

**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

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Nancy Lange	Commissioner
Daniel Lipschultz	Commissioner
Matt Schuerger	Commissioner
John Tuma	Commissioner

**In the Matter of a Commission
Inquiry into Standby Service
Tariffs**

August 19, 2016

**MINNESOTA SOLAR ENERGY
INDUSTRIES ASSOCIATION’S
COMMENTS ON VARIOUS
INVESTOR OWNED
UTILITIES’ FILED STANDBY
TARIFFS**

Docket No. E999/CI-15-115

**COMMENTS OF THE MINNESOTA
SOLAR ENERGY INDUSTRIES ASSOCIATION**

I. INTRODUCTION

The Minnesota Solar Energy Industries Association (MnSEIA) is a 501(c)6 non-profit entity that represents 96 different solar related business. Our membership includes installers, developers, manufacturers, utilities, trade-unions, electricians, distributors, environmental nonprofits, state colleges, and other companies and individuals that benefit from the growth of Minnesota’s solar industry.

We comment today for two reasons. First we wish to request that the Minnesota Public Utilities Commission (the “Commission” or the “PUC”) require all rate regulated utilities to file their own solar capacity credits for review and application. Currently, Xcel Energy (“Xcel”) is the only utility that is paying customers for their solar-created capacity during peak periods. When a new solar array goes online in any of the other service territories the other utilities are getting capacity for free. It is unjust enrichment.

We also suggest using the Department of Commerce’s (the “Department” or “DOC”) methodology for calculating solar capacity credits is the appropriate pathway to ensuring Qualifying Facilities (QF) receive just compensation for their sold capacity. No other proposed methodology does this as well, if at all.

II. BACKGROUND

On November 14, 2011, Xcel filed a stipulated settlement agreement with several parties regarding its rate case. Within the agreement, Xcel agreed to study the load profiles of larger scale solar facilities.¹

On December 12, 2012, the Department proffered an approach to calculating a capacity credit that results in a figure close to the \$5.15 estimated credit amount.² This was after some parties, like the Department's original position and the Solar Rate Reform group felt the capacity credit's value should be \$8.35, while Xcel contended it should be \$2.00.³

On May 12, 2012, the Commission adopted Xcel's settlement agreement and directed Xcel to file the results with the Department.⁴

On August 24, 2012, Xcel filed its load profile study for parties to review.⁵

On January 8, 2013, the Department and several groups filed comments stating that Xcel's study did not accurately reflect the solar capacity values during peak periods.⁶

On April 25, 2013, the issue came before the Commission. An interim rate was set for \$5.15 per kW per month.⁷

¹ See OTHER – STIPULATION AND SETTLEMENT AGREEMENT, XCEL ENERGY, Docket No. E002/GR-10-971, Doc. ID 201111-68338-01 (Nov. 14, 2011).

² See COMMENTS – DEPARTMENT OF COMMERCE, Docket No. E002/GR-10-971, Doc. ID 201212-81299-01 at 7-9.

³ See REPLY COMMENTS – DEPARTMENT OF COMMERCE, Docket No. E002/GR-10-971, Doc. ID 20131-82947-01 at 5 (Jan 18, 2013).

⁴ See ORDER – FINDING OF FACTS, CONCLUSIONS AND ORDER, MINNESOTA PUBLIC UTILITIES COMMISSION, Docket No. E002/GR-10-971, Doc. ID 20125-74691-01 at 35 (May 12, 2014).

⁵ See COMPLIANCE FILING – SOLAR LOAD PROFILE STUDY, XCEL ENERGY, Docket No. E002/GR-10-971, Doc. ID 20128-78123-02 (Aug. 24, 2012).

⁶ See REPLY COMMENTS, DEPARTMENT OF COMMERCE, Docket No. E002/GR-10-971, Doc. ID 20131-82947-01 (Jan 18, 2013).

⁷ See ORDER – ORDER SETTING INTERIM RATE AND ESTABLISHING NEW

On May 19, 2014, the Commission decided to retain the interim rate and requested that Xcel file revised tariffs bi-annually, and a generic proceeding on standby services was started.⁸

On February 12, 2015, the Commission issued a Notice for Comment on a Standby Service Tariff Proceeding.⁹

On November 19, 2015, after several months of stakeholder input, the Commission ordered that the rate regulated utilities file revised standby tariffs by May 19, 2016 for review.¹⁰

III. COMMENTS

i. THE COMMISSION SHOULD APPLY A CAPACITY CREDIT TO EACH OF THE RATE REGULATED UTILITIES.

A well designed Capacity Credit is not an incentive, it is not an “adder,” but is just compensation to a QF for the capacity it provides to the grid, especially during peak periods. To our knowledge, only Xcel has been compensating QFs in a reasonable manner for their capacity values.

In no way do we mean to suggest any wrong-doing or misconduct on the part of the other rate regulated utilities. Instead, we think Xcel’s Capacity Credit program has functioned like a successful pilot program, and it is now time to expand their model to all of the other rate regulated utilities.

SOLAR DOCKET, Docket No. E002/GR-10-971, Doc. ID 20135-86928-03 at 3-4 (May 13, 2013).

⁸ See ORDER - ORDER SETTING FINAL SOLAR PHOTOVOLTAIC STANDBY SERVICE CAPACITY CREDIT, REQUIRING UPDATES, AND REQUIRING COMPLIANCE FILING, MINNESOTA PUBLIC UTILITIES COMMISSION, Docket No. E002/GR-13-315, Doc. ID 20145-99678-01 (May 19, 2014).

⁹ NOTICE OF COMMENT PERIOD – ON SCOPE FOR GENERIC PROCEEDING ON STANDBY SERVICE TARIFFS, MINNESOTA PUBLIC UTILITIES COMMISSION, Docket No. E-999/CI-15-115, Doc ID 20152-107287-01 (Feb. 12, 2015).

¹⁰ See ORDER – ORDER REQUIRING TARIFF, MINNESOTA PUBLIC UTILITIES COMMISSION, Docket No. E-999/CI-15-115, Doc ID 201511-115811-01 (Nov. 19, 2015).

1. Capacity Is Still Valuable Even If There Is No Immediate Need For It.

One of the primary arguments that the non-Xcel rate regulated utilities have made for not providing a capacity credit is that they don't need any capacity. For instance, in their most recent Distributed Generation update, Ottertail Power retained its Capacity Credit at \$0.¹¹ Their rationale is as follows:

As stated in the September 2004 Order "A need [for capacity] exists if the utility shows a deficit at any year of the 5-year planning period." Otter Tail does not have a deficit in the 2015-2019 period of our recently filed IRP filing, therefore the value of the capacity payment is zero.¹²

What's intriguing about the basis for a \$0 capacity value is that Xcel still compensates customers for capacity, even though they have no need for capacity until 2025. Specifically, Xcel states "[a]lso, in the Company's most recent update in the 2016-2030 Upper Midwest Integrated Resource Plan proceeding (Docket No. E002/RP-15-21), capacity is not forecasted to be needed until 2025, so system customers may not see the full benefit of the resources until that time."¹³ Part of why it makes sense to still compensate QF's for their capacity even in times of no projected need is that it still helps in times of unforeseen outages, surprising increases of demand, and reduces peak demand in lieu of firing up a peaking natural gas plant.

Despite all of this, Ottertail is not compensating solar customers for their capacity. Even if Ottertail is forecasting a reduction in general energy demand, solar still helps them with their load profile during peak events. Solar helps Ottertail meet its needs during periods of intensive customer use, and avoid entering the spot-market for on-peak energy.

Fortunately, the time is ripe to adjust the compensation numbers. The Order Ottertail is referencing is the Order accompanying the 2004 Interconnection Standards (Docket 01-1023), which are currently under review in Docket 16-521.¹⁴ It is an appropriate time to implement a new, statewide rate regulated utilities approach to providing value for capacity.

¹¹ COMPLIANCE FILING – ANNUAL DISTRIBUTED GENERATION UPDATE, OTTER TAIL POWER COMPANY, Docket No. 16-10, Doc Id 20161-117798-01 at 3 (Jan. 29, 2016).

¹² *Id.*

¹³ COMPLIANCE FILING – XCEL ENERGY PETITION PUBLIC, XCEL ENERGY, Docket No. E999/CI-15-115, Doc. ID 20165-121503-01 at 10 (May 19, 2016).

¹⁴ See COMPLIANCE FILING – ANNUAL DISTRIBUTED GENERATION UPDATE, OTTER TAIL POWER COMPANY, Docket No. 16-10, Doc ID 20161-117798-01 at 3 (Jan. 29, 2016).

2. Intermittent Capacity Is Still Valuable Even If Firm Power Is Ideal.

Another argument the utilities seem to suggest for not providing a capacity value is that solar only provides intermittent capacity. For example, Minnesota Power does provide some capacity values for “firm-power” in their rate book.¹⁵ Minn. Rule 7835.0100, subp. 9 defines “firm power” as “energy delivered by the qualifying facility to the utility with at least a 65 percent on-peak capacity factor in the month. The capacity factor is based upon the qualifying facility's maximum on-peak metered capacity delivered to the utility during the month.”¹⁶

Gas, coal and nuclear all create energy consistently and at all times of the day, and they nearly always produce firm-power. Solar and wind are more intermittent, because they rely on weather patterns, and so they are considered “non-dispatchable” energy sources. But that should not render the capacity value that is provided to the utility valueless even if it is less than 65%. Firm power capacity may be ideal, but intermittent capacity is still useful, important and of value.

The reason that Xcel has been engaged in the Effective Load Carrying Capacity dialogue has been, because there isn't much information yet on how to evaluate the capacity non-firm energy sources provide. But the value is there and should be compensated for. It seems the methodologies of using valuable capacity are outdated among the other rate regulated utilities.

Minnesota Power says it best in their comment section on their 2016 Interconnection Report, in which they say “Minnesota Power is engaged in ongoing efforts to evaluate the costs and barriers to encouraging customer-owned generation. This includes a robust and important dialogue about infrastructure impacts, benefits, and costs, as they exist today and as they evolve.”¹⁷ This capacity credit dialogue is evolving, and we can see it in this docket and throughout the several dockets that this docket has sprouted from. Compensation for non-firm capacity isn't as easy as for firm power, but it is important and valuable nonetheless.

¹⁵ See e.g. MINNESOTA POWER ELECTRIC RATE BOOK at 60.1 (stating “Energy and Firm Power Capacity Credit 3.24¢ per kWh delivered to Company during period”).

¹⁶ Minn. Rule 7835.0100, subp. 9.

¹⁷ REPORT – 2015 DISTRIBUTED GENERATION INTERCONNECTION REPORT, MINNESOTA POWER, Docket No. E999/PR-16-10, Doc ID 20162-118784-01 at Additional Comments and Notes (Feb. 29, 2015).

ii. THE DEPARTMENT OF COMMERCE'S METHODOLOGY SHOULD BE HOW RATE REGULATED UTILITIES CALCULATE THEIR CAPACITY CREDITS, AND THE CREDIT VALUE SHOULD BE ADJUSTED ANNUALLY OR WHEN THE METHODOLOGY'S VARIABLES CHANGE.

1. The Department's Methodology is sound, easy to apply and should be the basis for determining a permanent solar capacity credit.

The original \$5.15/kW-mo. value was determined through a negotiated settlement after several rounds of stakeholder meetings. Xcel came in with a \$2.00 credit and the Solar Rate Reform Group came in with \$8.35, and the agreement was an average of the two.¹⁸ During the course of 2013 and 2014 the Solar Rate Reform Group and the DOC further developed a reasonable solar capacity credit methodology, which, at the time, resulted in a solar capacity credit of approximately \$5.15/kW-mo.

The methodology they used was as follows:

Combining these three components (avoided capacity plus avoided transmission, then adding avoided losses) yields an avoided capacity value of \$10.63/kW-month $[(\$7.25 + 2.81) * 1.057 = \$10.63]$.

[...]

Based on a MISO accredited capacity calculation of 48.6 percent and avoided costs of \$10.63/kW-month, the Department calculates a solar capacity credit of \$5.17. The value is close to the interim value of \$5.15 per kW. The Department recommends that the Commission approve the continuation of a solar capacity credit of \$5.15 per kW.¹⁹

The DOC wrote this in 2014, and it is a useful way to determine Capacity Credits. Because the above information uses MISO numbers, this should apply to - and be useful for - all Minnesota utilities.

The biggest benefit to establishing a methodology that calculates a fair market value for capacity is that it justly compensates the QF, while ensuring that ratepayers are not providing any subsidies. Setting a constant and permanent rate will likely result in either QFs getting too little for their capacity, or that ratepayers are paying too much.

¹⁸ REPLY COMMENTS – DEPARTMENT OF COMMERCE, Docket No. E002/GR-10-971, Doc. ID 20131-82947-01 at 5 (Jan 18, 2013).

¹⁹ *See Id.*

Another reason to support a methodology approach is that as time goes on the variables can be adjusted, which would ensure that the QF retains fair market value for its capacity and that ratepayers are paying only for the benefits they receive. If the goal is to compensate QFs for the value of their capacity, it makes sense to have a process to derive an actual value for the capacity procured in that year.

Having a methodology also creates an easily adoptable pathway for other rate regulated utilities to develop their own capacity credits. Instead, of going through a long, difficult process, adopting the DOC methodology is an easy solution for all rate regulated utilities. The DOC methodology could work as a cookie cutter approach for the other utilities to adopt.

The Department's methodology should be applied to all the rate-regulated utilities as the permanent solution for determining capacity credit values.

2. No Other Reasonable Options Have Been Proffered For Appropriately Calculating Solar Capacity Credits.

Contrary to the DOC approach, Xcel is not using a methodology to calculate its \$5.15/kW-mo Capacity Credit. This is an arbitrary and capricious way to compensate QFs for their capacity over time. We take issue with Xcel's approach for several reasons outlined below:

A. Xcel's Proposal Does Not Allow For A Capacity Credit Value To Change Along With Its Underlying Components.

The actual value of the Capacity Credit's components has changed overtime - and it will continue to change - but Xcel's current and proposed compensation to QFs for their capacity credit does not.

From a deductive approach it seems arbitrary to assume that capacity costs will remain constant indefinitely, especially when probing into the history of the \$5.15 credit. This capacity credit value was derived by taking two different methodologies, each predicated upon variables that change overtime, and then the values were averaged. Presumably the two methodologies that the \$5.15 credit was based on have also changed overtime, but the current capacity value is treated as a constant, only because it was the original byproduct of a settlement arrangement.

The fact that two scientific methodologies were averaged should not diminish the underlying assumptions of the methodologies themselves. This is especially true when DOC was able to reverse engineer a methodology of its own that can act as an intermediary model.

The available numbers also suggest that the credit's value should be increased. While Xcel's exact capacity numbers are not public, MISO publishes data each June that compare transmission costs on the various networks. This information can provide a way for us to empirically evaluate increased capacity costs and to estimate their relative increases. In 2013 the published Xcel

capacity costs were \$3.80/kW-mo.²⁰ In 2016 the costs were \$4.55/kW-mo.²¹ This equates to a 20% increase. Similarly, Xcel's demand rates have gone up from \$12.14 for summer 2013 to \$14.07 for summer 2016 – an increase of about 16.5%.²² Winter demand rates show a 19% increase over the same time period. This information suggests that any capacity sold to Xcel today is worth more than capacity sold in 2013, but the credit amount remains the same. If Xcel's program is adopted as is, the credit will remain the same no matter how much demand rates go up or published capacity costs go up and this will devalue the provided capacity over time.

B. Xcel's Proposal Does Not Include Accounting For Changes In Inflation.

Even if we accept that we're going to use a \$5.15/kW-mo credit for capacity, regardless of whether the variables change, keeping the credit constant will still reduce its value over time. This will eventually render the credit unjust compensation for capacity procured, because the credit does not track with inflation or energy rates. Some form of annual escalator seems necessary to ensure that the price of solar's capacity remains the same as the utility's need for capacity.

C. Converting The Credit To kWh Instead Of kW Inexplicably Removes The Credit's Tie To Demand Pricing.

Many of our installers and their customers have expressed that the current capacity credit payment schedule is confusing, but this is mostly to do with "grace-period" payment calculations. It is not because the credit is in the form of kW instead of kWh. Historically, capacity credit-like instruments were developed to tie in with Commercial and Industrial (C&I) demand charges, which are billed in kW form. Retaining a kW payment methodology is actually easier for a C&I customer to understand than converting it to a kWh payment.

By removing the capacity credit from the grace-period and then shifting from kW to kWh, Xcel's capacity credit goes from 1) confusing but with additional financing to 2) clear with no grace period financing to 3) back to confusing, and no grace period financing. The only thing it accomplishes is it separates the capacity credit from the additional grace-period financing, and as mentioned below, allows Xcel an opportunity to further devalue the \$5.15 capacity credit.

²⁰ See Historical Rate Information, MISO Transmission Pricing by Sink 06/01/2013. Schedule 9, Zone 16. (Available at: http://www.oasis.oati.com/woa/docs/MISO/MISODocs/Historical_Rate.html).

²¹ See "Year 2016 MISO Rates for OATT Schedule 9", Zone 16, NSP Companies.

²² See COMPLIANCE FILING – XCEL ENERGY PETITION PUBLIC, XCEL ENERGY, Docket No. E999/CI-15-115, Doc. ID 20165-121503-01 at 10 (May 19, 2016).

D. Xcel's Program Incorrectly Converts The Credit From kW To kWh, Because Of The Grace-Period's Removal.

The purpose of providing a new solar rider is to remove the Capacity Credit from the standby tariff and stand it on its own. The primary reason is to preclude solar from receiving grace-period benefits. The issue with removing the credit from standby is, however, that Xcel's calculations retain the 10-month period they pay capacity, instead of bumping it back up to 12 months as it should.

Xcel still multiplies the value by 10 months even though the 2 months of grace-period financing are gone.²³ The grace-period currently compensates QFs at a similar rate as the Capacity Credit. So having 10-months of a \$5.15/kW-mo Capacity Credit and two months of similar grace-period financing is sufficient to meet QF needs. It is like getting compensated for all twelve months even though technically the credit has only been applied to 10 months and the grace-period provides two months of value. The distinction has historically been wholly semantical, but by retaining the 10-month multiplier Xcel is creating a real-world difference in financing.

Xcel's reasoning for the 10-month application appears to be that the grace-period is two months, and so QFs are only getting credit for their capacity for 10 months of the year currently. As such Xcel apparently reasons that it makes sense to only provide credit for only 10 months to stay consistent. But this results in a lower rate than if it was appropriately multiplied by 12 months.

The solar rider removes the capacity credit from the standby tariff, which in turn precludes the QF from receiving any compensation from the grace-period. So, since Xcel will be purchasing capacity from the QF 12 months of the year, the credit should be multiplied across 12 months, instead of the 10-month period. Applying Xcel's calculation as it is currently set is like removing the grace period benefit twice.

E. Xcel's Program Includes A Seasonal Capacity Credit Cap, Which Is Only A Result Of An Unnecessary Move Towards kWh Billing.

Xcel has decided that it wants to move to kWh billing for better customer understanding and easier billing. In order to make this transition seamless, Xcel states the following:

A disadvantage associated with the proposed energy basis for the capacity credit is that it provides no natural limit to the capacity credit per kW of contribution to system peak capacity requirements. Without a limit, the energy based capacity credit could markedly exceed the value of the capacity contribution. For example, Solar PV efficiency improvements could increase the qualifying kWh solar generation applied to the credit without a corresponding kW contribution. *To help*

²³ *Id.* at 11.

*limit this risk, the proposed Solar PV capacity credit includes a seasonal credit kWh limit.*²⁴

In short, Xcel's self-inflicted transition from kW to kWh has a new "risk," and then their solution to limit this new risk is to gouge the capacity credit's value by adding seasonal credit limits.

This new "risk" begs the question: why are we transitioning to kWh to begin with? Neither solar installers nor their QF customer's need to have this kW to kWh conversion. So this new seasonal cap is only a byproduct of Xcel's desire to transition to a different billing mechanism. Instead of increasing risks, and then patching them over with credit reductions, the better solution is to not transition away from kW at all and to avoid all elements of seasonality or time of use.

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For all the above reasons it is less arbitrary to adopt a methodology over a specific credit value, and the DOC's approach seems like a reasonable manner for doing so.

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²⁴ See COMPLIANCE FILING – XCEL ENERGY PETITION PUBLIC, XCEL ENERGY, Docket No. E999/CI-15-115, Doc. ID 20165-121503-01 at 10 (May 19, 2016) [emphasis added].