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May 5, 2017

**VIA ELECTRONIC FILING**

PUC Filing Center  
Public Utility Commission of Oregon  
P.O. Box 1088  
Salem, OR 97308-1088

**Re: UM 1716 - In the Matter of PUBLIC UTILITY COMMISSION OF OREGON,  
Investigation to Determine the Resource Value of Solar**

Attention Filing Center:

Attached for filing in the above-referenced docket is an electronic copy of Idaho Power Company's Opening Testimony of Michael Youngblood.

Please contact this office with any questions.

Very truly yours,

Wendy McIndoo  
Office Manager

Attachment

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. )  

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**IDAHO POWER COMPANY**  
**OPENING TESTIMONY**  
**OF**  
**MICHAEL J. YOUNGBLOOD**

**May 5, 2017**

**I. INTRODUCTION**

**Q. Please state your name and business address.**

A. My name is Michael J. Youngblood and my business address is 1221 West Idaho Street, Boise, Idaho 83702.

**Q. By whom are you employed and in what capacity?**

A. I am employed by Idaho Power Company (Idaho Power or Company) as the Manager of Regulatory Projects in the Regulatory Affairs Department.

**Q. Are you the same Michael J Youngblood that filed Response Testimony and Reply Testimony in this matter?**

A. Yes. On June 30, 2016, I provided Response Testimony in this docket, and on July 21, 2016, I provided Reply Testimony.

**Q. What is the purpose of your testimony in this matter?**

A. Following the hearing held on January 31, 2017, the Commission issued Order No. 17-085 which directed the parties to file two additional rounds of testimony. As stated in the Order, the purpose of the additional testimony is three-fold: 1) to provide the opportunity to respond to new issues raised at the hearing; 2) to allow the opportunity to respond to the Straw Proposal attached to Order 17-085; and 3) to include a discussion of how to proceed with Phase II<sup>1</sup>. My testimony is intended to respond to these three directives.

**Q. How is your testimony organized?**

A. In general, Idaho Power's position on Staff's proposed methodology to determine the resource value of solar (RVOS) is unchanged, and therefore, adopts the Company's testimony and briefs already filed in this docket. The Company agrees with the Commission's conclusion following the hearing held on January 31, 2017, that there

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<sup>1</sup> Order No. 15-296 at 2 (Sep 28, 2015) ("The first phase will examine elements and methodologies. The second phase will examine values for each utility using those adopted methodologies.").

1 is broad consensus on numerous issues. Therefore, I have structured my testimony  
2 to address the issues provided in the Straw Proposal, and address the tentative  
3 resolutions on elements and methodologies for each element. With regard to specific  
4 issues raised at the hearing that are of concern to Idaho Power, I will address those  
5 during my discussion of the particular element. I will conclude my testimony with Idaho  
6 Power's proposed direction of how to proceed with Phase II of this docket.

7 **Q. Please describe the Company's response to each element of the Commission's**  
8 **RVOS Straw Proposal.**

9 A. In the testimony below, I will provide Idaho Power's comment on each of the RVOS  
10 Straw Proposal elements:

- 11 • **Energy:** Idaho Power agrees with the Commission's proposal to estimate the  
12 marginal avoided cost of energy using the methods currently used to determine  
13 avoided costs for a qualifying facility (QF). For Idaho Power, the methodology  
14 used to determine QF avoided costs is the incremental cost integrated resource  
15 planning methodology (ICIRP). This is the methodology approved by both this  
16 Commission and the Idaho Public Utilities Commission (IPUC) for determining the  
17 value of energy used to calculate avoided cost rates for QFs that exceed the  
18 standard rate eligibility cap. The ICIRP methodology has been in place for Idaho  
19 Power since approved for use through a contested case proceeding before the  
20 IPUC in December 2012<sup>2</sup> and was recently affirmed and reauthorized for the  
21 Company's use in Oregon in Order No. 16-174.<sup>3</sup> The methodology compares the  
22 hourly generation profile of a solar resource to the utility's resource stack being  
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24 <sup>2</sup> *In the Matter of the Commission's Review of PURPA QF Contract Provisions Including the*  
25 *Surrogate Avoided Resource (SAR) and Integrated Resource Planning (IRP) Methodologies for*  
*Calculating Avoided Cost Rates*, Case No. GNR-E-11-03, Order No. 32697 (Dec. 18, 2012).

26 <sup>3</sup> *In the Matter, of the Public Utility Commission of Oregon, Investigation into Qualifying Facility*  
*Contracting and Pricing*, UM 1610, Order No. 16-174 (May 13, 2106).

1 used to serve load in each hour, and assigns the cost of the utility's highest cost  
2 displaceable resource operating during the hours that the solar resource provides  
3 generation. The Company proposes to use the ICIRP methodology because it will  
4 provide a consistent determination of the value of a solar resource on an hourly  
5 basis for all such resources on the Company's system.

6 The Company understands the Commission's rationale for directing the  
7 utilities to model a range of hydro conditions to forecast energy prices. The  
8 Company agrees that while solar generation may provide extra value to utility  
9 customers in years of low hydropower generation, it is also true that solar  
10 generation will provide less value to utility customers in years of abundant hydro  
11 generation. For that reason, Idaho Power agrees with Staff that inputs to the model  
12 should reflect a full range of possible hydro conditions. However, multiple runs  
13 over numerous hydro conditions may be very cumbersome, and may not provide  
14 additional information. The Company recommends using a median hydro  
15 condition, in a similar way as the Company would value potential resources  
16 through its long-range integrated resource planning (IRP) process. The median  
17 hydro condition reflects a balance between increases or decreases in the value of  
18 solar generation that may exist in times of high or the low hydro generation. The  
19 Company believes that using a median hydro condition, as it does in its long range  
20 planning process, would result in an appropriate estimate for the marginal avoided  
21 cost of energy.

- 22 • **Generation Capacity:** In determining the generation capacity element, Idaho  
23 Power agrees with the Commission's Straw Proposal to use the  
24 sufficiency/deficiency demarcation as determined in the Company's most recent  
25 IRP. However, the Company believes that when a utility is resource sufficient, the  
26 capacity value should be zero. As the Company has stated in previous testimony,

1 there is no value for additional capacity during times when the Company is already  
2 capacity sufficient, and therefore there would be no deferrable capacity  
3 investments.

4 Idaho Power does not agree with the Commission's proposal to  
5 determine the capacity value in a manner that is consistent with the standard QF  
6 avoided cost guidelines. The standard QF avoided cost methodology is a  
7 prescriptive methodology used to determine the value of capacity based upon a  
8 surrogate or proxy resource, currently the value of the capacity provided by a  
9 combined cycle combustion turbine (CCCT). It is used in determining the price the  
10 utility is required to pay for a solar QF resource developed under the rules of the  
11 Public Utilities Regulatory Act of 1978 (PURPA), regardless of the need for that  
12 resource as determined by the Company's IRP. This value may not reflect of the  
13 marginal avoided cost of building and maintaining the lowest net cost generation  
14 capacity resource, which the Commission states is the definition of the generation  
15 capacity element. Idaho Power continues to propose that the determination of the  
16 value of generation capacity, consistent with using the IRP sufficiency/deficiency  
17 demarcation, should use the same methodology for estimating capacity  
18 contribution as used in its IRP, and to use the methodology from UM 1719 to  
19 estimate distributed solar generation's contribution to peak.

- 20 • **Transmission and Distribution Capacity:** Idaho Power agrees with the  
21 Commission's Straw Proposal to include a system-wide average of the avoided or  
22 deferred costs of expanding, replacing, or upgrading Transmission and Distribution  
23 (T&D) infrastructure attributable to incremental solar penetration, for growth-  
24 related investments in Oregon service areas. Idaho Power notes however, that  
25 the value may vary significantly among the utilities, and may vary within a particular  
26 utility's system. Because Idaho Power's system is primarily rural, adding solar in

1 many areas may not result in deferred T&D investments. Investments caused by  
2 high growth in one part of the utility's system may not suggest that investments  
3 may be deferred in low-growth areas.

4 • **Line Losses:** Idaho Power agrees with the inclusion of line losses in the  
5 Commission's Straw Proposal. The Company appreciates the Commission's  
6 recognition that line loss estimates should reflect the hours solar PV systems are  
7 generating electricity to more adequately represent a utility's seasonal loss  
8 variability over a year.

9 • **Administration:** The Company agrees that each utility should develop estimates  
10 of the direct, incremental costs of administering solar PV programs including staff,  
11 software, interconnection, and other utility costs, and will do so in Phase II of this  
12 docket.

13 • **Market Price Response:** As the Company has stated in previous testimony and  
14 affirmed during the hearing on January 31, 2017, the Company has not determined  
15 a market price response resulting from the impact of new solar generation. The  
16 Company remains unclear as to how the magnitude and quantification of a Mid-C  
17 market price response to new solar generation would be determined, at least  
18 regarding smaller distributed solar generation as identified in this docket. The  
19 Company agrees that this should be the topic of a separate technical workshop.  
20 The Company does note however, that the quantification and consideration of a  
21 market price response element for Idaho Power may produce a result of increased  
22 net costs as lower market energy prices would generally lead to decreased surplus  
23 sales values. The Company agrees with the Commission's assessment that the  
24 estimates of the impacts of incremental solar generation should be on both  
25 wholesale purchases *and* sales.

26 • **Renewable Portfolio Standard Compliance:** As the Company has stated in

1 previous testimony, the State of Idaho does not have an RPS requirement and,  
2 while Idaho Power is subject to the Oregon RPS, its obligations under that statute  
3 are not applicable until 2025, at which time the Company anticipates already being  
4 in compliance with existing resources. The Company appreciates and agrees with  
5 the Commission's recognition of these facts and its proposal that Idaho Power is  
6 exempt from this element.

7 • **Integration and Ancillary Services:** Idaho Power has Commission approved  
8 wind and solar integration costs in both its Idaho and Oregon jurisdictions and  
9 would anticipate using these costs in the RVOS methodology. With respect to  
10 ancillary services, the Company has stated in previous testimony that it does not  
11 consider solar resources to provide ancillary services, and views these  
12 components as strictly a cost. The Company supports the Commission's proposal  
13 to assign a value of zero to the ancillary service benefits of increased solar PV  
14 penetration, and will work with Staff and other parties in technical workshops to be  
15 held in the future.

16 • **Hedge Value:** The Company does not believe that conducting a workshop to  
17 examine methodologies to quantify a hedge value is appropriate. Idaho Power's  
18 hedging strategy is a prescribed process contained within the Risk Management  
19 Policy Manual, and was approved by the IPUC in 2002.<sup>4</sup> The Risk Management  
20 Policy Manual includes Idaho Power's risk management objectives as well as the  
21 policies, guidelines, controls and internal procedures established to protect against  
22 adverse movements in power supply costs and to ensure that the power cost  
23 adjustment balance does not move beyond a tolerance level acceptable to  
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25 <sup>4</sup> *In the Matter of Idaho Power Company's Interim and Prospective Hedging, Resource Planning,*  
26 *Transaction Pricing, and IDACORP Energy Solutions (IES) Agreement*, Case No. IPC-E-01-16  
(Phase II), Order No. 29102 (Aug. 28, 2002).



1 customers. The Company's hedging strategy does not vary based upon the  
2 addition of distributed generation solar resources, and hedge value is not an item  
3 Idaho Power evaluates for new resources. Therefore, if the Commission proposes  
4 a hedge value element for the RVOS, in Idaho Power case, the Company would  
5 propose that the hedge value be zero.

6 • **Environmental Compliance:** This element is intended to represent the avoided  
7 cost of complying with existing and anticipated environmental standards. Even  
8 though Idaho Power maintains that any potential future costs are not costs that are  
9 currently being avoided by a new solar resource, the Company supports the  
10 Commission's Straw Proposal to use the carbon regulation assumptions from their  
11 IRP. In the Company's 2015 IRP, Idaho Power developed multiple sensitivities for  
12 the EPA's proposed regulation for regulating CO<sub>2</sub> emissions from existing  
13 generating sources under CAA Section 111(d). The multiple sensitivities were a  
14 reflection of the considerable uncertainty related to the stipulations of the finalized  
15 regulation scheduled to be passed in the summer of 2015. To date, that regulation  
16 is still not finalized. Idaho Power's customers are not currently bearing any costs  
17 related to carbon emissions. Throughout previous testimony, Idaho Power has  
18 maintained that any potential future compliance costs that are not yet being  
19 incurred and cannot be fully determined do not constitute costs that are avoided  
20 by a new solar resource, and therefore, the value of this element for Idaho Power  
21 should be zero.

22 • **Security, reliability, and reserves:** Idaho Power does not agree with the  
23 Commission's proposal to include this element in the RVOS model. This element  
24 was originally recommended based on the potential application of solar generation  
25 coupled with energy storage or advanced inverters, or in potential microgrid  
26 applications of solar. Yet, as the Company discussed in prior testimony, most

1 mass-market solar resources in Oregon are not installed with these capabilities,  
2 and there are no known customer microgrid systems in Oregon. Because the  
3 analysis of mass-market systems is the intended application of the RVOS model,  
4 Idaho Power maintains that it is inappropriate to include an element to reflect  
5 potential benefits not actually provided by those systems. However, with that being  
6 said, the Company agrees that if this element is added, the appropriate value at  
7 this time is zero. The Company will participate in subsequent technical workshops  
8 to quantify the value of benefits, if they exist and as suggested by the Commission,  
9 considering only the value provided to each utility's system, and are not already  
10 captured in energy, capacity and ancillary services.

11 **Q. Is Idaho Power in general agreement with the Commission's Straw Proposal?**

12 A. Yes. As I have discussed above, Idaho Power generally agrees with the elements  
13 included in the Straw Proposal provided by the Commission and attached with Order  
14 No. 17-085. The methodology represents a reasonable response to the Commission's  
15 directive to establish an RVOS methodology applicable to small mass-market solar  
16 generation. Moreover, the Company is comfortable with the algebraic formulas that  
17 Staff and Mr. Arne Olson of Energy and Environmental Economics have proposed to  
18 use in the model.

19 In addition, Idaho Power supports the adoption of a model that is flexible and  
20 adaptable to the use of more or less granular data, and the proposed model  
21 accomplishes this objective. Idaho Power also reiterates its earlier statements that  
22 the model was designed for a limited purpose, and should be reevaluated before it is  
23 applied in other contexts. As Mr. Olson explains, the model was developed to produce  
24 a "25-year marginal, levelized value for a generic, small-scale solar resource installed

1 in 2016.<sup>5</sup> The Company agrees with Mr. Olson that the model was developed for a  
2 specific application—determining the RVOS for small-scale, mass-market resources.<sup>6</sup>  
3 If the Commission is to apply the RVOS model to a different set of resources, such as  
4 utility scale solar or community solar, different inputs to the model may need to be  
5 considered.

6 Without knowing the exact application for the RVOS, the Company remains  
7 concerned about the potential application of the RVOS model to net metering,  
8 especially with regard to evaluating the level of cost shifting, if any, resulting from solar  
9 installations under each utility's net metering service. While the RVOS model may be  
10 appropriate for modeling a long term levelized cost, it does not reflect embedded costs.  
11 Customer rates are designed to collect embedded costs of providing service, and the  
12 RVOS model evaluates marginal costs, and in some instances future costs that may  
13 not yet exist. The application of the RVOS methodology in combination with cost shift  
14 evaluations of net metering may lead to an inequitable and/or inappropriate  
15 assignment of costs and benefits among customers.

16 **Q. Does Idaho Power have a recommendation on how to proceed with Phase II of**  
17 **this docket?**

18 A. Yes. The Commission opened this docket on January 27, 2015, to examine the  
19 resource value of solar. The purpose of this Phase I of the proceeding was to adopt  
20 a methodology that the utilities will use to calculate the RVOS. It was understood that  
21 the utilities would apply the methodology to calculate a specific RVOS for their  
22 individual systems in a future phase.

23 Idaho Power believes that the next step is to for each utility to make a filing that  
24 uses its own data to populate the model and develop a utility-specific RVOS. These

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26 <sup>5</sup> Staff/400, Olson/4 (emphasis in original).  
<sup>6</sup> Staff/400, Olson/4.

1 filings should be made as compliance filings, in utility-specific dockets opened to allow  
2 a full investigation. Once the compliance filings are made, other parties could then  
3 file responses, which should establish those areas where there may be agreement  
4 and identify those areas that will need additional proceedings, such as elements for  
5 which the Commission has proposed additional workshops in its Straw Proposal.  
6 Workshops/Technical Conferences as proposed in the Straw Proposal could then be  
7 conducted either in the utility-specific dockets, or, where applicable to all utilities, in  
8 this docket.

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

10 A. Yes, it does.

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