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Warm Springs Power &  
Water Enterprises  
Washington Environmental Council  
WashPIRG  
Western Resource Advocates

July 21, 2016

421 SW 6TH AVE, Suite 1125  
Portland, OR 97204  
www.RenewableNW.org  
503.223.4544



*Via Electronic Mail*

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

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 1716**

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.

1 **Q. Please state your name, occupation and business address.**

2 A. Michael O'Brien, Senior Policy Analyst at Renewable Northwest. My business  
3 address is 421 SW 6<sup>th</sup> Avenue, Suite 1125, Portland, OR 97204.

4

5 **Q. On whose behalf are you testifying?**

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

9

10 **Q. Mr. O'Brien, please describe your educational background and work  
11 experience.**

12 A. I hold a Ph.D. in Physics from the University of Birmingham, in the United  
13 Kingdom, which included an MSc in the Physics and Technology of Nuclear  
14 Reactors. I also hold a BSc(Hons) in Physics from the University of  
15 Birmingham. After post-doctoral research with the United Kingdom Atomic  
16 Energy Authority, I completed an MPhil in Technology Policy at the  
17 University of Cambridge. Following Cambridge I worked for the UK  
18 Parliamentary Office of Science and Technology as Energy Advisor, and then  
19 for the House of Commons Energy and Climate Change Select Committee as  
20 Committee Specialist. I have been working at Renewable Northwest since I  
21 moved to the United States in June 2012.

22

23

1 **Q. What is the purpose of your testimony?**

2 A. This testimony addresses several issues raised in response testimony filed on  
3 June 30, 2016, and provides additional information regarding the Joint  
4 Parties' position on the resource value of solar ("RVOS") methodology.

5

6 **Q. Please summarize your testimony.**

7 A. Phase 1 of UM 1716 is meant to result in an 'Investigation to Determine the  
8 Resource Value of Solar' and should not lead to defined policy outcomes, such  
9 as the replacement of net metering. Additionally, no restrictions should be  
10 placed upon the ultimate use of the RVOS methodology, either in terms of the  
11 policies it could inform or of the scale of solar technology it could provide  
12 information about.

13

14 **Q. Did the Commission in UM 1716 prejudge future uses of the RVOS?**

15 A. UM 1716 is an 'Investigation to Determine the Resource Value of Solar' and  
16 the Commission neither anticipated nor ruled out a particular application of  
17 the RVOS methodology. In Order 15-296, the Commission found that "there  
18 could be many potential policy and ratemaking uses for the resource value of  
19 solar," and stated that it was "*not prejudging potential future uses*" (emphasis  
20 added).<sup>1</sup> The Commission's language comports with my recollection of the  
21 understanding developed amongst the majority of the stakeholders during  
22 the Scoping Workshops held in May and June 2015.

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<sup>1</sup> Docket No. UM 1716, *Order 15-296*, page 2, (Sep. 28, 2015).

1 As a result, I disagree with statements by Michael J. Youngblood, witness for  
2 Idaho Power, suggesting that the use of the RVOS methodology is limited to a  
3 particular solar program. For example, Mr. Youngblood states that “the  
4 definition and application of RVOS was intended by the Legislature to be  
5 limited to Solar PV Programs [also known as the volumetric incentive rate  
6 (“VIR”) or the solar pilot program]”.<sup>2</sup> However, my understanding is that the  
7 Legislature has not limited the use of the RVOS methodology to any  
8 particular solar program. Additionally, Mr. Youngblood states that “as it  
9 pertains to Idaho Power ... the methodology adopted in this docket should be  
10 limited to its Solar PV Program.”<sup>3</sup> This statement is problematic for two  
11 reasons: 1) it prejudices future uses of the RVOS; and 2) the current RVOS  
12 methodology is incompatible with the solar volumetric incentive rate  
13 program, as I explain below.

14  
15 The definition and application of the RVOS is not limited to the VIR. In its  
16 2015 report titled “Capacity Allocation and Volumetric Incentives Rates for  
17 the May 1, 2015, Enrollment Window of the Solar Pilot Program”, Staff  
18 presented the utilities’ reports of total program unallocated capacity.<sup>4</sup>  
19 Specifically, Table 2 shows that 0.000 MW out of the total 0.455 MW in VIR  
20 capacity allocated to Idaho Power remained unallocated as of March 16,

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<sup>2</sup> Idaho Power/100 Youngblood/8 lines 8–10

<sup>3</sup> Idaho Power/100 Youngblood/2 lines 18-20

<sup>4</sup> Docket No. UM 1452, *Capacity Allocation and Volumetric Incentives Rates for the May 1, 2015, Enrollment Window of the Solar Pilot Program*, page 2, (March 24, 2015).

1 2015.<sup>5</sup> In other words, all of Idaho Power's VIR capacity has already been  
2 installed.

3 **Table 2— Standing of Solar Pilot Program for 27.5 MW in Cumulative**  
4 **Nameplate Alternating Current (AC)<sup>6</sup>**

Utility	Total Allocated for VIR MW AC	Total MW AC Installed	Total MW AC In Process	Total MW AC Left To Be Allocated
PGE	16.333	13.159	1.845	1.329
PAC	10.812	8.833	0.74	1.239
IPC	0.455	0.417	0.039	0.000
	<b>27.600</b>	<b>22.409</b>	<b>2.624</b>	<b>2.568</b>

5  
6 Staff's Response to TASC Data Request 11 describes the limitations of the  
7 current RVOS methodology in the following manner:

8 "the RVOS methodology does not estimate the value provided by solar  
9 resources *that are already installed*. Rather, the methodology  
10 calculates the *marginal* value of new, behind-the-meter solar systems  
11 that are installed in 2016."<sup>7</sup> (Emphases included in original).

12  
13 Hence, the current RVOS methodology cannot be restricted to the VIR as it  
14 pertains to Idaho Power because all of Idaho Power's VIR capacity has been  
15 installed and the RVOS methodology in its current state does not estimate the  
16 value provided by solar resources that are already installed.

17  
18  
19

<sup>5</sup> *Id.*

<sup>6</sup> Docket No. UM 1452, *Capacity Allocation and Volumetric Incentive Rates for the May 1, 2015, Enrollment Window of the Solar Pilot Program*, page 2, (March 24, 2015).

<sup>7</sup> Docket No. UM 1716, Staff Response to TASC DR 11

1 **Q. Do any other witnesses prejudge future uses of the RVOS?**

2 A. Yes. In the context of discussing the increased penetration of net metered  
3 resources in Oregon, Brian S. Dickman, witness for PacifiCorp, states that if  
4 the RVOS is improperly valued, “the end result is a potential shifting of a  
5 utility’s fixed and other costs between customers deploying rooftop solar and  
6 those that are choosing not to deploy rooftop solar.”<sup>8</sup> This statement from  
7 PacifiCorp is based on assumptions as to how the RVOS will be applied.

8  
9 Firstly, as noted above, it was not the Commission’s intention in opening UM  
10 1716 to prejudge potential future uses of the RVOS.<sup>9</sup> PacifiCorp’s statement  
11 on the implications of improperly valuing the RVOS implies a future use of  
12 the RVOS whereby net metering is replaced by a program in which  
13 participating solar customers’ compensation for their generation is in some  
14 way informed by the RVOS. Hence, the statement by PacifiCorp’s witness  
15 anticipates a possible outcome of UM 1716 and prejudices potential future  
16 uses of the RVOS.

17  
18 Secondly, the only way for an improperly valued RVOS to result in a shifting  
19 of a utility’s fixed and other costs to non-solar customers is as a result of a  
20 rate case. As discussed in my Response Testimony, any time customers  
21 reduce their load for whatever reason, revenues for the utility decrease.<sup>10</sup>

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<sup>8</sup> PAC/1000 Dickman/2

<sup>9</sup> Docket No. UM 1716, *Order 15-296* (Sep. 28, 2015).

<sup>10</sup> RNW, OSEIA, NWECC, NW SEED/100, O'Brien/9–10

1 While PacifiCorp is correct about the importance of calculating the RVOS  
2 properly, it is also important that any potential rate impacts as a result of  
3 applying the RVOS take into account the other reasons that customers reduce  
4 load and reduce utility revenues.

5

6 **Q. Is the RVOS applicable to utility-scale solar generation?**

7 A. The RVOS methodology could be applied to utility scale generation by  
8 adjusting the various elements in the methodology appropriately. Such an  
9 application would be necessary in the case of community solar programs.

10

11 Staff's opening comments in UM 1716, dated July 15, 2015, included a list of  
12 the general understandings amongst all parties that included, "2. This docket  
13 considers all solar, not just residential systems."<sup>11</sup> However, witness Olson  
14 states that he does not recommend use of the RVOS methodology and model  
15 for calculating the value of utility-procured solar as the utilities already  
16 conduct "detailed integrated resource (IRP) process[es]".<sup>12</sup>

17

18 However, as Portland General Electric's witnesses points out in their  
19 testimony<sup>13</sup>, under Senate Bill 1547, "an electric company shall credit an  
20 owner's or subscriber's bill for the amount of electricity generated by a  
21 community solar project for the owner or subscriber in a manner that

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<sup>11</sup> Docket No. UM 1716, *Staff's Comments*, page 4, (July 15, 2015).

<sup>12</sup> Staff/200 Olson/36 lines 3-5

<sup>13</sup> PGE/100, Brown-Murtaugh/12



1 reflects the resource value of solar.”<sup>14</sup> Hence, PGE correctly advocates “for  
2 the ability to use the RVOS established in this docket to analyze utility-scale  
3 projects on a case by case basis—retaining the RVOS elements that are  
4 applicable to a specific utility project, and dropping elements that do not  
5 apply.”<sup>15</sup>

6

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

9 A. Yes, I have concerns regarding the service life of the solar equipment. Witness  
10 Dolezel states the economic lifetime of a solar photovoltaic system is  
11 assumed by the model to be 25 years.<sup>16</sup> While this is a fair assumption in  
12 general, there needs to be flexibility to apply the RVOS to the shorter 20 year  
13 power purchase agreement that electrical companies will be required to  
14 enter into with a community solar project.<sup>17</sup>

15

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

17 A. Yes, thank you.

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<sup>14</sup> Senate Bill 1547 of 2015, Section 22(6)(a)

<sup>15</sup> PGE/100 Brown-Murtaugh/12

<sup>16</sup> Staff/100 Dolezel/5

<sup>17</sup> Senate Bill 1547 of 2015, Section 22(2)(a)(D)