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June 1, 2022

VIA E-FILING

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

**Re: In the Matter of Minnesota Power's On-going
Compliance of its SolarSense Program with
Minnesota's Solar Energy Standard
Docket No. E015/M-16-485
Docket No. E015/M-20-607
Annual Report and Proposed Program Modification**

Dear Mr. Seuffert:

Pursuant to Order Point 9 of the Minnesota Public Utilities Commission ("Commission") January 29, 2021 Order ("January 29 Order") in Docket Nos. E-999/M-20-464 and E-999/M-13-542,¹ Minnesota Power (or the "Company") submits to the Commission its Annual Report for its SolarSense Program specific to on-going compliance with Minnesota's Solar Energy Standard ("SES"). Order Point 9 states:

Minnesota Power shall file reports relating to its SolarSense program (Docket 16-485) and its Community Solar Garden program (Docket 15-825), in their respective program dockets.

During the 2013 legislative session, Minn. Stat. § 216B.1691, the statute establishing Minnesota's Renewable Energy Standard was amended to include an additional Solar Energy Standard. The SES requires 1.5 percent of a public utility's retail sales, net of customer exclusions, to be served by solar energy resources by 2020. Minn. Stat. § 216B.1691, Subd. 2f requires each public utility to file an annual report with the Commission outlining its progress in achieving the SES beginning in 2014. Now that the 2020 deadline to achieve 1.5 percent solar has passed, annual reports of providing pre-compliance progress toward the SES is no longer statutorily required. In its January 29 Order, the Commission discontinued pre-compliance reporting requirements and

¹ *In the Matter of Utilities' Annual Reports on Progress in Achieving the Solar Energy Standard* (Docket No. E-999/M-20-464); and *In the Matter of the Implementation of Solar Energy Standards Pursuant to 2013 Amendments to Minnesota Statutes, Section 216B.1691* (Docket No. E-999/ M-13-542).

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approved continued reporting of information relevant to the evaluation of the utilities' ongoing SES compliance in utility-specific and commission-initiated dockets.

In this Annual Report, the Company provides the reporting requirements for its SolarSense Program that were previously provided in Minnesota Power's annual SES progress reports. Through this filing the Company also requests approval of a modification to the SolarSense Customer Rebate Program in order to meet growing demand for solar and offer an improved customer experience. The full details of the requested revision can be found within this Annual Report.

Please contact me at (218) 355-3297 or jkuklenski@mnpower.com with any questions regarding this filing.

Respectfully,

A handwritten signature in black ink that reads "Jennifer Kuklenski". The signature is written in a cursive style with a large initial "J".

Jennifer Kuklenski
Public Policy Advisor

JMK:th
Attach.

**STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

In the Matter of Minnesota Power’s On-going
Compliance of its SolarSense Program
with Minnesota’s Solar Energy Standard

Docket No. E015/M-16-485
Docket No. E015/M-20-607

**ANNUAL REPORT AND
PROPOSED PROGRAM MODIFICATION**

I. INTRODUCTION

Pursuant to Order Point 9 of the Minnesota Public Utilities Commission (“Commission”) January 29, 2021 Order (“January 29 Order”) in Docket Nos. E-999/M-20-464 and E-999/M-13-542,¹ Minnesota Power (or the “Company”) submits to the Commission its Annual Report for its SolarSense Program specific to on-going compliance with Minnesota’s Solar Energy Standard (“SES”). The Company continues to be in compliance with the SES in 2022. Additionally, through this filing the Company also requests approval of a modification to the SolarSense Customer Rebate Program in order to meet growing demand for solar and offer an improved customer experience. Specifically, Minnesota Power requests approval to make the following adjustments to the program starting in 2023:

- Reduce the target incentive level from 20 percent of installed cost to 10 percent of installed cost.
- Reduce the maximum rebate per customer from \$10,000 to \$5,000.
- Transition from a first-come, first-served rebate allocation process to a lottery-based allocation process to allow more time for solar installers and customers to submit applications given the high demand.

¹ *In the Matter of Utilities’ Annual Reports on Progress in Achieving the Solar Energy Standard* (Docket No. E-999/M-20-464); and *In the Matter of the Implementation of Solar Energy Standards Pursuant to 2013 Amendments to Minnesota Statutes, Section 216B.1691* (Docket No. E-999/ M-13-542).

II. BACKGROUND

During the 2013 legislative session, Minn. Stat. § 216B.1691, the statute establishing Minnesota’s Renewable Energy Standard (“RES”), was amended to include an additional Solar Energy Standard. The SES requires 1.5 percent of a public utility’s retail sales, net of customer exclusions, to be served by solar energy resources by 2020. Of the 1.5 percent SES, at least 10 percent must come from solar energy generated by or procured from solar photovoltaic (“PV”) devices with a nameplate capacity of 20 kilowatts (“kW”) or less (“Small Scale Carve-Out”). The SES statute was amended during the 2017 legislative session to increase the Small Scale Carve-Out of the SES from 20 kW or less to 40 kW or less for a public utility with between 50,000 and 200,000 retail electric customers which is applicable to Minnesota Power. Additionally, a provision was added to allow individual customer subscriptions of 40 kW or less to a community solar garden to count towards the utility’s Small Scale Carve-Out requirements. Minn. Stat. § 216B.1691, Subd. 2f requires each public utility to file an annual report with the Commission outlining its progress in achieving the SES beginning at 2014.

Through a series of orders, the Commission established reporting requirements specifying the information utilities must include in their SES progress reports. In these annual reports,² Minnesota Power reported on its 1 megawatt (“MW”) and 40 kilowatt (“kW”) community solar garden projects;³ 10 MW Camp Ripley Solar Project,⁴ the Company’s first utility scale solar project; and SolarSense Customer Solar Program,⁵ a portfolio-based solar program designed to help enhance the experience for customers pursuing solar.

In its January 29 Order, the Commission discontinued pre-compliance reporting requirements and approved continued reporting of information relevant to the evaluation

² Docket Nos. E015/M-14-321; E015/M-15-462; E015/M-16-342; E015/M-17-283; E015/M-18-205; E015/M-19-276; and E015/M-20-464.

³ Docket No. E015/M-15-825.

⁴ Docket No. E015/M-15-773.

⁵ Docket No. E015/M-16-485.

of the utilities' ongoing SES compliance. Specifically, the following order points apply to Minnesota Power:

****Reported in Utility-Specific Cost Exemption Dockets**

1. *Annual excluded customer sales for the previous calendar year*
2. *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 kilowatt-hour (kWh) usage*

For purposes of items 1 and 2:

Minnesota Power shall include all relevant information, including but not limited to the total costs that have been apportioned to and recovered from solar-paying (nonexempt) customers under Minn. Stat. § 216B.1691, subd. 2f(f), that would have been recovered from exempt customers, in its annual reports in Docket 15-773. (Camp Ripley Solar Project).

****Reported in the annual Renewable Energy Standard (“RES”) Report Tab “4. SES Retail Sales”**

3. *The total Minnesota retail sales for customers excluded from the SES requirement*
4. *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 solar renewable energy credits (SRECs) generated in the past year from those units. Generation should be broken down into the following categories: facilities with 40-kilowatt (kW) capacity or less, eligible community solar garden (CSG) subscriptions, and facilities over 40 kW.*

****Reported in RES Report Tab “6. Biennial Compliance Requirement”**

5. *A short summary of ongoing efforts to obtain solar energy, including a brief summary of the anticipated mix of project sizes for SES compliance*
6. *A summary of progress toward compliance with the 10% carve out for systems under 20 kW*

7. *Discussion on the utilities' efforts to reach, by 2030, the energy goal that 10% of the retail electric sales in Minnesota be generated by solar energy.*

***Reported in RES Report Tab "7. REC Purchase & Sales"*

8. *Purchases and sales of SRECs to meet the SES*

***Reported in Utility-Specific, Program-Specific Dockets*

9. *Minnesota Power shall file reports relating to its SolarSense program (Docket 16-485) and its Community Solar Garden program (Docket 15-825), in their respective program dockets.*

Through this Annual Report, Minnesota Power provides the required information for its SolarSense Customer Solar Program, similar to what has been provided in past SES annual reports, in compliance with prior Commission orders, including Order Point 9 of the January 29 Order.

III. SOLAR SENSE CUSTOMER SOLAR PROGRAM

Minnesota Power has provided rebates to help customers adopt renewable energy technologies through its comprehensive Conservation Improvement Program ("CIP") since 2004. On June 1, 2016, the Company filed a request to expand the SolarSense rebate program outside of CIP. In the filing, the Company proposed a three year portfolio of programs including customer rebates, solar energy analysis, low-income solar, research and development, and education and outreach. Minnesota Power proposed that an annual program status update be submitted including the number of participating customers, the total energy produced by participating customers, the time of year that systems were installed for purposes of banking Solar Renewable Energy Credits ("SRECs"), installed capacity in relation to the SES Small Scale Carve-Out, the number and price of rebates paid to customers, and the total costs of the Company to administer the program.

The Commission unanimously approved the proposal in its February 10, 2017 Order (“February 10 Order”), with the exceptions of the Company’s requests to relocate the Made in Minnesota program, which has since been closed to new applicants, from CIP to the Solar Factor and for a solar education and outreach program budget.⁶ Additionally, the February 10 Order required Minnesota Power to file an annual report on or before June 1 beginning June 1, 2018, that includes the following information:

- a. The number of SolarSense applications, projects selected, and rebate amounts;
- b. The total capacity and energy production for projects selected;
- c. The number of low-income projects selected, rebate amounts, and capacity;
- d. The annual amount of spending on program development and delivery; and
- e. Contract continuity issues.

Furthermore, the Company submitted a request to extend and modify the SolarSense Customer Solar program through 2024 in Docket No. E-015/M-20-607. The Commission approved the extension in its December 17, 2020 Order in that Docket.

The information identified by Minnesota Power and the requirements outlined by the Commission are provided in the following sections.

SolarSense Customer Rebate Program

The SolarSense Customer Solar Program provides an expected performance-based incentive (“EPBI”) for customer-sited solar installations. The EPBI allows Minnesota Power to incentivize systems designed for optimal performance at a higher level than systems projected to be lower performing while still addressing the upfront cost barriers associated with installing a customer-sited solar PV system.

The customer rebate is determined by the expected annual kWh output of the system⁷ multiplied by the per-kWh incentive level determined by Minnesota Power. The per-kWh incentive amount is calculated based upon a target incentive level of 20 percent of the

⁶ Order Approving Program Changes, Denying Cost Recovery in Part, Requiring Annual Report, and Requiring Compliance Filing Docket No. E015/M-16-485.

⁷ The expected output from the system is determined using the National Renewable Energy Laboratory’s PV Watts tool: <http://pvwatts.nrel.gov/>.

total installed cost and is reviewed annually to ensure that the incentive level is responsive to changing market conditions. Using installed cost data from solar PV installations in Minnesota Power’s service territory in 2020, the per-kWh incentive level for the 2021 program year was \$0.52/kWh.

Minnesota Power received 84 SolarSense applications in 2021. Of the applications received, 58 customers were awarded funds. There were 290,928 kWh produced by SolarSense systems installed in 2021, resulting in 290 SRECs.

Table 1 provides a summary of SolarSense installations and rebates in 2021.

Table 1- 2020 SolarSense Rebate Summary

Number of Installations	Capacity (kW)	Rebates Paid	SRECs Generated
59 ¹	543.03	\$342,890	290

(1)There were 59 installations completed in 2021 and 58 projects were awarded funds in 2021 as one system was paid in 2020.

Proposed Modification to SolarSense Customer Rebate Program

Minnesota Power has seen an increase in customer interest in small-scale solar installations as the cost of installing solar has continued to decline. However, the SolarSense program is limited and there has been more customer demand for rebates than funding available in recent years. Minnesota Power has received requests from customers, solar installers, and interested stakeholders to make modifications to the SolarSense Customer Rebate program in an attempt to allocate the available budget to more customers. Based on these conversations and observed trends over the last two years, Minnesota Power proposes to make the following adjustments to the program starting in 2023:

- Reduce the target incentive level from 20 percent of installed cost to 10 percent of installed cost.
- Reduce the maximum rebate per customer from \$10,000 to \$5,000.

- Transition from a first-come, first-served rebate allocation process to a lottery-based allocation process to allow more time for solar installers and customers to submit applications given the high demand.

In the past, Minnesota Power used a lottery based method for selecting rebates. However, the Company received feedback that the amount of work needed to apply for the program was burdensome for customers and installers, with little certainty they would receive projects from the lottery. In response to this feedback, Minnesota Power requested and the Commission approved a first-come, first-served rebate allocation process. The first-come, first-served allocation method worked well because at that time, the SolarSense budget was large enough to meet the demand for private solar arrays. The most recent approval of SolarSense Rebate for the 2021-2024 period decreased the budget for rebates. At the same time, demand for solar has risen beyond the capacity of the program to provide rebates. The first-come, first-served method has become a race to submit applications. Recent feedback suggests that reverting back to a lottery system would benefit customers and installers by allowing applications to be submitted over a given period of time and be selected in a way that provides all applicants an equal opportunity to be chosen.

The Company has alleviated some of the earlier problems associated with the lottery based system by simplifying the rebate application requirements. Additionally, Minnesota Power is in the process of selecting and implementing a new software solution to streamline the SolarSense rebate application process. This new tool will add transparency to the application and installation process for customers and installers and provide for an improved customer experience.

SolarSense Low-Income Solar Grant Program

The goal of the Low-Income Solar Grant Program (“LI Solar Grant Program”) is to create a viable, long-term solar market for low-income customers in northern Minnesota by exploring innovative ways to address the solar adoption challenges commonly faced by this customer segment. These challenges can include lack of upfront capital, home ownership status, physical condition of the home, low credit scores, limited access to

information, and more. The program was intentionally designed to be flexible to encourage a wide variety of project structures, partnerships and creative solutions to address these barriers.

The Company provided funding for four projects in 2021. Descriptions of these projects are listed below in Table 2.

Table 2- LI Solar Projects

Project	System Size (kWac)	Funding Amount
RREAL	5.22	\$12,950
One Roof Housing	5.31	\$17,141
One Roof Housing	5.31	\$14,491
One Roof Housing	5.6	\$19,684
Total	21.44	\$64,266

RREAL

The Rural Renewable Energy Alliance (“RREAL”) worked with Habitat for Humanity in Grand Rapids to install a solar array on a new home built for a low-income Minnesota Power customer. The grant covered nearly all of the added expense of the solar system.

One Roof Housing

One Roof Housing was awarded funding for three projects in 2021. All three projects were for the installation of solar arrays on houses that are participating in One Roof Housing’s land trust program. The land trust program ensures that these homes will remain in the low- to moderate-income market regardless of whether they are sold in the future. The solar arrays on these homes will help bring down the energy costs of these homes, benefiting the homeowners.

SolarSense Evaluation and Planning Program

The Evaluation and Planning Program provides the resources needed for Minnesota Power to deliver and evaluate the SolarSense Customer Solar Program which includes

working with customers to administer rebates, completing an annual review of the program, proposing and implementing modifications to the current programs or the development of new programs, responding to data requests, preparing the solar program tracker, preparing regulatory filings and more. The intent of the Evaluation and Planning Program is to ensure that program resources are being used in the most efficient manner possible to meet customer needs while also achieving compliance with Minnesota Power’s SES requirements.

Table 3- 2021 SolarSense Customer Solar Program Spending

Program Name	Approved 2021 Budget¹	Actual 2021 Spending
Customer Incentives	\$350,698	\$342,890
Low-Income Solar Program	\$120,000	\$64,266
Program Development and Delivery²	\$140,650	\$80,886
Total	\$611,348	\$488,042

- (1) The approved budget listed in this table is reflective of only the approved budget for 2021. As described in the Company’s SolarSense Customer Solar Program filing, flexibility in the program budgets to use any unused budget dollars in the future program years is critical.
- (2) The Program Development and Delivery budget includes labor, IT expenses, evaluation and planning, equipment and professional services.

As shown in Table 3, actual program spending in 2021 was \$488,042, which is roughly 20 percent below the approved budget amount of \$611,348. The main drivers for the lower-than budgeted spending are the lack of Low-Income Solar projects and the Program Development and Delivery expenses. Minnesota Power anticipates that unused budget dollars from 2021 will be used in future years as more projects are awarded funds through the LI Solar Grant Program and as Minnesota Power works to streamline the SolarSense Customer Rebate program application process.

IV. CONCLUSION

Minnesota Power is pleased to provide this annual report on its on-going compliance with prior Commission orders and with Minnesota's SES. The SolarSense Customer Solar Program reflects the Company's holistic approach to providing customers with solar energy options that work for them and through this filing, Minnesota Power is proposing modifications to the SolarSense Program beginning in 2023. Minnesota Power looks forward to continued collaboration with customers, interested stakeholders and the Commission as it brings forward solar programs and projects for the future.

Dated: June 1, 2022

Respectfully submitted,



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STATE OF MINNESOTA)
) ss
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AFFIDAVIT OF SERVICE VIA
ELECTRONIC FILING

Tiana Heger of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 1st day of June, 2022, she served Minnesota Power's Annual Report of its SolarSense Program in **Docket Nos. E015/M-16-485 and E015/M-20-607** on the Minnesota Public Utilities Commission and the Energy Resources Division of the Minnesota Department of Commerce via electronic filing. The persons on E-Docket's Official Service List for this Docket were served as requested.



Tiana Heger