Oregon Solar Energy Industries Association

Oregon Public Utility Commission
201 High Street SE, Suite 100
Salem, OR 97301-3398

February 13, 2020

Dear Chair Decker, Commissioner Tawney and Commissioner Thompson,

Oregon Solar Energy Industries Association (OSEIA) respectfully submits these comments in regards to UM 1910, UM 1911 and UM 1912, the Resource Value of Solar (RVOS) and its use for future proceedings.

OSEIA has serious concerns with staff's recommendation that the RVOS framework "seems like a good approach that should have general applicability" for evaluation of other resources. OSEIA participated in the RVOS dockets and has multiple concerns both with the methodology that the Commission adopted and in how the utilities have complied with that methodology, which resulted in RVOS values which are much lower than most other studies have found. The low values artificially deflate the value of solar in Oregon, and the use of RVOS in any proceeding could have a negative impact on solar adoption in the state and therefore Oregon's ability to meet its greenhouse gas reduction goals. Indeed, there is more work to do in Oregon to determine the most accurate methodology and associated calculations for evaluating the net benefits of solar (and other resources).

OSEIA has the following technical concerns with existing RVOS methodology and compliance with the methodology:

Generation Capacity. While it is not unreasonable to use hourly loss-of load probability (LOLP) values to shape generation capacity values into a 12x24 matrix, it appears that the IOUs use a set of LOLPs from various sources and of different vintages. The choice of LOLPs should reflect a consistent planning horizon and the most recent values.

To the extent that clean energy resources, such as renewables combined with battery storage, will be used as the future incremental source of capacity to meet peak demand, storage (and not the traditional gas-fired combustion turbine [CT]) should be used to estimate the marginal generation capacity costs. California uses this assumption and Oregon should as well.

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We believe there are mathematical flaws in the values and recommend that staff evaluate the filed 12x24 tables to ensure they are correct. For example, PGE's July 18, 2019 compliance filing indicates a $7.19 MWh solar value for generation capacity, yet the simple average of the 12x24 matrix PGE provided for the generation capacity values is equal to $7.19 per MWh, whereas applying a solar profile to the matrix would result in a lower value. Thus, PGE may be double-discounting the capacity value of solar in its 12x24 table. PGE may be using its assumption of a 15% solar capacity contribution in developing the 12x24 table, instead of using its full avoided capacity cost to develop the 12x24 matrix, to which a solar profile then is applied.

The $7.19 per MWh amount is a 25-year real levelized value starting in 2018. It assigns zero generation capacity value in 2018-2020, and then positive values starting in 2021, based on the Oregon PUC's decision that 2021 will be the capacity deficiency date. We note that, for the 2020 RVOS, the levelized cost calculations should start in 2020, not 2018.

Generation Capacity Value During Sufficiency Periods. Regions with ISOs that administer visible capacity markets have demonstrated that the value of capacity is not zero even in years with more-than-adequate amounts of capacity. Thus, the RVOS assumption that capacity has zero value in sufficiency years is problematic and is not in line with other states.

Use Marginal Line Losses. Avoided line loss calculations use average losses by period. OSEIA had recommended using the Regulatory Assistance Projects (RAP) estimate that marginal line losses are generally equal to about 150% of average line losses. The marginal line loss issue has to do with the fact that an increment of power flow on an already loaded transmission line results in a higher amount of losses than the average losses experienced by the power flow that is already there. This is similar to the calculus notion that if losses are proportionate to the square of the power flow, then the derivative – which is the rate of change in losses or the "marginal" loss rate – will be proportional to 2x the average loss amount. The OPUC decision addressed the importance of 12x24 blocks for line loss values in order to capture changes in loss values at different times, but did not justify why pricing of marginal QF deliveries should only consider average, rather than marginal, line losses that are avoided by the utility. Similar to the issues identified with developing other 12x24 values, calculations should be checked to ensure the solar profile is not being double counted, as we believe it currently is.

T&D Deferral Value. OSEIA strongly supports future enhancements that can provide locational price signals. A key value of distributed solar is its ability to defer both generation capacity and T&D capacity. T&D capacity contributions to peak (e.g. 36% for PGE) should not be overly conservative. Given that annual T&D value calculated by the utilities includes a solar contribution factor (based on the 8760 product of a solar profile and T&D allocation factors), again it is important not to simply allocate that price to a 12x24 matrix such that a baseload

generator would earn the target amount. For example, the simple average of PGE's distribution capacity deferral (12x24) matrix is $7.19 per MWh, which is the same as the proposed real-levelized $/MWh value. To remove "solar performance" from the 12x24 tables, the utilities should use a 100% contribution factor, so that performance during 12x24 periods can determine that performance.

It does not make sense to use hourly "net" system load data, as described by PGE, to differentiate prices by hour and month, if by net load the utility means system load less renewable generation. Generation from wind and solar projects must also use the transmission system to reach load, so the transmission system must serve the total system load, not the net load. As a result, the hourly allocation of avoided transmission costs should be based on system load, not net loads.

Hedge Value. The current RVOS uses a proxy value of 5%. The actual cost to ensure against periodic natural gas price spikes – by fixing the long-term cost of marginal gas supplies – is much higher. It is important to recognize that the market volatility and disruptions against which solar hedges do not occur often, but, when they do occur, the impacts on consumers who rely on those markets can be substantial. Prominent instances of such volatility over the last 20 years include the 2000-2001 western energy crisis, and periodic natural gas price spikes after hurricanes, forest fires and pipeline disruptions. Solar provides a significant benefit for energy consumers by reducing their exposure to this market volatility and its resultant costs.

Environmental compliance. The avoided environmental compliance costs for fossil generation can include more than just the avoided carbon costs adopted in the RVOS orders. There can also be costs for fossil plants to comply with air and water quality regulations governing criteria air pollutants and wastewater or cooling water discharges. Further, the RVOS orders allow each utility to use their own carbon cost assumptions, which results in inconsistent values. The carbon compliance regimes active today in the U.S. are statewide or regional.

In addition, it's worth noting that solar provides value beyond complying with existing laws. Oregon cannot reach its greenhouse gas reduction goals by complying with current laws alone. There are environmental benefits to solar that other states have incorporated into their value of solar but which Oregon's RVOS does not take into consideration.

OSEIA reiterates that we are not at a point where RVOS or the framework it uses should be treated as a foundational element for the valuation of any resource. Further, we question whether the Legislature ever intended it to be considered in any proceeding other than community solar. Of note, the Commissioners decided against using RVOS as the rate for community solar due, in

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part, to its inadequate value for meeting the legislative intent to incentivize participation.[1] While Staff has suggested the RVOS could be used to help determine the incremental subsidy in programs such as community solar[2], even there we would argue that the flaws in the methodology and associated calculations undermine the true value of the program and result in an inaccurate cost signal and therefore disservice to ratepayers.

Thank you for your consideration of these comments. We look forward to working with you on these important issues.

Sincerely,

Angela Crowley-Koch

Executive Director

[1] See Order 18-088 and Order 18-177

[2] See the February 6 Staff Reports for UM 1910, 1911, and 1912, as well as October 4, 2019 Staff Report in UM 1930

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