

**STATE OF MINNESOTA  
BEFORE THE MINNESOTA DEPARTMENT OF COMMERCE**

**In the Matter of the Petition for  
approval of Northern States Power  
Company, d/b/a Xcel Energy, for  
approval of its Community Solar  
Garden Program**

**COMMENTS of the MINNESOTA  
SOLAR ENERGY INDUSTRIES  
ASSOCIATION (MnSEIA)**

**October 22, 2021**

**Docket No. E-002/M-21-718**

**MnSEIA's COMMENTS**

The Minnesota Solar Energy Industries Association (MnSEIA) is a 501(c)(6) nonprofit trade association that represents our state's solar businesses, with 135 member companies, which employ roughly 4,000 Minnesotans.

**BACKGROUND**

On October 1, 2021, Northern States Power Company, d/b/a Xcel Energy (Xcel or the Company) filed its Program Proposal<sup>1</sup> in response to the requirements of Minn. Stat. § 216C.376, for a Solar for Schools incentive program to be funded by the Renewable Development Account subject to Minn. Stat. § 116C.779. Xcel has dubbed this incentive program Solar\*Rewards for Schools (Solar for Schools).

Initial Comments to the Deputy Commissioner were due October 11, 2021, and were later extended<sup>2</sup> at the request of All Energy Solar<sup>3</sup> to October 22, 2021. On or about October 11, 2021, Xcel<sup>4</sup> and iDEAL Energies LLC (iDEAL)<sup>5</sup> filed comments.

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<sup>1</sup> Northern States Power Company, d/b/a Xcel Energy, Program Proposal, In the Matter of the Petition of Northern States Power Company for Approval of Plan for Solar for Schools, Docket No. E002/M-21-718, Doc. Id., 202110-178460-01, (October 1, 2021). *Hereinafter*, Xcel Program Proposal.

<sup>2</sup> Minnesota Department of Commerce, Department of Energy Resources, Notice of Extension Variance, In the Matter of the Petition of Northern States Power Company for Approval of Plan for Solar for Schools, Docket No. E002/M-21-718, Doc. Id., 202110-178744-01, (October 12, 2021).

<sup>3</sup> All Energy Solar, Extension Variance Request, In the Matter of the Petition of Northern States Power Company for Approval of Plan for Solar for Schools, Docket No. E002/M-21-718, Doc. Id., 202110-178688-01, (October 11, 2021).

<sup>4</sup> Northern States Power Company, d/b/a Xcel Energy, Initial Comments, In the Matter of the Petition of Northern States Power Company for Approval of Plan for Solar for Schools, Docket No. E002/M-21-718, Doc. Id., 202110-178683-01, (October 11, 2021). *Hereinafter*, Xcel Comments.

<sup>5</sup> iDEAL ENERGIES LLC, Comments, In the Matter of the Petition of Northern States Power Company for Approval of Plan for Solar for Schools, Docket No. E002/M-21-718, Doc. Id., 202110-178705-01, (October 12, 2021). *Hereinafter*, iDEAL Comments.

## **I. The Proposed Rate Structure Will Not Attract Sufficient Interest**

Xcel proposes to compensate all Solar\*Rewards for Schools participants at 2¢/kWh production-based incentive (PBI). In the case of income-qualified Schools, Xcel proposes an up-front incentive structure that declines per-Watt as system size increases.<sup>6</sup>

This incentive level simply fails to compete on financial terms with another net-metering tariff for similarly-sized and -situated systems: the Photovoltaic Demand Credit Rider (PV Demand Credit).<sup>7</sup> While the structure of that program differs from the proposed Solar\*Rewards for Schools in several respects, it is clear that the PV Demand Credit both 1) offers a higher (average) per-kWh rate, and that 2) renewable energy credits (RECs) do not accrue to the Company. For these two reasons, it is unlikely that any school would chose to use the Solar\*Rewards for Schools program when a better alternative exists.

If the program is not a viable or competitive option for schools to achieve their own goals when installing solar, then the program does not achieve the statutory objective of creating an incentive program for schools to install solar.

A meaningful Solar\*Rewards for Schools program would offer a meaningful incentive to sell the associated RECs to Xcel. We conclude that such a program would utilize a PBI of 4.5-5¢/kWh.

### **A. The PV Demand Credit currently serves School enterprises in Xcel territory, and a credible Solar\*Rewards for Schools program should offer a meaningful alternative**

The PV Demand Credit is a tariff for Xcel Energy customers that compensates certain distributed solar generators for the value of energy produced during periods of peak demand.<sup>8</sup> It is well known within the solar industry that many schools—which meet the qualifications for the Credit<sup>9</sup>—install solar distributed generation (DG) under that tariff.<sup>10</sup>

That tariff employs Xcel's Capacity Value Stack Methodology<sup>11</sup> in order to determine the value of the energy and capacity delivered by solar DG installed behind-the-meter on demand-metered

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<sup>6</sup> See, Xcel Program Proposal, Table 1: Summary of Proposed Incentive Levels, at 11.

<sup>7</sup> See, Northern States Power Company, Minnesota Electric Rate Book — MPUC No. 2, Photovoltaic Demand Credit Rider, Rate Code A85 (Closed), Rate Code A86, Section No. 5, 5th Revised Sheet No. 125., Effective Date: February 14, 2020. *Hereinafter* Xcel PV Demand Credit tariff sheet.

<sup>8</sup> See generally, Order Approving Solar PV Demand Credit Rider With Modifications, In the Matter of a Rate for Large Solar Photovoltaic Installations, Docket No. E-002/M-13-315 & In the Matter of a Commission Inquiry Into Standby Service Tariffs, Docket No. E-999/CI-15-115, Doc. Id. 20202-160459-01, (February 14, 2020). *Hereinafter*, PV Demand Credit Order.

<sup>9</sup> See, Xcel PV Demand Credit tariff sheet.

<sup>10</sup> See generally, iDEAL Energy Comments.

<sup>11</sup> See, PV Demand Credit Order, at 16.

premises. The Minnesota Public Utilities Commission (Commission) described that methodology in its Order approving the tariff as such:

In brief, this method 1) recognizes that PV customers generate a variety of benefits for Xcel's system relative to similar customers that lack PV generation, 2) quantifies those benefits, 3) adds them up, and 4) allocates the benefits in proportion to a customer's PV output during peak periods. As a result, the formula rewards cost-saving behavior appropriately, without requiring other ratepayers to provide undue subsidies to the PV customers.<sup>12</sup>

That is, the PV Demand Credit was crafted to be subsidy-free and unencumbered by incentives. Instead the PV Demand Credit evolved through several iterations meant to fairly compensate demand-billed customers with PV that were being both overcharged for demand, and undercompensated for capacity and generation. The final methodology approved by the Commission to measure the *value to the Company's grid* added by that sort of DG was proposed by Xcel, and widely agreed to by stakeholders.<sup>13</sup> It is a fair representation of the value to the utility of a PV system that is the same size (between 40 kW<sub>AC</sub> and 1 MW<sub>AC</sub>) and similarly-situated (on demand-metered premises) contemplated by the Solar\*Rewards for Schools program.

There is clear legislative intent for the Solar for Schools program *to be an incentive program*. The stated purpose of the statute is to create “a program to provide financial assistance to enable schools to install and operate solar energy systems that can be used as teaching tools and be integrated into the school curriculum.”<sup>14</sup> Xcel also clearly believes that this outlay of Renewable Development Account monies is meant to be an incentive program, because it refers to what would become its tariff as its “Proposed Incentive Structure.”<sup>15</sup>

And yet, the 2¢/kWh PBI in Xcel's proposal falls short of the best approximation of the fair value for this sort of solar installation, which is the PV Demand Credit.

#### **i. The average hourly value of the PV Demand Credit**

The PV Demand Credit compared to the PBI in the Solar\*Rewards for Schools program is not an apples-to-apples comparison, so we must “convert” the former into terms more readily compared to the latter. The PV Demand Credit applies only to generation during peak hours—here, 1 PM to 7 PM—incur a monthly charge, and faces two forms of caps to credits issued. Whereas, the proposed Solar\*Rewards for Schools PBI is a flat 2¢/kWh incentive. For the moment, we will set

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<sup>12</sup> *Id.*, at 12.

<sup>13</sup> *Id.*, at 5-12.

<sup>14</sup> Minn. Stat. § 216C.376, Subdivision 1.

<sup>15</sup> *See*, Xcel Program Proposal, at 10.

aside the upfront, per-Watt grants for income-qualified applicants, because the program should work for all applicants.

There are two rates associated with Xcel's Photovoltaic Demand Credit Rider: A85 (Closed) and A86.<sup>16</sup> The former is only available to certain customers grandfathered in under previous iterations and application periods, like the Photovoltaic Solar Credit. The A85 credit per kWh of peak generation is 7.1390¢/kWh. The A86 rate, which is available now to demand-metered premises (like many school campuses), is 6.9648¢/kWh.

iDEAL assumes that half of the energy produced by an array subject to this tariff is produced during peak hours, and accordingly concludes that the average value for an hour of PV generation is half the A86 rate, or 3.482¢/kWh.<sup>17</sup>

Other MnSEIA member companies have suggested, anecdotally, that the two caps built into the PV Demand Credit have historically reduced the credit to around 40% of the total energy produced on an annual basis, or 2.786¢/kWh. The first cap is the Firm Demand cost paid during a given month, and the second is a seasonal cap that consists of 100% of the maximum system output during June, July, August, and September and 75% of the same during the other eight months of the year.<sup>18</sup>

Both conversions to an average hourly rate equivalent to the PBI at issue here are significantly higher than the 2¢/kWh that Xcel proposes.

Moreover, the PV Demand Credit does not price in the value of a REC, because those eligible for the PV Demand Credit retain ownership of the RECs.

### **B. The Solar\*Rewards for Schools PBI should include a premium for RECs**

Renewable Energy Credits are a legal construction, a kind of exclusive, intangible property that denotes electricity generated from renewable sources.<sup>19</sup> Utilities and consumers alike track and retire RECs to claim credit for renewable energy standards, corporate sustainability goals, and marketing claims. Xcel sells RECs to its customers on a voluntary basis.<sup>20</sup> In short, RECs have inherent value, and to a degree, market value.

A central feature of the enabling legislation provides that the RECs produced by the PV systems receiving assistance under this program belong to Xcel Energy for *the life of the system*, “regardless of the duration of the financial assistance provided.”<sup>21</sup> This stipulation of REC

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<sup>16</sup> See, Xcel PV Demand Credit tariff sheet.

<sup>17</sup> See, iDEAL comments, at 3.

<sup>18</sup> See, Xcel PV Demand Credit tariff sheet.

<sup>19</sup> Minn. Stat. § 216B.1691, Subd. 4.

<sup>20</sup> Minn. Stat. § 216B.169.

<sup>21</sup> Minn. Stat. § 216B.376, Subd. 5., (b).

ownership calls into question whether or not a Solar for Schools system would be eligible for the PV Demand Credit after its 20-year contract with Xcel, since the latter is incompatible with incentive programs; subsequently, this uncertainty devalues the tail-end value of a Solar\*Rewards for Schools contract. Therefore, the purchase-price of the REC by the utility from systems in this program should value the premium for RECs for the whole life of the system.

The value of a solar REC to Xcel Energy is somewhat opaque, but there is some evidence that the minimum value is \$20.00/MWh, or 2¢/kWh. The difference between the Enhanced and Standard Applicable Retail Rate for Solar\*Rewards Community Subscribers is the value of the REC: 2¢/kWh for gardens equal to or under 250 kW, and 3¢/kWh for gardens over 250 kW.<sup>22</sup>

Xcel sells RECs to its customers through its Renewable\*Connect program in 100 kWh blocks.<sup>23</sup> The going rate for a month-to-month Renewable\*Connect contract in 2021 is 3.647¢/kWh; for a five-year contract, 3.345¢/kWh; and, for a ten-year contract, 3.295¢/kWh. Those contract prices include a neutrality charge “to mitigate the impact of the R\*C Pilot program on non-participating customers” of .0493¢/kWh in 2021.<sup>24</sup> If we assume that the value of the REC sold is the Renewable\*Connect price less the neutrality charge, then the price Xcel charges its customers for RECs on a month-to-month basis is 3.154¢/kWh; for a five-year contract, 2.852¢/kWh; and, for a ten-year contract, 2.802¢/kWh.

Xcel’s proposed PBI is wholly inadequate in this light. The 2¢/kWh PBI only covers the minimum published value for a REC, and falls far short of the highest price the Company sells RECs back to its customers, 3.154¢/kWh. Potential Solar\*Rewards for Schools projects under 250 kw would be compensated even less than similarly sized Solar\*Rewards Community projects. Moreover, these prices only account for the 20-year life of the “incentive,” beyond which Xcel receives the RECs at no cost. Lastly, projects that have received any incentives, *including Solar\*Rewards for Schools*, are ineligible after that 20-year term to participate in the PV Demand Credit—further diminishing the value of the proposed PBI.

iDEAL discussed this disparity at length,<sup>25</sup> and MnSEIA agrees with those conclusions—namely, that Xcel’s proposal inadequately compensates Solar\*Rewards for Schools customers for the purchase of RECs, that this inadequacy is unfair to schools in light of other Xcel programs like Solar\*Rewards and Solar\*Rewards Community, and that that unfairness would disincentivize program participation if approved.

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<sup>22</sup> See, Northern States Power Company, Minnesota Electric Rate Book — MPUC No. 2, Solar\*Rewards Community Program (Continued), Applicable Retail Rate, Section No. 9, 6th Revised Sheet No. 64.1, Effective Date: April 1, 2021. See also, iDEAL Comments, at 4-5.

<sup>23</sup> See, Northern States Power Company, Minnesota Electric Rate Book — MPUC No. 2, Voluntary Renewable\*Connect Pilot Program Rider (Continued), Section No. 5, 8th Revised Sheet No. 150, Effective Date: August 1, 2021.

<sup>24</sup> *Ibid.*

<sup>25</sup> See, iDEAL Comments at 4-5.

Because many school districts and college administrations have their own sustainability goals—*some of which can only be met by the lawful ownership of RECs*—the meaningful choice for schools considering whether to install solar on their campuses should be to participate in a program that includes RECs or does not. The choice that sells the RECs to the utility should offer compelling financial incentives to do so.

**C. The PBI for the Solar\*Rewards for Schools program should be between 4.5¢/kWh and 5¢/kWh**

Xcel's proposal seems to have been made in good faith. Recent revisions to the Solar\*Rewards incentive structure have decreased associated incentives to 4¢/kWh for residential customers, and 3¢/kWh for commercial customers.<sup>26</sup> In both cases, the associated RECs accrue to the Company during the contract period. It may follow from the Company's perspective that larger systems, mostly for demand-metered premises on campuses, should be compensated at a level down—the systems are larger, and therefore benefit from economies of scale, for example.

However, this paradigm fails in several respects. First, schools already possess a feasible alternative in the PV Demand Credit Rider. Second, systems in the Solar\*Rewards program offset much higher Residential and Small General Service rates than the General Service rate applicable to campuses. Third, the Solar\*Rewards for Schools program requires educational and publicly-available monitoring components to be built into the curriculum, which add a marginal cost. The first respect is dispositive.

A fair PBI should at least match the value of the sum of these two parts: 1) the value of the energy and capacity of the PV system, and 2) the value of the REC.

The annualized average hourly value of the PV Demand Credit—which is both the alternative solar solution for schools and a fair, subsidy-free value for energy and capacity of similarly-situated PV systems—is estimated to be between 2.786¢/kWh and 3.482¢/kWh. The value of a REC, between the lowest price purchased by Xcel and the highest price sold by Xcel, is between 2¢/kWh and 3.154¢/kWh.

Accordingly, the calculated minimum and maximum of a range for the PBI would be 4.786¢/kWh and 6.636¢/kWh, respectively.

Good public policy may suggest the lower end of that range, however, as a lower PBI will stretch the limited funds available to the program further, and will lead to more projects being awarded. Furthermore, while we have mostly set aside the upfront incentive structure for income-qualified schools during this analysis, we have not and do not suggest changes there; for reasons of

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<sup>26</sup> See, Decision, Minnesota Department of Commerce, Department of Energy Resources, In the Matter of Northern States Power Company's Solar\*Rewards Program, Docket No. E002/M-13-1015, Doc. Id. 202110-178740-01, (October 12, 2021).

financeability and equity, income-qualified school districts should be incentivized at a higher rate.

iDEAL's analysis concludes that the combined value of the PV Demand Credit and customer retention of the REC is 4.5¢/kWh, and that a lesser rate would fail to incentivize program participation.<sup>27</sup>

Accordingly, MnSEIA suggests that the PBI should fall within a range of 4.5¢/kWh to 5¢/kWh, and Xcel's proposed upfront incentives for income-qualified schools should remain as proposed.

## **II. Other Issues**

The Notice of Comment Period invited stakeholders to speak to a number of other topics related to Xcel's program proposal. MnSEIA's position on each of those is largely in agreement with other commenters, Xcel Energy and iDEAL Energies.

MnSEIA agrees with Xcel that the legislation was not intended to include solar thermal devices.<sup>28</sup>

We also consent to Xcel's proposal to allow for the negative check-off process that applies to the Solar\*Rewards program, and agree with the logic that program administration should "limit significant differences" from the same.<sup>29</sup> Speedy and efficient administration of this program will influence its success.

Lastly, the Company's proposal for applicants to demonstrate eligibility for income-qualified participation in the program appears to comport with legislative direction and intent.

## **Conclusion**

In order for the program to meet the legislative direction to incentivize schools to install solar photovoltaic devices, the production based incentive—which is the only incentive that applies to all program applicants, and the only incentive available to non-income-qualified participants—needs to be sufficiently competitive with other options. The chief alternative to the program and the option most-often chosen by schools, the Photovoltaic Demand Credit Rider, is simply a better rate that also allows schools to retain ownership of RECs.

Accordingly, legislative intent will be met when the PBI for the Solar\*Rewards for Schools program exceeds the combined value of the PV Demand Credit and the REC sold to Xcel in exchange. We conclude that that rate should be between 4.5¢/kWh and 5¢/kWh.

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<sup>27</sup> See, iDEAL Comments, at 8.

<sup>28</sup> See, Xcel Comments, at 2-3.

<sup>29</sup> Id., at 6-7.

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