

November 16, 2018

Via Electronic Filing

Daniel P. Wolf

Executive Secretary

Minnesota Public Utilities Commission 121 7th Place E., Suite 350

St. Paul, MN 55101

Re: Comments on Xcel Energy's 2019 VOS calculation / Docket No. M-13-867

Dear Mr. Wolf:

The Institute for Local Self-Reliance (along with co-signers Community Power and Cooperative Energy Futures) respectfully submits the following comments on Xcel Energy's 2019 Value of Solar Calculation. Our comments highlight several areas of concern in the calculation, from the PV production values to locational value to fuel price estimates.

PV Production

In its letter approving the calculation, the Department of Commerce noted that Xcel replaced the longstanding estimate of solar project with the actual generation from 39 facilities for a single calendar year. This change does not follow the defined VOS methodology for calculating solar fleet production listed on pages 13-16 of the approved Value of Solar Methodology developed by the Minnesota Department of Commerce Division of Energy Resources on April 1, 2014.¹ This methodology identifies three allowable approaches for modelling PV production:

¹ <https://mn.gov/commerce/policy-data-reports/energy-data-reports/?id=17-81656>

1. Utility Fleet - Metered Production. Fleet production data can be created by combining actual metered production data for **every PV system** in the utility service territory ... (emphasis added)
2. Utility Fleet, Simulated Production. If metered data is not available, the aggregate output of **all distributed PV systems** in the utility service territory can be modeled using PV system technical specifications and hourly irradiance and temperature data ... To make use of this option, detailed system specifications for **every PV system** in the utility's service territory must be obtained ... (emphasis added)
3. Expected Fleet, Simulated Production. **If neither metered production data nor detailed PV system specifications are available**, a diverse set of PV resources can be estimated by simulating groups of systems at major load centers in the utility's service territory with some assumed fleet configuration. (emphasis added)

Xcel's proposed process of evaluating only 39 existing solar gardens complies with none of these methods.

Our concern is that community solar projects are not the only potential application for the value of solar, nor are community solar projects using uniform technology, e.g. tracking versus fixed-tilt panels. It was unclear from Xcel's explanation of the actual fleet data if there was a distinction made by technology used. If actual data is to be used, then the VOS calculation should validate whether this change has an adverse impact on projects with fixed-tilt panels.

Additionally, we note that in all previous VOS calculations, Solar PV production was evaluated based on lifetime expected capacity factor. This year, for the first time, the methodology for calculating solar production was both changed to a specific subset of projects, and to a timeframe based on a single year of data. The methodology used for

calculating solar production should remain consistent with the methodology used in previous years and should comply with the approved Value of Solar Methodology.

Avoided Distribution Capacity

Although the Department is technically correct that the result of applying the methodology as read results in a zero value for this component of the value of solar, we believe such a perverse result requires revisiting how this component is calculated. The value of avoided capacity isn't just in avoiding an increase in aggregate system demand, but also in reducing that demand such that capacity replacements could be smaller than without them. In other words, grid-connected distributed solar continues to have a demand reduction benefit, but the methodology no longer values it. This violates the statutory intent to accurately price the value of solar.

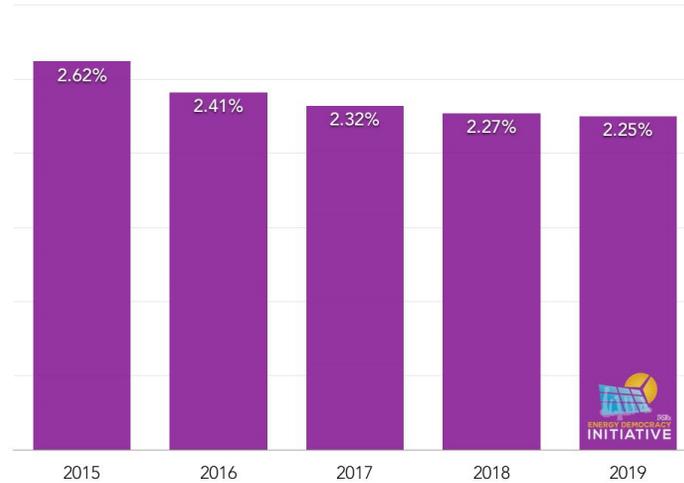
Locational Value

Revisiting the locational value components made sense after initial results that defied common sense (such as having the locational value of each planning area be less than the systemwide average). However, locational value calculations may help to avoid perverse results of using systemwide figures (see above), and if progress has been made in stakeholder review of locational value, it should be presented.

Avoided Fuel Cost Escalation Factor

In every year since the 2015 filing, the assumed rate of increase in the years beyond contract availability have been falling. It appears that the problem may lie in the VOS Methodology (page 7) that indicates the use of the Consumer Price Index for the calculation.

MINN. VOS FUEL PRICE ESCALATION



We are concerned with this method because the history of natural gas prices suggests it may be overly simplistic. Within the last decade, natural gas prices were almost 6 times today's prices, and fluctuations have often been sudden and severe. (Chart below from MacroTrends).²



There are at least two pieces of additional evidence to suggest that smoothly rising curves are a poor projection of natural gas price risk. For one, numerous electric utilities

² <https://www.macrotrends.net/2478/natural-gas-prices-historical-chart>

are in a virtual stampede to build new natural gas capacity, with nearly 20 gigawatts planned for 2018 alone.³ This surging demand is likely to impact prices, and certainly undermines the idea of a declining escalator. Additionally, some analysts have examined the financial data of the fracking industry and found worrying signs of a financial bubble.⁴

Thank you for the opportunity to comment; we appreciate that there has not been any legislative preemption of this regulatory process.

Sincerely,

/s/

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³ <https://www.utilitydive.com/news/eia-gas-to-outpace-renewables-for-2018-us-gen-additions/522980/>

⁴ <https://www.nytimes.com/2018/09/01/opinion/the-next-financial-crisis-lurks-underground.html>