

**City of Minneapolis**  
350 S. Fifth Street  
Minneapolis, MN 55415

**Target Corporation**  
33 South 6th Street, cc-2805  
Minneapolis, MN 55402

February 19, 2019

Daniel P. Wolf  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7th Place East, Suite 350  
Saint Paul, MN 55101

RE: Commission Inquiry into Standby Service Tariffs  
Docket No. E999/CI-15-115

Dear Mr. Wolf:

The City of Minneapolis and Target Corporation, with support from Farmington Area Public Schools, Hi-Lo Manufacturing, LifeSource Organ Eye and Tissue Donation, Midwest Diesel Service, Inc., Minneapolis Public Schools, Performance Office Papers, Triangle Warehouse, Inc. and University of Minnesota (see Attachment A), appreciate the opportunity to comment on Xcel Energy's proposed changes to the PV Demand Credit Rider.<sup>1</sup>

We submit the following Comments for the Commission's consideration and note that none of the parties to these Comments were among the participants in Xcel's stakeholder discussions in June 2018. We believe that our remarks as a Commercial Customer Cohort offer a perspective not considered in Xcel's proposal.

We address each question from the Commission in turn.

- **Did Xcel propose an appropriate methodology for determining the PV Demand Credit?**

The Commercial Customer Cohort is not satisfied that the methodology proposed by Xcel fairly credits customers for the grid value peak load reduction from solar investments nor is the methodology consistent with renewable energy market financing realities that Xcel accounts for in its own renewable energy programs and contracts. The existing methodology reached through negotiated agreement results in a value of \$0.7139/kWh for production between 1 and 7 p.m. Xcel's proposed methodology (and accompanying assumptions) would combine to cut the credit by more than half without supporting evidence of why the proposed methodology is more appropriate.

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<sup>1</sup> Docket 15-115. Xcel Energy in the Matter of the Petition of a Commission Inquiry into Standby Service Tariffs, PV Demand Credit Rider Methodology. Oct. 19, 2018.

PV demand credit rider is not an incentive; the PV Demand Credit Rider is an instrument intended to correct the mismatch between the value of a customer’s solar facility to the grid system and the non-coincident demand charge structure a commercial customer is billed at. The Commercial Customer Cohort appreciates that the Commission recognizes that there is value that commercial on-site solar contributes to the grid system.<sup>2</sup>

The Commercial Customer Cohort recommends that the Commission either deny the Company’s petition to modify the PV Demand Credit Rider or require that the Company resubmit a proposal with assumptions that align with their recent petitions for company-procured acquisition proposals.<sup>3</sup> In those proposals, Xcel employed more favorable cost and contract term length assumptions that reflect well-recognized market realities that were not included in the Company’s latest PV Demand Credit Rider proposal.

**• Does the PV credit methodology accurately reflect solar value?**

No, Xcel’s proposed decrease in the Credit from the current \$0.07139/kWh for production between 1 p.m. and 7 p.m. to a proposed \$0.03396/kWh does not reflect solar value.

In developing the proposed PV Demand Credit, Xcel included the following table in the October 19, 2018 filing (Table 1 below, identified as Table 2 in Xcel’s petition). As discussed below, the Commercial Customer Cohort disagrees with the following specific components:

- Levelized CT Cost (row a),
- Embedded Transmission Cost (row b),
- Future Need (2025) Timing Factor (row f), and
- Reduced Billed Demand Value (row j).

<b>Proposed Methodology - PV Demand Credit per kW</b>			
a	Levelized CT Cost	\$4.54	
b	Embedded Transmission Cost	\$3.47	
c	Total Generation and Transmission	\$8.01	a + b
d	Line Losses	6.65%	
e	Total with Losses	\$8.54	c * (1+d)
f	Future Need (2025) Timing Factor	60%	
g	Future Need Adjusted Total	\$5.13	e * f
h	Capacity Contribution	50%	
i	Capacity Contribution Adjusted Total	\$2.56	g * h
j	Reduced Billed Demand Value	\$0.41	
k	Demand Credit per kW	\$2.15	i - j

*Table 1 (Table 2 in Xcel’s petition.) Xcel’s proposed methodology for calculating per kW-month credit for a reduced PV Demand Credit Rider*

<sup>2</sup> In the Order related to Xcel Energy’s rate case from 2010, the Commission directed Xcel to work on a solution that created fair compensation for commercial solar owners. And in the April 20, 2018 Order under this docket, the Commission directed Xcel to conduct a new Effective Load Carrying Capacity study and PV Customer Demand study, to file the results, and to work with stakeholders to propose a new PV Demand Credit Rider Methodology based on the results of the studies.

<sup>3</sup> For example, dockets for acquisitions, 18-765 Dakota Range Petition and 18-777 Jeffers Community Wind Farm.

A. Levelized CT Cost (row a)

The generation capacity cost assumption is inconsistent with assumptions made in recent Xcel petitions for procurement and other filings.

In the PV Demand Credit Rider calculation, Xcel included only avoided Combustion Turbine (CT) installed capacity assumptions (and no Combined Cycle (CC) generation) with a low levelized generation capacity cost of \$4.54 per kW-month coupled with very low O&M costs. We note that solar also avoids CC plant facilities as acknowledged in the Value of Solar Methodology in which Xcel assumes a 50/50 CC/CT blend.

In the petition for approval of the Dakota Range III Wind power purchase agreement (PPA), Xcel included both CC and CT costs, and additionally, CT costs were higher in all three generic cases of the filing. (See Table 2 below, labeled as Table 13 in Xcel’s Dakota Range III Wind petition.)<sup>4</sup> In response to MnSEIA’s IR 5 under this docket, Xcel cites the Brattle Group’s most recent Cost of New Entry (CONE) study for PJM as the basis for its lower CT costs.<sup>5</sup> Brattle’s lowest CONE is about \$7.50 per kW-month in 2019, largely due to Brattle’s higher fixed annual O&M costs (\$17 per kW-yr compared to Xcel’s assumption of \$6 per kW-yr).<sup>6</sup>

In support of its Dakota Range III Wind PPA Xcel submitted various CC and CT scenarios used in developing the capacity value of the PPA. (See again, Table 2 below).

Table 13: Thermal Generic Information (Costs in 2018 Dollars)

Resource	Sherco CC	Generic CC	Generic CT	Generic CT	Generic CT
Technology	7H	7H	7H	7F	7H
Location Type	Brownfield	Greenfield	Brownfield	Brownfield	Greenfield
Cooling Type	Wet	Dry	Dry	Dry	Dry
Book life	40	40	40	40	40
Nameplate Capacity (MW)	916	916	374	232	374
Summer Peak Capacity with Ducts (MW)	870	870	NA	NA	NA
Summer Peak Capacity without Ducts (MW)	643	643	331	228	331
Capital Cost (\$/kW)	\$914	\$951	\$446	\$495	\$445
Electric Transmission Delivery (\$/kW)	NA	\$301	NA	NA	\$100
Ongoing Capital Expenditures (\$/kW-yr)	\$6.77	\$6.77	\$4.77	\$3.85	\$3.85
Gas Demand (\$/kW-yr) 2018\$	\$32.56	\$21.14	NA	NA	\$2.07
Fixed O&M Cost (\$000/yr) 2018\$	\$2,605	\$3,105	\$422	\$736	\$668
Variable O&M Cost (\$/MWh)	\$1.42	\$1.42	\$4.90	\$4.90	\$4.90
Levelized \$/kw-mo (All Fixed Costs) \$2018	\$12.04	\$12.71	\$4.62	\$5.13	\$5.58
Heat Rate with Duct Firing (btu/kWh)	6,494	6,818	NA	NA	NA
Heat Rate 100% Loading (btu/kWh)	6,331	6,647	9,042	9,791	9,042
Heat Rate 75% Loading (btu/kWh)	6,464	6,787	9,474	10,234	9,474
Heat Rate 50% Loading (btu/kWh)	6,876	7,220	10,833	12,006	10,833
Heat Rate 25% Loading (btu/kWh)	7,831	8,222	11,279	12,835	11,279
Forced Outage Rate	3%	3%	3%	3%	3%
Maintenance (weeks/yr)	5	5	2	2	2

Table 2. Dakota Range Wind acquisition filing (Docket 18-765, Attachment C, Table 13) shows higher generation cost assumptions than used for the PV Demand Credit Rider.

<sup>4</sup> Docket 18-765 Table 13 in Attachment C in the application for approval of the Dakota Range Wind III petition.

<sup>5</sup> Docket 15-115. MnSEIA IR 5. Xcel Response references an April 2018 Brattle CONE Study. Jan. 7, 2019.

<sup>6</sup> April 2018 Brattle CONE Study.

The Commercial Customer Cohort notes that if CC cost assumptions were considered, the levelized generation cost would be higher. Additionally, other recent Xcel filings that included levelized avoided CT costs were higher than the \$4.54/kW-mo the Company is proposing in this docket.<sup>7</sup>

If the Company's methodology remains the foundation for the PV Demand Credit Rider, we propose using the assumptions from the Brattle report for LCOE of \$7.50 per kW-month or more reasonable assumptions for generation costs as with the recent Dakota Range III and Jeffers petitions and the 2019 VOST.

#### B. Embedded Transmission Cost (row b)

The embedded transmission cost is an appropriate component, but the value is too low.

Like the levelized capacity cost, the Company's proposed embedded transmission cost is below the value used in recent, relevant filings. In this docket Xcel has proposed an embedded transmission cost value of \$3.47/kW-mo. This is lower than the value used in the Company's most recent Value of Solar filing (\$49/kW-yr, or \$4.09/kW-mo).<sup>8</sup> The Commercial Customer Cohort recommends that Xcel use the embedded transmission cost from the recent Value of Solar filing.

#### C. Future Need (2025) Timing Factor (row f)

Xcel's proposed new 'future need' adjustment should be removed.

In this methodology, Xcel discounted the solar capacity credit with a new "future need" 60% adjustment factor as the Company states it does not need capacity until 2025:

*The solar resources would first be met by Community Solar Garden (CSG) resources, and then supplemented with utility scale as needed or if economically justified. Based on our current forecast, the Company anticipates that the amount of CSG achieving commercial operation by 2021 will exceed 650 MW. After accounting for all of these resource additions as well as accounting for current load forecasts and MISO Planning Reserve Margin updates, the revised capacity need has shifted to 2025.<sup>9</sup>*

The Commercial Customer Cohort disagrees with Xcel's statement above. The Commission's Order regarding Xcel's most recently approved IRP found that the utility had a need for new renewable resources and that this need included anticipated solar resources, *without limitation to "large-scale" solar.* (Emphasis added.)<sup>10</sup> In addition, Xcel applies the future need adjustment to the avoided transmission cost value without any documentation.

Additionally, the new 'future need' adjustment component is inconsistent with statutory direction to 'give the maximum possible encouragement to cogeneration and small power production consistent

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<sup>7</sup> Docket 15-115. MnSEIA IR 6, Xcel response. Jan 7, 2019.

<sup>8</sup> Docket E002/M-13-867. Table 13. Economic value of avoided transmission capacity cost, Response to PUC - IR 49, Dec. 27, 2018. [Click here to view the document](#)

<sup>9</sup> Docket No.: E999/CI-15-115 Response To: MN Solar Energy Industries Association IR 8. Jan 7, 2019.

<sup>10</sup> Docket No. E-002/RP-15-21. In the Matter of Xcel Energy's 2016–2030 Integrated Resource Plan: Order Approving Plan with Modifications and Establishing Requirements for Future Resource Plan Filings. Jan 11, 2017.

with protection of the ratepayers and the public.<sup>11</sup> An advantageous element of the existing methodology--that Xcel retained in this proposal--is that if the customer's system doesn't produce, the customer isn't compensated. This makes commercial on-site solar under this PV Demand Credit Rider a low-risk part of the grid mix that benefits non-participating customers.

Customer investments in solar decrease the need for ratepayer-funded investments in future generation needs identified in Xcel's IRP. By fairly valuing customer solar generation, the Company can avoid or defer the need for additional generation, providing value to all customers.

If the Commission disagrees with our recommendation and adopts Xcel's proposed future need adjustment, then the levelized avoided generation and transmission costs in rows *a* and *b* of Table 1 should be inflation-adjusted to 2025 dollars.

#### D. Future Need Adjusted Total (row i)

The 'Future Need Adjusted Total' row is unnecessary per the reasons listed in the last component, 'future need timing factor'.

#### E. Reduced Billed Demand Value (row j)

The new 'Reduced bill demand value' component should be removed.

In the PV Customer Demand Study, the Company acknowledged that "there was a wide range of individual customer impacts observed, significantly related to PV capacity as a percent of total site load requirements."<sup>12</sup> The Company indicated that the Reduced Billed Demand Value is based on an assumed 6.4 percent decrease in billed demand charges for the 24 customers in the study.<sup>13</sup>

It's premature to include the Reduced Billed Demand Value in the methodology at this time. The sample size used by the Company to develop the proposed value is extremely small. Furthermore, it is likely that most of the systems included in the small sample size were constructed under the old PV credit in the standby tariff. This is important because these systems did not receive the price signal to shave the system peak in their design the way new systems under the current 1 – 7pm generation credit structure receive. Under more data is received The Commercial Customer Cohort recommends that this methodology line item be removed.

The Commercial customer cohort also notes that any adjustment for reduced bill demand value would not be needed if the Company were to develop a generation demand rate that was assessed at the time of the system peak, separate from the distribution demand rate. This is the approach the Company's affiliated company the Public Service Company of Colorado takes, as does the Option R tariff structures in California.

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<sup>11</sup> Minn. Stat. 216B.164

<sup>12</sup> Docket No. E999/CI-15-115 [COMPLIANCE FILING](#), Solar Effective Load Carrying Capability (ELCC) Study & PV Billed Demand Study. Aug 17, 2018.

<sup>13</sup> Xcel Energy in the Matter of the Petition of a Commission Inquiry into Standby Service Tariffs, [PV Demand Credit Rider Methodology](#). Pages 4-5. Oct 19, 2018.

## Other Recommendations Relating to Whether the Methodology Accurately Reflects Solar Value

The factor ‘*Applicable Months per Year*’ should be removed from the methodology.

In addition to the foundational components in Table 2 that were used to identify an amount for the PV Rider, the Commercial Customer Cohort notes that Xcel further diminished the credit in the final conversion steps by introducing a new *b) Applicable Months per Year* factor. (See Table 3 of Xcel’s October 19, 2018 filing.)

In the Negotiated Agreement filed in March 2018 under this docket, the grace period component of the previous methodology was eliminated.<sup>14</sup> The new ‘*Applicable Months per Year*’ component is a grace period in a different form. The credit should be based on 12 months because the system can operate 12 months of the year. This is consistent with input d) of 8,760 *Total Annual Hours*.

Credit per kW Conversion to Peak Period kWh Credit			
a	Demand Credit per kW	\$2.15	
b	Applicable Months per Year	11	
c	Annual PV Credit per kW	\$23.65	a * b
d	Total Annual Hours	8,760	
e	Annual Solar PV Capacity Factor	15.90%	
f	Peak Period Solar PV Capacity Factor	7.95%	e * 50%
g	Annual Peak Period Solar PV kWh per kW	696.42	d * f
h	Solar PV Capacity Credit per kWh	\$0.03396	c / g

Table 3. Xcel proposed credit per kW Conversion to Peak Period kWh Credit from October 19, 2018.

The principles of reasonableness and fairness should be applied to commercial solar customers.

As a qualitative response to the question, “*Does the PV credit methodology accurately reflect solar value?*” the Commercial Customer Cohort would like to address Xcel’s statement from the petition:

*We believe care should be taken in the methodology to ensure it is as reasonable as possible to fairly consider the cost responsibility of all customers that pay for the credits received by customers on the PV Demand Credit Rider.*<sup>15</sup>

The Commercial Customer Cohort appreciates the Company’s goal for reasonableness and fairness for all customers and shares the goal. However, the Cohort disagrees that the methodology proposed by the Company achieves this goal. “All Customers” includes those who invest in solar, and they should be fairly compensated for benefits to the grid that would otherwise need to be supplied by the utility.

<sup>14</sup> Docket 15-115. Negotiated Agreement for the existing PV Demand Credit Rider between Xcel, Minnesota Department of Commerce and Minnesota Solar Industries Association. March 20, 2018.

<sup>15</sup> Xcel’s petition under this docket, page 5. Oct 19, 2018.



- **Is the PV Demand Credit set at the correct level?**

The Demand Credit of \$2.15 per kW and the corresponding conversion to a peak period Solar PV Capacity Credit of \$0.03396 per kWh calculated by Xcel do not reflect fair compensation to commercial solar customers for value contributions to the grid system. It is less than half of the value in the Negotiated Agreement filed on March 20, 2018.

After the Negotiated Agreement filed under this docket on March 20, 2018, MnSEIA commented that the Agreement was sufficient to meet the needs of the parties. Xcel asserted that the Agreement reached with the Department and MnSEIA:

- resulted in a reasonable PV Demand Credit interim rate,
- provided additional certainty to customers, and
- established a workable process and timeline (December 2020) for establishing a new PV Demand Credit rate proposal.<sup>16</sup>

However, the methodology proposed by Xcel on October 19, 2018, just months after the Negotiated Agreement took effect in June 2018, cuts the value of the PV Demand Credit rider by more than half. It includes new components and assumptions that diminish compensation to the customer in a compounded manner, since some component values depend on previous inputs.

The Commercial Customer Cohort believes that the value proposed by Xcel is too low for the reasons stated in the previous section, and that if adopted, the proposed changes will result in unnecessary and unfair suppression of the commercial solar market in Xcel's Minnesota territory.

- **Is the revised tariff sheet attached to Xcel's filing appropriate?**

- A. Add term certainty in alignment with utility-originated agreements to improve equitable treatment for customer-sited solar.

While solar is modular, it can take significant time to execute a full energy plan, considering the interrelationship between customer's use, energy efficiency investments, electric vehicle adoption, etc. An uncertain, fluctuating PV Rider is not conducive to thoughtful, cost effective energy planning and makes financing difficult. Longer-term compensation commitments are the norm in power generation agreements.

Utilities and third parties alike seek multi-year PPAs due to the high upfront costs, yet low operating costs of renewable generation facilities. For example, proposals for the Moraine II Wind Farm,<sup>17</sup> the Jeffers Wind Farm,<sup>18</sup> Dakota Range III,<sup>19</sup> Xcel's 2019 Renewable\*Connect filing,<sup>20</sup> and the Value of Solar<sup>21</sup>

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<sup>16</sup> Docket 15-115. Commission Order Approving Solar PV Demand Credit Rider with Modifications and Standby Service Rider. April 20, 2018. Pages 3-4.

<sup>17</sup> Docket 08-1487. Petition – Approval of Amendment to Power Purchase Agreement with Moraine Wind II.

<sup>18</sup> Docket 18-777. Community Wind North Facilities and the Jeffers Wind Facility.

<sup>19</sup> Docket 18-765. Petition, Dakota Range III 150 MW Wind Farm.

<sup>20</sup> Docket 19-33. Petition for Approval of Renewable\*Connect Program.

<sup>21</sup> Docket 13-867. Xcel Community Solar Program.

are examples of Xcel renewable energy dockets filed in the last quarter that include 10- to 25-year agreements. Long-term agreements are appropriate for both the utility, its customers, and third-party generation owners as certainty benefits all parties and is a necessity to finance renewable energy projects. Customer renewable energy projects face the same market financing realities that utility projects face.

Solar rate design should not discriminate between utility ownership and customer ownership because such discrimination will result in less customer-financed generation that otherwise would bring cost-effective generation to the system offsetting ratepayer-funded utility investments.

The Commercial Customer Cohort recommends that the final approved methodology includes a 15-year term length for an initial credit value. In support of our recommendation, we point to Xcel's Table 2, row f (60% discount value), where Xcel appears to also assume a 15-year value term for customer PV.<sup>22</sup> The 15-year term would provide more consistency with Xcel's renewable PPAs.

#### B. Eliminate the 'Credit kWh Limit' in the Tariff.

Xcel's proposed tariff includes a 'Credit kWh Limit' per billing period as follows:

##### *CREDIT KWH LIMIT*

*The maximum kWh applied to the Rider credit per kWh each billing period is the Peak Period maximum 15-minute Solar Photovoltaic kW output for the billing period times 100 hours for billing periods ending in the months of June, July, August or September and 75 hours for billing periods ending in other months.*

This Credit kWh Limit is not appropriate and adds unnecessary billing complexity. Xcel developed this PV Demand Credit Rider based on a conversion of a capacity credit in \$/kW of contracted power (not actual kW generation during the month) to an energy production credit in \$/kWh for actual energy produced. Parties that worked on the Negotiated Agreement agreed that using actual production instead of capacity-based made sense and provides a reasonable protection for non-participants. This conversion makes it unnecessary to include a limit on the kWh for the month.

#### C. Eliminate the 'Credit Limit' in the Tariff.

Further, Xcel includes a second limitation on the value of the credit for the customer:

##### *CREDIT LIMIT*

*The maximum credit for each billing period is the applicable standard or on-peak billed demand charge from the base tariff associated with this Rider. For Peak-Controlled Service and Peak-Controlled Time of Day Service customers, the maximum credit for each billing period is the billed demand charge for Firm Demand.*

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<sup>22</sup> Xcel states that "the future need timing factor is a discount adjustment recognizing that no incremental capacity need is forecasted until the year 2025 (pg. 4 from October 19, 2018 filing). While the details of how the 60% figure were developed are not presented, we know that there are 6 years between now and 2025. Dividing 6 years by 40% (difference between 100% capacity value and the 60% discounted value for the capacity in year 2025) equals an assumed term of 15 years for the PV's avoided capacity value (6 years/.40 = 15 years).



The Commercial Cohort disagrees with this limitation in value as well. This proposed credit limit artificially limits the credit value of the solar resource to the system to an individual customer's demand charges that are a product of the customer's load shape and rate class. "Untying" the solar array's value to the system from the customer's specific load shape is the goal of this whole docket, yet this credit limit re-ties these elements again.

Without additional justification from Xcel on the analytical foundations of these limits the Commercial customer cohort recommends this artificial limit be removed from the proposed tariff.

- Are there other issues the Commission should consider in adopting a PV Demand Credit Rider methodology or in setting the level of the credit offered through the Rider?

A. Distribution capacity costs should be included as a non-zero value.

Distributed solar can defer capacity-related distribution costs as well as generation and transmission costs by reducing peak loads on distribution circuits and substations. Avoided distribution capacity costs are a component of the Value of Solar methodology, and should be included in the PV Demand Credit Rider.

IR12 from MnSEIA requested information on any studies within the last five years that include Xcel's marginal or avoided costs of distribution capacity.<sup>23</sup>

Xcel responded with the *2017 Minnesota Transmission and Distribution Avoided Cost Study*<sup>24</sup> completed for the state's investor owned utilities, but this report provided avoided cost estimates associated with *energy efficiency*. It did not include avoided costs associated with solar that can be directly applied to the PV Demand Credit Rider. Xcel did not provide any avoided distribution cost studies associated with solar.

In IR 9 from MnSEIA, requested hourly load data from any distribution substation with planned upgrades. This could have been used to estimate distribution level capacity contribution from solar. Xcel's response did not include this data.<sup>25,26</sup>

However, a similar question was asked in PUC IR 49 regarding the 2019 Value of Solar Methodology:<sup>27</sup>

*Determine the distribution cost per kW by using an average of two years of historical spending and the three forecasted years used in Xcel's planning process, and apply this distribution cost in the calculation of the 2019 VOS. Provide the recalculation of the system-wide VOS with this change only.*

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<sup>23</sup> Docket No. E999/CI-15-115. MnSEIA IR No. 12. Dec. 14, 2018.

<sup>24</sup> Minnesota Transmission and Distribution Avoided Cost Study. Xcel Energy, Minnesota Power, Otter Tail Power Company with The Mendota Group, LLC/Energy & Environmental Economics (Third Party Evaluator). July 31, 2017.

<sup>25</sup> It is unknown whether the Company didn't respond because there are no plans to upgrade distribution substations, there were issues obtaining the data in the allotted timeframe, or if the omission was an oversight.

<sup>26</sup> Docket No. E999/CI-15-115. Xcel response to MnSEIA IR No. 9 (e). Jan 7, 2019.

<sup>27</sup> Docket E002/M-13-867. Response to PUC - IR 49. Table 13. Economic value of avoided transmission capacity cost. Dec. 27, 2018.

Xcel's response to the Commission's IR identified an avoided distribution cost calculation of \$159.99/kW:<sup>28</sup>

*Please see Attachment B for an alternative 2019 VOS calculation that includes the Department of Commerce's recommendation to modify the VOS methodology with a new Avoided Distribution Cost Component calculation. The Table 1 enclosed below highlights the Department's recommendation which includes two years of actual and three years of budgeted capacity related distribution capital costs and associated installed capacity.*

*The resulting capacity related distribution cost per installed kW of \$159.99 is input on Table 5 of VOS data input table in Column G, row 17 of Attachment B.*

The Commercial Customer Cohort requests that an avoided distribution capacity component be included in the PV Demand Credit Rider.

#### B. Extend the current PV Demand Credit Rider.

Through discussions with other parties it appears that there are many outstanding issues with Xcel's proposed methodology and input data. If the Commission determines to further extend the review timeline of the credit rider the Commercial Customer cohort recommends that the Commission extend the term of the current PV Demand Credit Rider while the methodology is under deliberation. Given that developing and deploying rooftop commercial solar systems in Minnesota weather conditions can take over one year from project origination to completion, the Commercial Customer cohort recommends that the Commission recognize this significant customer lead time in any extension of the current agreement. The Commercial Customer Cohort may make a specific recommendation on this point in reply comments after reviewing other parties' comments.

#### C. Rename the Rider as *System Peak Shaving Rider* and make solar + storage systems eligible.

To reduce confusion about the purpose and goal of the PV Demand Credit Rider, the Commercial Customer Cohort recommends renaming it as the *System Peak Shaving Rider*, as the credit is designed to value solar's contribution to shaving the system peak, which often is not at the same time the commercial customer's peak distribution demand occurs for billing purposes.

Further, the Commercial Customer Cohort believes that there should be an option to include energy storage technologies under the tariff. Commercial and municipal customers are increasingly interested in solar + storage applications for resiliency and continuity of operations. Changing the name provides a more natural path to include an energy storage option at a future date.

### Recommendations Summary

The Commercial Customer Cohort recommends that the Commission either deny Xcel's petition to modify the PV Demand Credit Rider or require that the Company resubmit a proposal with

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<sup>28</sup> Docket E002/M-13-867. Response to PUC - IR 49. Table 5. VOS Data table -- required format showing assumptions used in the VOS calculation Dec. 27, 2018. Unit of time is unknown. [Click here to view the document](#)

assumptions that align with recent petitions for Company-procured acquisition proposals. Specifically, we recommend changes as follows:

- Methodology components and assumptions should be modified as follows.
  - Levelized CT Cost (row a)
    - appropriate component, but the value is too low
  - Embedded Transmission Cost (row b)
    - appropriate component, but the value is too low
  - Future Need (2025) Timing Factor (row f)
    - component should be removed
  - Reduced Billed Demand Value (row j)
    - component should be removed

Recommended changes to Xcel's Proposed PV Demand Credit Rider Methodology					
Xcel Row	Xcel's Proposed Component	Xcel Proposed Value	Commercial Cohort Recommendation	Commercial Cohort Proposed Value	Comments
a	Levelized CT Cost	\$4.54	Levelized Generation Cost	\$7.50	Based on April 2018 Brattle Cost of New Entry Study
b	Embedded Transmission Cost	\$3.47		\$4.09	From Value of Solar filing
		0	Embedded Distribution Cost	TBD	Add avoided distribution cost
c	Total Generation and Transmission	\$8.01	Total Generation, Transmission and Distribution	TBD	
d	Line Losses	6.65%		6.65%	
e	Total with Losses	\$8.54		TBD	
f	Future Need (2025) Timing Factor	60%	Remove		
g	Future Need Adjusted Total	\$5.13	Remove		
h	Capacity Contribution	50%		50%	
i	Capacity Contribution Adjusted Total	\$2.56			50% of line e
j	Reduced Billed Demand Value	\$0.41	Remove		
k	Demand Credit per kW	\$2.15			Line i

- *'Applicable Months per Year'* should be removed from the methodology.
- Add term certainty in alignment with utility-originated agreements to improve equitable treatment for customer-sited solar. We recommend a 15-year term.
- Eliminate the 'Credit kWh Limit' in the Tariff.
- Eliminate the 'Credit Limit' in the Tariff.
- Avoided Distribution capacity costs should be included as a non-zero value in the methodology.
- If the Commission determines that additional review time is needed or directs Xcel to return with a revised methodology, then we recommend that the Commission extend the current PV Demand Credit Rider term period
- Rename the Rider as *System Peak Shaving Rider* and make solar + storage systems eligible.

In conclusion, the signatories of the Commercial Customer Cohort believe it is in the public interest to properly value customer-sited, distributed solar. We support continued new deployment of renewable energy, including both utility-scale and customer-sited solar. Electricity customers should have a right to install and be compensated for solar under a fair agreement with reasonable term certainty that compensates the Customer for the value of their investment to the grid.

We appreciate the Commission's consideration of our comments.

Respectfully submitted,

Mark Ruff  
CFO, City of Minneapolis  
Minneapolis, MN

Holly Lahd  
Lead Energy & Sustainability Program Manager, Target Corporation  
Minneapolis, MN

**Attachment A**  
**Letter from the Commercial Customer Cohort in Support of**  
**Comments by the City of Minneapolis and Target Corporation**

February 19, 2019

Daniel P. Wolf  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7th Place East, Suite 350  
Saint Paul, MN 55101

RE: Commission Inquiry into Standby Service Tariffs  
Docket No. E999/CI-15-115

Dear Mr. Wolf:

We submit this letter as part of the Commercial Customer Cohort in support of *Comments* by the City of Minneapolis and Target Corporation regarding Xcel's proposed changes to the PV Demand Credit Rider.

The Commercial Customer Cohort is a group of Xcel general service electricity customers with an interest in customer-sited solar. The Cohort promotes the commercial customer's right to develop solar on their property and to be credited fairly. We also emphasize the business need for term length certainty under the contractual relationship with the utility.

We share the concern that Xcel's proposed methodology and resulting credit value of \$0.03396 per kWh from 1 – 7 PM do not reflect fair compensation to commercial solar customers for value contributed to the grid system. The proposed credit is a reduction of more than half compared to the existing \$0.07139 per kWh established under the Negotiated Agreement in March 2018.

We appreciate the Commission's attention on this important matter. Thank you for the opportunity to share our perspective as commercial customers with an interest in solar.

Respectfully submitted,

Jane Houska, Director of Finance, and  
Dan Miller, Director of Operations  
Farmington Area Public Schools  
Farmington, MN

Erik Nordley  
President  
Hi-Lo Manufacturing  
Stacy, MN

Peter Farstad  
Chief Administrative Officer  
LifeSource Organ Eye and Tissue Donation  
Minneapolis, MN

Jerry Reiter,  
President  
Midwest Diesel Service, Inc.  
Blaine, MN

Andy Lesch  
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Minneapolis Public Schools  
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