



Minnesota Rural Electric Association

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February 13, 2014

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: Distributed Solar Value Methodology under Minn. Stat. §216B.164, subds.10 (e) and (f)
Docket No. E999/M-14-65

Dear Dr. Haar:

Enclosed please find comments from the Minnesota Rural Electric Association on the possible amendments to rules governing Cogeneration and Small Power Production. The document has been filed with the E-Docket system.

Sincerely,

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Joel Johnson

Director of Government Affairs
Minnesota Rural Electric Association

RE: Comments on the Methodology Components of the Proposed Minnesota Value of Solar Rate -

The Minnesota Rural Electric Association (MREA) submits these comments in response to the Minnesota Department of Commerce – Division of Energy Resources (DOC-DER) submission of a proposed Value of Solar (VOS) methodology.

The Minnesota Rural Electric Association represents the interests of the state's 44 electric distribution cooperatives and the six generation and transmission cooperatives that supply them with power. Our member cooperatives are not-for-profit electric utility businesses that are locally owned and governed by the member-consumers they serve.

General Comments

Although electric cooperatives were specifically and intentionally exempted from the legislation which created the VOS process (HF 729 - Chapter 85 of 2013 Session Laws), MREA and our member cooperatives have participated in the DOC-DER stakeholder process because of our concerns over Minnesota's current net metering laws. We have expressed a willingness to explore the idea of a VOS tariff that allows a utility to recover the fixed and variable cost of its existing plant, and pays the owner of the distributed generation a fair price for the energy they produce. We believe a VOS could accomplish the above mentioned goals if the design, in fact, reflects the true value of distributed solar energy to a utility and not a tariff designed primarily to incent the installation of distributed solar generation around the state.

We appreciate the work DOC-DER has done in putting together components for the VOS methodology and their inclusion of stakeholders in the process. It is obvious DOC-DER has worked hard to find ways to measure actual value in many of these areas. We also appreciate the DER's repeated reminders to stakeholders that the intent of VOS is not to incent the installment of solar generation in Minnesota, but to arrive at a price for distributed solar that reflects the actual value of energy produced to the utility and all of its customers/members.

Areas of Agreement

We appreciate that Integration Cost remains in the VOS Components table as a placeholder. As PV system penetration increases on distribution feeders, the need to monitor and regulate distribution system voltage and frequency will also increase. To the extent that advanced inverter functionality is unable to fully address these impacts, the VOS rate should be adjusted to reflect PV system integration costs.

We also appreciate that Credit for Local Manufacturing/Assembly, Market Price Reduction and Disaster Recovery were not included in the VOS Components table. The statutory language specifies that the VOS rate must reflect value to utilities. None of these proposed value components do. As the DER mentioned specifically in its introductory comments, the VOS is not intended to be an incentive tariff, but a reflection of the actual value of the energy to the utility.

In previous comments, we expressed concern over that the differences between distribution systems needed to be considered in the methodology and were glad that the proposal allows for utility-specific multipliers relating to capacity. Rural coops by nature have larger infrastructure cost per customer due to the low density of members. Hence, we feel it is important that the VOS should reflect those differences.

Also, investments in distribution infrastructure are not necessarily always capacity related. Examples include:

- Addition of smart grid devices such as SCADA and relay upgrades.
- Changing from high side fuses to circuit breakers.
- Replacement due to obsolescence or failure (such as replacement of failed transformer with a new transformer of the same capacity).
- In rural areas, land (FERC account 360) is not capacity related as the distance tends to dictate the need for substations.
- Many electric co-ops have rural feeders which are voltage limited. As a result, solar installations added to these feeders would not provide any feeder capacity savings. In fact, due to intermittent output of solar, installations will likely increase costs due to necessary voltage regulation equipment.

We believe the locational specific option will be helpful. Many cooperative have certain loads that tend to skew the system wide results. Examples include substations where load and investment are driven by irrigation or crop drying. The addition of solar generation in these areas would tend to have no impact on reducing these types of loads and associated investment necessary to serve them.

Overall Concerns

Although MREA appreciates a number of the changes made since the December 10 comment period, a number of specific concerns about the proposal remain.

First, we continue to believe the VOS credit schedule should be changed from a 25-year term, to a 20-year term. The VOS statutory language specifies that participating utilities must enter

into a 20-year contract with the PV system owner. The credit schedule should match the known contract term, not the assumed life of a PV resource. Moving to a 20-year VOS credit schedule reduces uncertainties inherent in the cost and benefit assumptions made for PV resources in years 21-25.

Voltage Control should also be removed from the VOS Components table and should not be treated as a potential value that would increase the VOS rate. Advances to PV system inverters and the ensuing revisions to the IEEE and UL standards will ultimately address power quality, safety and reliability issues resulting from PV system integration. However, we don't think system owners should be financially rewarded for future required inverter functionality designed to correct power quality issues potentially introduced by PV systems.

We remain puzzled at the choice to go with NYMEX Natural Gas futures to determine the Avoided Fuel Cost methodology. As we have stated previously, we believe the methodology should consider a locational marginal price (LMP) approach to determine the energy value of PV, as opposed to NYMEX NG futures and assumed escalation values. The MISO wholesale energy market is a transparent source for the value of electricity on an hourly basis that can be easily correlated to PV fleet production. PV energy value could be calculated as a weighted average solar value by simply multiplying the hourly PV fleet production by the hourly MISO LMP. As the MISO LMP value changes from year to year to reflect market conditions – which are largely determined by fuel costs - the VOS rate would then accurately track market conditions. This approach provides maximum benefit to PV's production, coincident to times of high electricity demand, and also differentiates solar PV from other forms of distributed generation.

We are also concerned that 12-year NYMEX NG futures are an imperfect proxy for fuel costs, which introduce an element of speculation in energy value calculations. If NYMEX NG futures remain in the Avoided Fuel Cost methodology, changes should be made to incorporate a 20-year evaluation period, not a 25-year period. Reducing the evaluation period to 20-years aligns it with the VOS contract term and reduces the assumption that fuel costs would escalate at an assumed, arbitrary value for an additional five years 20 years from the start of the contract.

In addition, the Guaranteed NG fuel price escalation rate should be removed as component of Avoided Fuel Cost methodology. The 4.75% escalation factor was calculated based on *a single* price quote, received by Austin Energy on 9/23/2013. One price data point based on conditions which were a "snapshot in time" should not determine a guaranteed fuel escalation rate above and beyond a general escalation rate.

We agree that Avoided Generation and Transmission Capacity Costs should be included in the VOS rate calculation methodology, but only for the years in which generation or transmission is needed. Again, statutory language specifies that the VOS rate must reflect value to utilities. If the utility has no new generation or transmission capacity additions planned in the current VOS rate calculation year, the VOS rate should not include these values until the year of the planned capacity additions.

Unfortunately, there is no mechanism in the proposal for delaying generation capacity savings if a utility does not need generation. In regard to transmission, the VOS Transmission Savings Credit is applied in all years based on a utility's MISO transmission payments. This unnecessarily increases the transmission credit in the VOS example.

It would be helpful if the DOC-DER looked to MISO more in this regard and include MISO rule changes over time. That would better reflect actual value in the market and at different times of the year.

When determining the Avoided Environmental Cost, DOC-DER's proposed methodology continues to use the federal Social Cost of Carbon (SCC), even though the SCC has not been adequately vetted in the science and business communities. In fact, the U.S. Government has recently issued a Federal Register notice soliciting review and comments on the SCC process and results. We do not believe it is appropriate to rely on the SCC in this analysis until the review process is complete. Instead, the Minnesota Public Utilities Commission (MN PUC) should use its own established costs for CO2.

We also remain puzzled over why the Avoided Environmental Cost calculation uses the mid-point of the Urban Externality Values published by the MN PUC for all pollutants except CO2. There is no explanation why Urban Values were chosen over the Metro Fringe or Rural Values, all of which are lower than the Urban Values. If a VOS were to be adopted by MN's electric cooperatives, the Urban Values in the proposed methodology would overstate the benefit of solar to our members, resulting in a higher VOS.

Conclusion

As mentioned above, Minnesota's electric cooperatives appreciate the opportunity to participate in this process and the DOC-DER's willingness to address a number of our concerns with the initial proposal.

We can foresee a time when electric co-ops, at the direction of their local Boards, use what is produced here as a framework for compensating our members for energy produced by distributed solar. That, however, will require a VOS methodology that reflects the true value of

distributed solar on that particular system. We remain concerned that some of the choices in the current design were made with an eye toward increasing the bottom line VOS rate rather than accepted industry standards found in existing resource planning tools.

However, we do appreciate the efforts by DOC-DER- to be transparent about their assumptions, sources and methodologies and look forward to participating in this ongoing conversation.

Sincerely,

Joel Johnson
Director of Government Affairs
Minnesota Rural Electric Association