

Staff Briefing Papers

Meeting Date	September 6, 2018	Agenda Item **3
Company	Electric Utilities Subject to Minnesota’s Solar Energy Standard, Minn. Stat. §216B.1691, Subd. 2f E999/M-18-205 E999/M-13-542	
Docket No.	In the Matter of Utilities’ Annual Reports on Progress in Achieving the Solar Energy Standard In the Matter of the Implementation of Solar Energy Standards Pursuant to 2013 Amendments to Minnesota Statutes, Section 216B.1691	
Issues	What action should the Commission take on the utilities’ fifth annual solar energy standard reports? Should the Commission issue any clarification on system eligibility dates for solar generating facilities?	
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Relevant Documents

Date

Xcel Energy – 2018 SES Reports (Public and Trade Secret)	June 1, 2018
Minnesota Power – 2018 SES Reports (Public and Trade Secret)	June 1, 2018
Otter Tail Power – 2018 SES Reports (Public and Trade Secret)	June 1, 2018
Xcel Energy – Response to PUC IR 1	June 22, 2018
DOC DER – Comments	July 10, 2018

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

Background

In 2013, legislation was passed which was codified as Minn. Stat. [§ 216B.1691, Subd. 2f](#), Minnesota's Solar Energy Standard (SES). The SES requires electric investor-owned utilities in Minnesota to procure 1.5% of their annual retail sales from solar energy.

That statute also states at Subd. 2f (g) that beginning in 2014 and through 2020, each of those utilities subject to the SES shall file a report with the Commission "reporting its progress in achieving the solar energy standard established under this subdivision."

In an Order issued April 25, 2014, in [Docket E999/CI-13-542](#), the Commission established content requirements for utilities' annual Solar Energy Standards (SES) reports. The first reports were received in Docket No. E-999/M-14-321 and in an Order issued October 23, 2014, the Commission established additional content requirements for the annual SES reports.

In its November 28, 2016 Order in Docket 16-342, the Commission delegated authority to the Executive Secretary to develop a standardized form for future SES Reports.

In its October 20, 2017 Order in Docket 17-283, the Commission delegated authority to the Executive Secretary to eliminate outdated or duplicative questions from the reports, and to update the reports as necessary. The list of current reporting requirements can be found in Appendix A.

On June 1, 2018 the three IOUs (Minnesota Power, Otter Tail Power, and Xcel Energy) submitted their annual reports.

On May 29, 2018, the Governor signed HF 3232 (Laws of MN, 2018, Chapter 193 H.F. No. 3232) which amended the capacity threshold for the small scale carve out requirement and for Xcel's Solar*Rewards incentive program to 40 kW. The law only had an impact on Xcel Energy, as Minnesota Power and Otter Tail Power had the small scale carve out threshold raised to 40kW in 2017. As the law was signed near the annual report deadline, Commission staff issued an IR asking Xcel Energy how the legislation would impact its forecasted compliance.

Summary of 2017 SES Reports

The Department reviewed the annual reports, provided a summary of the utilities efforts and recommended the Commission accept the reports as complete.

Staff agrees with the Department that the utilities have fulfilled their statutory reporting requirement, and recommends that the Commission accept these reports. This is included as **Decision Option 1**.

Table 1: 2017 SES Reporting Summary

	Minnesota Power	Otter Tail Power	Xcel Energy
Retail and Excluded Sales			
1. Annual MN retail sales for the reporting year (MWh)	8,997,352	2,584,490	29,739,386
2. Annual Excluded customer sales for the reporting year (MWh)	5,973,804	69,172	75,306
3. Annual Minnesota retail sales less exclusions (MWh)	3,023,548	2,515,318	29,664,080

Est amount of solar generation a utility would be required to obtain in 2020	Minnesota Power		Otter Tail Power		Xcel Energy	
	MW	MWh	MW	MWh	MW	MWh
1. Entire 1.5% Standard	30	50,879	30	40,000	226	437,907
2. Small Scale Carve-Out (10% of 1.5%)	4	5,088	3	4,000	31	43,791
3. 2030 Goal of 10%	198	339,192	200	260,000	1,581	3,023,736

Eligible Solar Capacity	Minnesota Power		Otter Tail Power		Xcel Energy	
	Total	In MRETS	Total	In MRETS	Total	In MRETS
Less than 40kW (MW)	1.731	0.824	0.263	0.113	24.06	16.84
Greater than 40kW (MW)	12.52	11.04	0	0	480.21	477.49

Breakdown of S-RECS - total balance	2017 - 2018	Total	2017 - 2018	Total	2017 - 2018	Total
	Utility-owned solar projects	17,066	18,785	0	0	0
Solar Facilities that have entered into a PPA with the utility	0	0	0	0	420,305	440,418
Community Solar Gardens	67	67	0	0	146,568	146,813
Facilities under a net metering tariff						
a. Receiving an incentive (any type)	513	860	0	0	19,748	30,229
b. Not receiving an incentive	0	0	24	44	0	0
Other	0	0	0	0	3,902	4,399
Purchased	0	0	27,056	27,056	0	0
Total	17,646	19,712	27,080	27,100	590,523	621,859

Xcel Energy

Xcel Energy indicated that it will have ample SRECs and generating facilities to meet the 2020 standard. This includes a mix of solar PPAs with utility scale facilities, Community Solar Gardens, and customer site solar from various incentive programs.

Xcel once again raised a concern that they would not have enough small scale SRECs to meet the small scale carve out beginning in 2030, even with the recent statutory changes increasing the carve out and Solar*Rewards threshold to 40 kW.

Staff Analysis

Staff wishes to make two important clarifications to Xcel’s report. First, Xcel reasserted its view that only generating systems installed after August 1, 2013 are eligible to produce SRECs for SES compliance, as per Minn. Stat. 216B.1691 Subd. 2f (f) and Order Point 1 from the Commission’s April 25, 2014 Order in Docket 13-542.

Staff has consistently disagreed with Xcel's assumption and maintains that both this section of statute and the Commission's Order refer to the shelf life of SRECs and not to the generation facility itself.

The statutory language Xcel relies on to make its eligibility argument is at Minn. Stat. §216B.1691 subd. 2f(h):

h) Notwithstanding any law to the contrary, a solar renewable energy credit associated with a solar photovoltaic device installed and generating electricity in Minnesota after August 1, 2013, but before 2020 may be used to meet the solar energy standard established under this subdivision.

The SES statute refers to two different elements of compliance: the eligibility of solar facilities, and the shelf life of S-RECs (the time period a utility has to use an S-REC for compliance after it is generated). The above provision relates to shelf life, not eligibility, for obvious reasons—if this provision meant to refer to eligibility, then no solar facilities installed and generating after 2020 would be eligible for the SES, an absurd result. No utility would be able to comply with the SES if nothing installed after 2020 qualified for it. Neither Otter Tail Power nor Minnesota Power are using Xcel's reasoning, and Staff also notes that the Commission, Department, and parties have all agreed in recent IRP decisions that facilities constructed after January 1, 2020 are SES eligible.

Someone less familiar with the SES and regulatory work may reasonably ask why subd 2f(h) would refer to S-REC shelf life. There was a logical reason to give special treatment to S-REC shelf life: a past Commission order set up shelf life for RECs as 4 years¹. The SES statute, understandably, departed from that Commission order by setting up a longer shelf life for S-RECs generated between 2013 and 2020, to provide an incentive for utilities or generators to construct solar facilities during that time, making it more likely that utilities would meet the 2020 mandate.

Staff recommends that the Commission clarify this point in the order so as to avoid any future confusion. Staff has included such language as **Decision Option 2**. Staff also recommends that Xcel file a compliance filing with updated numbers that reflect all SES eligible systems, included as **Decision Option 3**.

Second, Staff wishes to reiterate its comments from previous SES reports that Xcel will have ample small scale solar capacity on its system. Xcel's projections show production declining because Solar*Rewards and Made In Minnesota contracts will begin to expire after they reach their 10 year incentive payment term. At this time REC ownership will revert back to the customer, but the overwhelming majority of these systems will continue to produce electricity for at least an additional decade, if not more, and already have the necessary metering technology to continue recording SREC output.

The easiest way for Xcel to maintain control over the coveted small SRECs would be a tariff option allowing customers to elect to sell their SRECs to the company after the expiration of a

¹ ORDER ESTABLISHING INITIAL PROTOCOLS FOR TRADING RENEWABLE ENERGY CREDITS, Issued December 18, 2007, Docket Nos. E999/CI-04-1616 and E999/CI-03-869.

Solar*Rewards contract. Xcel could then enroll interested customers in this new tariff offering and use the existing metering infrastructure to continue the uninterrupted transfer of SRECs for SES compliance.

Furthermore, with the above clarification on system eligibility, Xcel should gain almost 10 MW of solar capacity installed prior to August 1, 2013 that can generate eligible SRECs. This includes prior iterations of its Solar*Rewards Program where the contracts signed with customers gave Xcel the SRECs for the life of the system. Xcel has been retiring SRECs from these systems for general RES compliance. This could be an excellent source of SRECs to help Xcel maintain compliance at no additional cost.

Minnesota Power

Minnesota Power indicated that it expects to meet its 2020 SES requirements through a combination of banked SRECs and around 23 MW of company and customer installed solar capacity. This includes the small scale solar carve out requirement, which Minnesota Power plans to meet through a combination of customer sited solar installations and company solar gardens. The Company also files reports on its solar offerings as part of the annual SES report, staff highlights some takeaways from the report below.

Community Solar Garden Pilot (Docket 15-825)

Minnesota Power's 1 MW and 40 kW solar gardens are operational and customers began receiving bill credits in early 2018. As part of its pilot proposal, Minnesota Power developed an extensive set of evaluation criteria which it will include in next year's report once subscribers have received bill credits for a full year.

Initially Minnesota Power reserved 50% of subscriptions for residential customers. After the first offering, the commercial subscriptions were fully allocated to two customers, while the residential subscriptions were only half filled. Accordingly, the company plans to offer all the remaining subscriptions to any eligible customers. Minnesota Power also indicated that it gets approximately 15 customer calls related to its CSG program each week, with calls lasting from 15 to 30 minutes each. The company provided additional information on subscriber numbers, bill credits, and generation in its [report](#).

SolarSense Program (Docket 16-485)

Minnesota Power offers an incentive program, SolarSense, for rooftop solar installations. In 2017 Minnesota Power awarded 51 installations rebates, with 27 completed projects. 18 customers experienced delays due to an installer failing to meet deadlines. Commission staff is aware of the issue with this installer and has updated the Commission at planning meetings. As an extension of SolarSense, the company installed two solar systems through its low-income solar pilot program on sites that serve low income populations.

Otter Tail Power

Otter Tail Power continued to work on its efforts to achieve the solar energy standard. During 2017 it began to purchase SRECs for SES compliance. While Otter Tail has investigated a 20 -30 MW Company owned array or PPA, solar resources may not be considered least cost in all of its operating jurisdictions at this time. While the company's SREC purchases will fulfill the majority

of Otter Tail's SES requirements until a facility is cost effective, the small scale portion of the standard remained a challenge.

In its 2017 Order accepting the SES reports the Commission directed Otter Tail to provide additional information on its efforts to obtain small scale SRECs in its next annual report. OTP indicated that it will not be able to meet the small scale carve out without the purchase of SRECs. It has approached SREC brokers with small scale RECs available, and continues to monitor the market for cost effective solutions.

In addition to SREC purchases, Otter Tail runs its Publically Owned Property Solar (POP Solar) program. Despite interest from schools and communities, only one 37.8 kW facility has been installed thus far, despite a 40% project rebate offered through the program. POP solar is funded through CIP at \$229,720, or enough to install around 180 kW of solar annually. Otter Tail also issued an RFP to build a 40 kW company-owned facility, and hopes to complete at least one installation by the end of 2018.

Staff recommends that Otter Tail continue to report this additional information in next year's report, and, if necessary, make any requests if feels necessary to assist with SES compliance.

Future SES Reporting

Minn. Stat. 216B.1691 requires annual reports on SES progress through 2020, when SES compliance begins. After that point, Staff had assumed that any SES reporting would be combined with RES compliance report spreadsheets.

Minnesota Power submits additional reporting materials with its SES reports on its other solar programs (SolarSense and its Community Solar Garden program). Commission staff have supported and continues to support the co-locating of similar reports in individual dockets so as to have a more holistic overview of utility solar programs. However, staff does not think that the RES reports are the appropriate place to migrate longer narrative form.

Staff suggests that the Commission allow Minnesota Power (and other utilities if they wish) to continue to submit an annual 'Solar Report' past the expiration of formal SES reporting. Commission staff are also convening an ongoing reporting group as an offshoot of the Distributed Generation Advisory Group formed out of Docket 17-284, where stakeholders are discussing further ways to streamline DER related reporting. At this time Staff does not think any decision option is necessary given the ongoing stakeholder discussions about streamlined reporting, and if direction is necessary it could be addressed with next year's filing.

Decision Options

1. Accept the utilities' 2016 Solar Energy Standard reports. *(DOC, Staff)*
2. Clarify that Minn. Stat. 216B.1691 Subd. 2f(f) and Order Point 1 from the Commission's April 25, 2014 Order in Docket 13-542 refer to the shelf life eligibility of SRECs and not to the eligibility of solar generating facilities. *(Staff)*
3. Require Xcel Energy, within 30 days of the order, to provide a compliance filing updating their 2017-2018 SES Report to include all eligible solar facilities and associated SRECs. *(Staff, if 2 is adopted)*

Attachment A: SES Reporting Requirements and Changes

From April 25, 2014 Order, Ordering Paragraphs 4 and 5

1. Annual Minnesota retail sales for the previous calendar year
2. Annual excluded customer sales for the previous calendar year
3. A list of customers requesting exclusion from the requirements of the SES, the North American Industry Classification System (NAICS) code associated with their manufacturing activity, and their annual kWh usage
4. The total Minnesota retail sales for customers excluded from the SES requirement
5. Annual solar generation on the utilities' system for the previous calendar year, including the total number of units registered in M-RETS to that utility and S-RECs generated in the past year from those units
6. Estimated amount of solar generation (expressed as capacity) a utility would be required to obtain in 2020
7. Estimated solar energy requirements to meet the SES in 2020
8. A short summary of ongoing efforts to obtain solar energy, including a brief summary of the anticipated mix of project sizes for SES compliance
9. A summary of progress toward compliance with the ten percent carve out for systems under 20 kW
10. A brief summary of the state(s) in which the solar generation is located or anticipated to be located
11. Purchases and sales of S-RECs to meet the SES
12. The SES annual reports shall also include a breakdown of S-RECs, identifying which credits were associated with each of the following:
 - a. Facilities receiving a Value of Solar rate;
 - b. Community Solar Gardens;
 - c. Facilities under a net metering tariff;
 - d. Utility-owned solar projects;
 - e. Solar facilities that have entered into a purchased power agreement with the utility;
 - f. Facilities receiving an incentive, such as Solar Rewards or Made in Minnesota.

From October 23, 2014 [Order](#) Accepting SES Reports

13. ~~Excluded sales only from customers that have requested and been approved by utilities for exclusion from the Solar Energy Standards requirements~~ *Combined with item 3 for 2017 reports*
14. ~~Additional information supporting each utility's assumed capacity factor~~ *Combined with item 16*
15. ~~More detailed information on each utility's ongoing efforts to obtain solar energy on their systems~~ *Combined with item 8 above for 2017 reports*
16. Information on the effective load carrying capability and MISO capacity accreditation for existing or planned solar facilities
17. ~~Additional discussion on any challenges utilities face in registering small solar facilities~~ *Eliminated for 2017 reports – staff understands that many of the concerns with registering facilities in MRETS have been resolved, and utilities have the opportunity to comment on any other MRETS issues if they arise.*

18. ~~A discussion of how utilities weigh the uncertainty of the solar investment tax credit benefit to awaiting the potential for technology improvements which may reduce the costs of adding solar resources. Eliminated for 2017 reports – ITC drawdown is well known and utilities have explained their reasoning in prior reports.~~

From November 28, 2016 Order Accepting SES Reports

19. Discussion on the utilities' efforts to reach, by 2030, the energy goal that ten percent of the retail electric sales in Minnesota be generated by solar energy.

From October 20, 2017 [Order](#) Accepting SES Reports

20. In its next report, Otter Tail must outline a specific plan for compliance with the Solar Energy Standard small-scale obligation, including any one or more of the following: anticipated yearly capacity installations for small-scale solar facilities, a plan for a Community Solar Garden, or specific facilities for small SREC purchases.
21. The Commission hereby delegates to the Executive Secretary the authority to modify the SES reporting form used by utilities to eliminate outdated questions and update information as needed.