July 21, 2016

Public Utility Commission of Oregon
Attn: Filing Center
PUC.FilingCenter@state.or.us

Re: In the Matter of PUBLIC UTILITY COMMISSION OF OREGON, Investigation to Determine the Resource Value of Solar
Docket No. UM 1716

Dear Filing Center:

The Cross Responsive Response Testimony of Michael O’Brien on behalf of Renewable Northwest, the Oregon Solar Energy Industries Association, the NW Energy Coalition, and Northwest Sustainable Energy for Economic Development is enclosed for filing in the above-referenced docket.

Thank you for your assistance, and please do not hesitate to contact our office if you have any questions.

Sincerely,

/s/ Silvia Tanner
Silvia Tanner
Staff Counsel
Renewable Northwest
In the Matter of

PUBLIC UTILITY COMMISSION OF OREGON,

Investigation to Determine the Resource Value of Solar.

Cross Responsive Testimony of Michael O’Brien on behalf of Renewable Northwest, the Oregon Solar Energy Industries Association, the NW Energy Coalition, and Northwest Sustainable Energy for Economic Development.
Q. Please state your name, occupation and business address.

A. Michael O’Brien, Senior Policy Analyst at Renewable Northwest. My business address is 421 SW 6th Avenue, Suite 1125, Portland, OR 97204.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Renewable Northwest, the Oregon Solar Energy Industries Association, the NW Energy Coalition, Northwest Sustainable Energy for Economic Development (the “Joint Parties”).

Q. Mr. O’Brien, please describe your educational background and work experience.

A. I hold a Ph.D. in Physics from the University of Birmingham, in the United Kingdom, which included an MSc in the Physics and Technology of Nuclear Reactors. I also hold a BSc(Hons) in Physics from the University of Birmingham. After post-doctoral research with the United Kingdom Atomic Energy Authority, I completed an MPhil in Technology Policy at the University of Cambridge. Following Cambridge I worked for the UK Parliamentary Office of Science and Technology as Energy Advisor, and then for the House of Commons Energy and Climate Change Select Committee as Committee Specialist. I have been working at Renewable Northwest since I moved to the United States in June 2012.
Q.  **What is the purpose of your testimony?**
A.  This testimony addresses several issues raised in response testimony filed on June 30, 2016, and provides additional information regarding the Joint Parties’ position on the resource value of solar (“RVOS”) methodology.

Q.  **Please summarize your testimony.**
A.  Phase 1 of UM 1716 is meant to result in an ‘Investigation to Determine the Resource Value of Solar’ and should not lead to defined policy outcomes, such as the replacement of net metering. Additionally, no restrictions should be placed upon the ultimate use of the RVOS methodology, either in terms of the policies it could inform or of the scale of solar technology it could provide information about.

Q.  **Did the Commission in UM 1716 prejudge future uses of the RVOS?**
A.  UM 1716 is an ‘Investigation to Determine the Resource Value of Solar’ and the Commission neither anticipated nor ruled out a particular application of the RVOS methodology. In Order 15-296, the Commission found that “there could be many potential policy and ratemaking uses for the resource value of solar,” and stated that it was “not prejudging potential future uses” (emphasis added). The Commission’s language comports with my recollection of the understanding developed amongst the majority of the stakeholders during the Scoping Workshops held in May and June 2015.

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**UM 1716 — Cross Response Testimony of Michael O’Brien**
As a result, I disagree with statements by Michael J. Youngblood, witness for Idaho Power, suggesting that the use of the RVOS methodology is limited to a particular solar program. For example, Mr. Youngblood states that “the definition and application of RVOS was intended by the Legislature to be limited to Solar PV Programs [also known as the volumetric incentive rate (“VIR”)] or the solar pilot program”.\(^2\) However, my understanding is that the Legislature has not limited the use of the RVOS methodology to any particular solar program. Additionally, Mr. Youngblood states that “as it pertains to Idaho Power … the methodology adopted in this docket should be limited to its Solar PV Program.”\(^3\) This statement is problematic for two reasons: 1) it prejudges future uses of the RVOS; and 2) the current RVOS methodology is incompatible with the solar volumetric incentive rate program, as I explain below.

The definition and application of the RVOS is not limited to the VIR. In its 2015 report titled “Capacity Allocation and Volumetric Incentives Rates for the May 1, 2015, Enrollment Window of the Solar Pilot Program”, Staff presented the utilities’ reports of total program unallocated capacity.\(^4\) Specifically, Table 2 shows that 0.000 MW out of the total 0.455 MW in VIR capacity allocated to Idaho Power remained unallocated as of March 16,

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\(^2\) Idaho Power/100 Youngblood/8 lines 8–10
\(^3\) Idaho Power/100 Youngblood/2 lines 18–20
In other words, all of Idaho Power’s VIR capacity has already been installed.

Table 2—Standing of Solar Pilot Program for 27.5 MW in Cumulative Nameplate Alternating Current (AC)

<table>
<thead>
<tr>
<th>Utility</th>
<th>Total Allocated for VIR MW AC</th>
<th>Total MW AC Installed</th>
<th>Total MW AC In Process</th>
<th>Total MW AC Left</th>
<th>Total MW AC Left To Be Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGE</td>
<td>16.333</td>
<td>13.159</td>
<td>1.942</td>
<td></td>
<td>1.229</td>
</tr>
<tr>
<td>PAC</td>
<td>10.812</td>
<td>8.833</td>
<td>0.74</td>
<td></td>
<td>1.239</td>
</tr>
<tr>
<td>IPC</td>
<td>0.455</td>
<td>0.417</td>
<td>0.032</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td><strong>27.600</strong></td>
<td><strong>22.409</strong></td>
<td><strong>2.624</strong></td>
<td></td>
<td><strong>2.568</strong></td>
</tr>
</tbody>
</table>

Staff’s Response to TASC Data Request 11 describes the limitations of the current RVOS methodology in the following manner:

“the RVOS methodology does not estimate the value provided by solar resources that are already installed. Rather, the methodology calculates the marginal value of new, behind-the-meter solar systems that are installed in 2016.” (Emphases included in original).

Hence, the current RVOS methodology cannot be restricted to the VIR as it pertains to Idaho Power because all of Idaho Power’s VIR capacity has been installed and the RVOS methodology in its current state does not estimate the value provided by solar resources that are already installed.

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5 Id.
7 Docket No. UM 1716, Staff Response to TASC DR 11
Q. Do any other witnesses prejudge future uses of the RVOS?

A. Yes. In the context of discussing the increased penetration of net metered resources in Oregon, Brian S. Dickman, witness for PacifiCorp, states that if the RVOS is improperly valued, “the end result is a potential shifting of a utility’s fixed and other costs between customers deploying rooftop solar and those that are choosing not to deploy rooftop solar.” This statement from PacifiCorp is based on assumptions as to how the RVOS will be applied.

Firstly, as noted above, it was not the Commission’s intention in opening UM 1716 to prejudge potential future uses of the RVOS. PacifiCorp’s statement on the implications of improperly valuing the RVOS implies a future use of the RVOS whereby net metering is replaced by a program in which participating solar customers’ compensation for their generation is in some way informed by the RVOS. Hence, the statement by PacifiCorp’s witness anticipates a possible outcome of UM 1716 and prejudices potential future uses of the RVOS.

Secondly, the only way for an improperly valued RVOS to result in a shifting of a utility’s fixed and other costs to non-solar customers is as a result of a rate case. As discussed in my Response Testimony, any time customers reduce their load for whatever reason, revenues for the utility decrease.

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8 PAC/1000 Dickman/2
9 Docket No. UM 1716, Order 15-296 (Sep. 28, 2015).
10 RNW, OSEIA, NWEC, NW SEED/100, O’Brien/9–10
While PacifiCorp is correct about the importance of calculating the RVOS properly, it is also important that any potential rate impacts as a result of applying the RVOS take into account the other reasons that customers reduce load and reduce utility revenues.

Q. Is the RVOS applicable to utility-scale solar generation?
A. The RVOS methodology could be applied to utility scale generation by adjusting the various elements in the methodology appropriately. Such an application would be necessary in the case of community solar programs.

Staff’s opening comments in UM 1716, dated July 15, 2015, included a list of the general understandings amongst all parties that included, “2. This docket considers all solar, not just residential systems.” However, witness Olson states that he does not recommend use of the RVOS methodology and model for calculating the value of utility-procured solar as the utilities already conduct “detailed integrated resource (IRP) process[es]”. However, as Portland General Electric’s witnesses points out in their testimony, under Senate Bill 1547, “an electric company shall credit an owner’s or subscriber’s bill for the amount of electricity generated by a community solar project for the owner or subscriber in a manner that

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12 Staff/200 Olson/36 lines 3-5
13 PG/100, Brown-Murtaugh/12
reflects the resource value of solar.”

Hence, PGE correctly advocates “for the ability to use the RVOS established in this docket to analyze utility-scale projects on a case by case basis—retaining the RVOS elements that are applicable to a specific utility project, and dropping elements that do not apply.”

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**Q.** Do you have any more concerns about the application of RVOS to community solar?

**A.** Yes, I have concerns regarding the service life of the solar equipment. Witness Dolezel states the economic lifetime of a solar photovoltaic system is assumed by the model to be 25 years. While this is a fair assumption in general, there needs to be flexibility to apply the RVOS to the shorter 20 year power purchase agreement that electrical companies will be required to enter into with a community solar project.

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**Q.** Does this conclude your testimony?

**A.** Yes, thank you.

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14 Senate Bill 1547 of 2015, Section 22(6)(a)
15 PGE/100 Brown-Murtaugh/12
16 Staff/100 Dolezel/5
17 Senate Bill 1547 of 2015, Section 22(2)(a)(D)