteria. This model is similar to the recent RFP issued by the Company in the Solar Resource Acquisition docket.¹²

The Company uses competitive procurement in Solar*Rewards Community in its Colorado jurisdiction. There, the program features two paths for garden operators: an

¹² Docket No. E-002/M-14-162.

RFP and the Standard Offer program. The Company issues an RFP once per year with a capacity target. Once the "market price" is determined by the RFP process, that price forms the basis of the Standard Offer program. A \$.02 premium is then added to the Standard Offer Program level. The Commission may wish to consider using a similar mechanism here.

A competitive procurement process might be implemented as follows:

- 1. Solicit competitive bids for gardens development at a proposed bill credit rate in March of each year following approval of an annual rate update.
- 2. Accept the lowest cost bids up to 5 MW and process applications in sequence from successful bidders.
- 3. The incentive level is set for all based on the highest bid price among the first 5 MW bidders less the current bill credit rate.
- 4. [OPTIONAL] Open the program to all applicants in October of each year at the bid price established in the competitive procurement process.
- 5. Repeat annually.
- 6. Garden Operators wishing to forego any incentive may apply at any time and would not be bound by the competitive procurement process described above.

Under another alternative competitive procurement structure, bids could be received via a reverse auction, where the Company opens a bidding process beginning at \$0 and increasing incrementally. When the rate offer reaches an attractive level, a qualified bidder signals to the Company its willingness to build a certain amount of capacity at that rate, and funds are reserved on that bidder's behalf. Once the incentive budget is exhausted and/or the capacity target is achieved, the auction ends.

A primary advantage of incentive mechanisms that use competitive procurement is their effectiveness in producing accurate market-based pricing. Repeating the process iteratively over time allows the program to react to changing PV prices, new technologies, developing market efficiencies, or other dynamic circumstances.

3. Option 3 – Competitive Upfront Incentive to Garden Operator

A third option the Commission may wish to consider is an upfront incentive payment to the garden operator. This option would generally follow the same competitive procurement process described above with key modifications. Instead of offering a financial incentive in the form of a per kWh subscriber bill credit, the Company could offer an upfront incentive (or rebate) payment directly to the garden operator.

A competitive upfront incentive process might be implemented as follows:

- 1. Solicit competitive bids for gardens development for an up-front incentive level in January of each year (either through RFP or reverse auction).
- 2. Accept the lowest cost bids up to 5 MW and process applications in sequence from successful bidders.
- 3. The incentive level is set for all successful bidders based on the highest bid price among the first 5 MW bidders. The incentive is in the form of a one-time, up-front capacity-based payment made to the garden operator.
- 4. [OPTIONAL] Open the program to all applicants in October of each year at the bid price established in the competitive procurement process.
- 5. Repeat annually.
- 6. Garden Operators wishing to forego any incentive may apply at any time and not bound by the competitive procurement process.

The garden operator's ability to attract financing and defray initial startup costs may benefit from a direct payment. Additionally, a direct incentive payment to the garden operator makes transparent the transfer of a financial benefit from non-participants to the garden operator. If the Commission determines an additional incentive is supported by the public interest, an upfront incentive paid directly to the garden operator would be a transparent and administratively straightforward method to achieve policy goals.

CONCLUSION

We appreciate the opportunity to provide comments on the important topic of potential incentives for use in Solar*Rewards Community. We believe a properly designed Solar*Rewards Community bill credit rate has the potential to not only reasonably allow gardens to be created, but also to expand solar participation in Minnesota in a way that is fair to all customers and reflective of market principles. We respectfully request the Commission carefully consider our comments in light of delivering the goals of customer fairness and low-cost compliance with solar standards in tandem with reasonably allowing for the creation, financing, and accessibility of solar gardens.

Dated: October 1, 2014

Northern States Power Company

CERTIFICATE OF SERVICE

I, SaGonna Thompson, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

- <u>xx</u> by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota
- \underline{xx} electronic filing

Docket No. E002/M-13-867

Dated this 1st day of October 2014

/s/

SaGonna Thompson Regulatory Administrator

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Dan	Rogers	drogers@sunedison.com	SunEdison	N/A	Electronic Service	No	SPL_SL_13- 867_Community Solar Garden - Xcel
Matthew J.	Schuerger P.E.	mjsreg@earthlink.net	Energy Systems Consulting Services, LLC	PO Box 16129 St. Paul, MN 55116	Electronic Service	No	SPL_SL_13- 867_Community Solar Garden - Xcel
Doug	Shoemaker	dougs@mnRenewables.or g	MRES	2928 5th Avenue South Minneapolis, MN 55408	Paper 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
Erin	Stojan Ruccolo	ruccolo@fresh-energy.org	Fresh Energy	408 Saint Peter St Ste 220 Saint Paul, MN 55102-1125	Electronic Service	No	SPL_SL_13- 867_Community Solar Garden - Xcel
Thomas P.	Sweeney III	tom.sweeney@easycleane nergy.com	Clean Energy Collective	P O Box 1828 Boulder, CO 80306-1828	Paper Service	No	SPL_SL_13- 867_Community Solar Garden - Xcel
SaGonna	Thompson	Regulatory.Records@xcele nergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	SPL_SL_13- 867_Community Solar Garden - Xcel
Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	Suite 325 7301 Ohms Lane Edina, MN 55439	Electronic Service	No	SPL_SL_13- 867_Community Solar Garden - Xcel
Daniel	Williams	DanWilliams.mg@gmail.co m	Powerfully Green	11451 Oregon Avenue N Champlin, MN 55316	Electronic Service	No	SPL_SL_13- 867_Community Solar Garden - Xcel