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November 19, 2014

VIA ELECTRONIC AND U.S. MAIL

Attention: Filing Center
Public Utility Commission of Oregon
3930 Fairview Industrial Drive SE
P.O. Box 1088
Salem, Oregon 97308-1088

      Re: **Docket No. UM 1610 (Phase II) – Solar Capacity Contribution**
           In the Matter of Public Utility Commission of Oregon Investigation into
           Qualifying Facility Contracting and Pricing – Idaho Power Company's
           Response Testimony of Michael J. Youngblood (Exhibit 700)

Dear Filing Center:

      Enclosed for filing in Docket No. UM 1610 are an original and five (5) copies of
the Phase II Solar Capacity Contribution Response Testimony of Michael J. Youngblood
on behalf of Idaho Power Company. Copies of the testimony have been served on all
parties to this proceeding as indicated in the Certificate of Service.

      If you have any questions, please do not hesitate to contact the undersigned.

               Sincerely,

               Christa Bearry
               Legal Administrative Assistant

Enclosures

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

**DOCKET NO. UM 1610
PHASE II
SOLAR CAPACITY CONTRIBUTION**

IN THE MATTER OF PUBLIC UTILITY)
COMMISSION OF OREGON)
INVESTIGATION INTO QUALIFYING)
FACILITY CONTRACTING AND PRICING.)
_____)

IDAHO POWER COMPANY

RESPONSE TESTIMONY

OF

MICHAEL J. YOUNGBLOOD

November 19, 2014

1 Q. Please state your name and business address.

2 A. My name is Michael J. Youngblood and my business address is 1221 West Idaho

3 Street, Boise, Idaho 83702.

4 Q. Are you the same Michael J. Youngblood who previously testified in this

5 docket?

6 A. Yes. My witness qualifications are set forth in my Direct Testimony, Idaho

7 Power/600.

8 Q. What is the purpose of your testimony?

9 A. The purpose of my testimony is to respond to the testimony filed November 4, 2014,

10 specifically the opening testimony of Public Utility Commission of Oregon

11 ("Commission") Staff witness Brittany Andrus and Obsidian Renewables, LLC's

12 ("Obsidian") witness David W. Brown. In addition, I will reiterate why the current

13 approved methodology for determination of the capacity adder for solar avoided cost

14 rates is appropriate and should not be modified. Staff's proposed modification is

15 harmful to customers because it artificially *increases* the avoided cost of capacity

16 rate rather than recognizing the *decreased* contribution to peak as directed by Order

17 No. 14-058. Using the numbers from Idaho Power's Schedule 85, and inputs from

18 Idaho Power Company's ("Idaho Power" or "Company") 2013 Integrated Resource

19 Plan ("IRP"), Staff and the Oregon Department of Energy's ("ODOE") proposed

20 methodology produces a solar Qualifying Facility ("QF") capacity rate that actually

21 exceeds the 100 percent proxy value capacity rate for a baseload resource. This

22 result is contrary to the intent and direction of Order No. 14-058 and produces an

23 unlawful rate that exceeds the Company's avoided cost.

24 Q. This expedited proceeding, and the dispute/objection raised by Obsidian has

25 been characterized as only affecting the *Renewable* Avoided Cost Rates, and

26 not the *Standard* Avoided Cost Rates. Is this an accurate characterization?

RESPONSE TESTIMONY OF MICHAEL J. YOUNGBLOOD

1 A.   No. The objections raised, and the solutions proposed, by Obsidian, Staff, and the

2   ODOE are really not about the renewable avoided cost capacity component, and

3   nothing in the objections/proposed solutions are specific to the renewable

4   methodology. The objections and proposed solutions are really an objection to the

5   overall method by which the capacity component of avoided cost rates is paid to a

6   QF. Idaho Power is concerned that the focus of the other parties' proposals seeks to

7   determine an annual lump sum of entitled capacity payments and to flow that entire

8   amount through to the QF. This focus is inconsistent with the Commission's

9   direction in Order No. 14-058 to reduce the capacity payment to reflect wind and

10   solar's reduced contribution to peak as compared to the proxy resource and thereby

11   to cease payment to intermittent and variable resources such as wind and solar at

12   100 percent of the avoided capacity contribution of a combustion turbine, but to pay

13   wind and solar a reduced portion of the proxy resource's capacity contribution based

14   upon wind and solar's contribution to peak.

15 Q.   **What is the main focus of the direct testimony provided by Obsidian?**

16 A.   Obsidian states that it wants to address the issue of the appropriate solar capacity

17   payment that should be made to standard renewable solar QFs.

18 Q.   **Was this issue resolved by the Commission in Order No. 14-058 of this**

19   **docket?**

20 A.   Yes. However, Obsidian requested clarification on how the capacity adder described

21   in Staff/103/Bless/2 will be applied to renewable solar QF resources. In a ruling

22   dated June 10, 2014, the Administrative Law Judge (ALJ) granted the request for

23   clarification and directed parties to address the methodology applicable to renewable

24   solar QF resources.

25 Q.   **Is Obsidian requesting a change to the methodology approved in Order No.**

26   **14-058?**

1 A. In its direct testimony, Obsidian clearly states that it is not asking to reverse the

2   Commission's initial decision regarding capacity payments and was not challenging

3   the conclusion to pay a different capacity rate to different resources. Obsidian/200,

4   Brown/3. Yet, much of Obsidian's testimony addresses which volumetric rate option

5   the Commission should apply and which contribution to peak ("CTP") factor should

6   be used. Obsidian/200, Brown/9-15. Obsidian disagrees with using PacifiCorp's

7   capacity factor from its 2013 IRP and also disagrees with use of the capacity factor

8   from the 2013 IRP of Portland General Electric Company ("PGE"). Instead, Obsidian

9   proposes that the Commission should require the purchasing utilities to calculate the

10   CTP using what it calls an "industry standard" method, the Effective Load Carrying

11   Capacity (ELCC) methodology.

12 Q. **Would Obsidian's proposal result in a change in the methodology for**

13   **determining Renewable Standard avoided cost rates just approved by the**

14   **Commission in Order No. 14-058?**

15 A. Yes, absolutely. The Commission specifically ordered that for the Standard Method,

16   the assumed capacity contribution to peak load would be the contribution estimate

17   used in the utility's acknowledged IRP for the specific type of generation (wind, solar,

18   etc.) and for the Standard Renewable Method, the capacity contribution for each

19   renewable QF resource type used in the price adjustment would be the capacity

20   contribution assumed for that resource type in the utility's acknowledged IRP.

21   Therefore, all of Obsidian's testimony regarding a change in the methodology for

22   determining the appropriate CTP should be disregarded.

23 Q. **What issues are raised with the remaining portions of Obsidian's testimony?**

24 A. The remainder of Obsidian's testimony basically describes its general agreement

25   with Staff's subsequent proposal made for calculating the renewable solar QF

26   capacity payment. It appears, however, that both Obsidian and Staff base their

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1   conclusions on an erroneous assumption regarding the determination of the

2   appropriate capacity adder to be used in determining renewable avoided cost rates.

3   Both Obsidian and Staff seem to believe that a "target annual capacity payment" is

4   appropriate, and the alleged "double discount" that Obsidian proposed was being

5   made to capacity contribution payments in its request for clarification, exists because

6   of the design of the volumetric rate used for the capacity contribution payment.

7 Q. **Please describe Staff's proposal for calculating the capacity contribution**

8   **adjustment payment to solar QFs receiving the standard renewable avoided**

9   **cost price.**

10 A. Staff's proposal has two steps. First, determine the value of capacity on a dollars-

11   per-megawatt ("MW") basis. Second, determine how to pay those dollars over the

12   course of a year on a dollars-per-megawatt-hour ("MWh") basis. Staff/300, Andrus/9.

13 Q. **Why has Staff proposed this method for determining the capacity contribution**

14   **payment?**

15 A. Staff appears to now agree with Obsidian's argument that the problem with the

16   current capacity contribution adjustment is because the adjustment is being made to

17   a volumetric rate that is an hourly rate. Staff believes that in order to remove the

18   hours component in the capacity valuation, it is necessary to go back a step and

19   determine the value of avoided capacity to the utility on a dollar-per-MW basis.

20   While this is not necessarily incorrect, it leads Staff to the mistaken conclusion that

21   the full value of capacity is what is being avoided by the renewable QF. That just is

22   not the case.

23 Q. **Why is the full value of capacity not avoided by the renewable QF resource?**

24 A. The full value of capacity determined from the generation of the proxy resource is not

25   the same as the estimated generation to be received from the renewable QF

26   resource. Let me be clear, a renewable QF *would* receive the full value of capacity *if*

1   the renewable QF provided the same amount of capacity in all the hours that the

2   surrogate proxy resource provided capacity.   But it does not.   Therefore, the

3   Commission approved an adjustment to the capacity contribution of a renewable QF

4   in Order No. 14-058. This adjustment accounts for the fact that the renewable QF

5   resource does not provide the same capacity contribution as the surrogate proxy

6   resource.   For the Standard avoided cost rate, the proxy is a combined-cycle

7   combustion turbine ("CCCT"). For the Renewable Standard avoided cost rate, the

8   proxy is the next renewable resource identified in the utility's acknowledged IRP. For

9   both PacifiCorp and PGE, that proxy renewable resource is a wind turbine.

10 Q.   **What was approved in Order No. 14-058 with regard to the determination of**

11   **solar capacity in avoided cost rates?**

12 A.   Order No. 14-058 approved a methodology that adjusted both the Standard and the

13   Standard Renewable avoided cost prices in order to account for the actual

14   contribution to peak capacity made by each QF resource type, as compared to the

15   proxy resource. Therefore, for a solar QF, an adjustment is made to the proxy rate

16   to account for how much capacity the solar QF provides on-peak, when the

17   Company needs it the most.   For Idaho Power, using the same 90 percent

18   exceedance criterion used its long-term IRP planning process, the on-peak capacity

19   contribution for a solar QF is 32 percent.

20 Q.   **Please describe how the capacity payment for a solar QF would be determined**

21   **for Idaho Power's Standard avoided cost rates.**

22 A.   Certainly. The table below is a portion of the Company's Schedule 85 for Standard

23   Avoided Cost Prices for PV Solar QF. The year shown is 2016, the first year that the

24   Company is capacity deficient. Column (a) is the capacity price, in $/kW-year, of the

25   proxy CCCT. Column (b) is that capacity price allocated to on-peak hours. In other

26   words, this is the cost of capacity for the utility that would be avoided in each on-

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1   peak hour by the generation from a QF. For a Standard Baseload QF, this amount

2   ($13.62) would be added to the energy only price ($43.16) in Column (c) to

3   determine the on-peak price of $56.78 per MWh to be paid to the QF. The off-peak

4   price would be just the energy only price of $43.16 per MWh.

5   However, a solar QF does not provide on-peak capacity in every hour of the

6   on-peak period. That is why the Commission determined in Order 14-058 that an

7   adjustment to the calculation should be made to account for the reduced capacity

8   generation. Column (d) is Idaho Power's solar capacity contribution percentage of

9   32.0 percent. That is multiplied times the capacity cost allocated to on-peak hours in

10   column (b) to arrive at column (e), the capacity payment for on-peak hours of $4.36

11   per MWh. That is then added to the energy only price ($43.16) in column (c) to

12   determine the on-peak price of $47.52 per MWh to be paid to the solar QF. The off-

13   peak price would remain the same as before at $43.16 per MWh.

Year	Capacity Price	Capacity Cost Allocated to On-Peak Hours	Energy Only Price	PV Solar Capacity Contribution	Capacity Payment On-Peak Hours	On-Peak	Off-Peak
	$/kW-yr	($/MWh)	$/MWh		$/MWh	$/MWh	$/MWh
	(a)	(b) (a) /(8.76 x 100.0% x 55.5%)	(c)	(d)	(e) (b) * (d)	(f) (c) + (e)	(g) = (c)
2016	$66.20	$13.62	$43.16	32.0%	$4.36	$47.52	$43.16

20 Q.   **Does Staff believe that a QF resource should receive a capacity payment even**

21   **if the resource does not generate during the on-peak hours, when the utility**

22   **needs the capacity the most?**

23 A.   Apparently they do. Staff makes the statements that a substantial number of on-

24   peak hours are in the morning or evening, when the sun is not shining. Staff goes on

25   to state that because of this, it is simply impossible for a solar QF to generate during

26

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1   these hours and therefore a solar QF would be undercompensated for the value of

2   capacity. Staff/ 300, Andrus/8-9.

3 Q. **Should avoided cost prices be such that a QF is compensated for capacity**

4   **when capacity is not needed?**

5 A. No, not at all. The Commission has determined this with regard to the determination

6   of a utility's capacity sufficiency or deficiency, and has established that the capacity

7   portion of the avoided cost price is not included during the time when a utility is

8   capacity sufficient. In a similar way, if a utility is not capacity deficient during the off-

9   peak hours, then there is no capacity that is being "avoided"; therefore, the capacity

10   portion of the payment should not be included. That is why the avoided cost prices

11   distinguish between on-peak and off-peak prices.

12 Q. **Then if a QF only generates during the on-peak hours, but not in every on-peak**

13   **hour, should a QF still receive the same total amount of capacity payment as a**

14   **generator that provides capacity in all on-peak hours?**

15 A. No, it should not. That would mean that the avoided cost price would have to be

16   inflated during the reduced hours that the QF was generating in order to be

17   equivalent to the same total amount of capacity payment for a generation resource

18   that provided capacity in every hour of the on-peak period. The QF with reduced on-

19   peak generation would not be compensated at the avoided cost rate, but at some

20   rate more than the cost of the generation that is being avoided. Customers are

21   harmed because they are paying more than the cost of the capacity of generation

22   being avoided.

23 Q. **Does Staff's proposed change to the approved methodology better align the**

24   **avoided capacity costs with the generation that is being avoided?**

25 A. No, not at all. In fact, Staff's proposal can create a mismatch of the costs truly being

26   avoided. Staff's proposed two-step process first determines the value of capacity on

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1   a dollars-per-MW basis. They call this the target capacity dollars. The second step

2   of Staff's proposed process is to determine how to pay *those* dollars over the course

3   of a year, their capacity contribution adjustment. This is where the mismatch may be

4   created. Staff assumes that the QF is entitled to all of "those" dollars, that the

5   capacity contribution adjustment would be expected to pay the target capacity dollars

6   over the course of a year. Staff/300, Andrus/12. If that were true, then taken to the

7   extreme, if a solar QF only generated for one on-peak hour in a year, Staff's capacity

8   contribution adjustment would compensate the QF for the total target capacity dollar

9   amount in one hour, equivalent to a lump-sum capacity payment.

10   Q.   **What are the differences between the Standard Methodology and the Standard**

11   **Renewable Methodology for determining avoided cost rates?**

12   A.   The main difference between the methodologies is in the proxy that is assumed to be

13   avoided, for purposes of determining avoided costs. For the Standard Methodology

14   it is a CCCT. For the Standard Renewable Methodology for PGE and PacifiCorp, it

15   is the capacity and energy costs of a wind turbine. The capacity adder for renewable

16   QFs other than wind, like solar, that request the Standard Renewable rates are

17   compensated for the incremental capacity provided beyond the capacity of the wind

18   turbine, at a capacity rate equivalent to the Standard CCCT proxy. This is then

19   added to the rates that already include the capacity payment for the wind turbine.

20   Q.   **Can you provide some examples of how the current approved methodology**

21   **provides for a fair and equitable avoided cost of capacity for a solar QF?**

22   A.   Yes. I will provide three simple examples using Idaho Power's Standard avoided

23   cost rates, however, the calculations are similar for the Standard Renewable avoided

24   cost rates. For demonstration purposes, let us assume that a utility has identified

25   that it needs 100 MW of capacity in the year 2016, and that capacity would be

26   provided by a CCCT. Example 1 below determines the cost of that capacity using

1   the Standard avoided cost rates. Assuming the Standard avoided cost of capacity

2   for the proxy CCCT, 100 MW of installed CCCT capacity, running for 100 percent of

3   the 4,862 on-peak hours would cost $6,621,772 for the year. Now let us assume

4   that instead of the CCCT, we were to install or acquire enough solar generation to

5   provide 100 MW of on-peak capacity. Idaho Power's on-peak capacity contribution

6   for solar identified in the Company's 2013 IRP is 32 percent, 313 MW of solar would

7   need to be installed in order to provide 100 MW of on-peak generation. If those 313

8   MW of solar were valued at the Standard avoided cost of a solar QF, and also

9   provided the same 100 MW of capacity for all 4,862 on-peak hours, the value of that

10 capacity would still be the same $6,621,772.

Example 1					
Resource Type	Installed MW	Capacity Cost Allocated to On-Peak Hours ($/MWh)	On-Peak Hours	On-Peak Capacity Contribution	Total Capacity Dollars
	(a)	(b)	(c)	(d)	(e)
					(c)*(d)*(e)*(f)
CCCT	100	$13.62	4,862	100%	$6,621,772
Solar	313	$4.36	4,862	100%	$6,621,772

17   Now let us assume the same installed amounts of generation valued at the

18 same prospective prices, but assume that the on-peak capacity was not provided for

19 all 100 percent of the 4,862 on-peak hours. Let us assume that both the CCCT and

20 the solar generation only provided on-peak capacity for 32 percent of the on-peak

21 hours. Again, both generation resources would provide the equivalent amount of

22 capacity, and would be compensated the same amount. The amount of capacity

23 provided for the year would be valued at $2,118,967.

24

25

26

Example 2					
Resource Type	Installed MW	Capacity Cost Allocated to On-Peak Hours ($/MWh)	On-Peak Hours	On-Peak Capacity Contribution	Total Capacity Dollars
	(a)	(b)	(c)	(d)	(e) (c)*(d)*(e)*(f)
CCCT	100	$13.62	4,862	32%	$2,118,967
Solar	313	$4.36	4,862	32%	$2,118,967

Lastly, let us assume that we installed equal amounts of generation. And let's assume that we valued them at the same capacity cost, but that the solar generation only provided capacity for 32 percent of the on-peak hours. The value of the capacity provided for these two resources is not the same.

Example 3					
Resource Type	Installed MW	Capacity Cost Allocated to On-Peak Hours ($/MWh)	On-Peak Hours	On-Peak Capacity Contribution	Total Capacity Dollars
	(a)	(b)	(c)	(d)	(e) (c)*(d)*(e)*(f)
CCCT	100	$13.62	4,862	100%	$6,621,772
Solar	100	$13.62	4,862	32%	$2,118,967

Please note, however, that the value of the capacity for the solar generation ($2,118,967 for the year) is 32 percent of the value of the capacity for the CCCT generation that provided 100 percent on-peak capacity ($2,118,967 ÷ $6,621,772 * 100 = 32%). Also note that the $2,118,967 value of capacity for 100 MW of solar priced at the full capacity cost of the CCCT proxy is equivalent to the required amount of solar installed to provide the 100 MW of capacity valued at the Standard avoided cost of solar. In other words, the value of the capacity from each of the differing generation resources is priced equitably with the current Commission approved Standard Methodology, and no change is necessary.

RESPONSE TESTIMONY OF MICHAEL J. YOUNGBLOOD

1 Q. **What is the effect of Staff, Obsidian, and DOE's recommendations?**

2 A. Staff's proposed modification is harmful to customers because it *increases* the

3 avoided cost of capacity rate rather than recognizing the *decreased* contribution to

4 peak as directed by Order No. 14-058. Prior to Order No. 14-058, a QF was

5 compensated for capacity by receiving 100 percent of the capacity cost of the proxy

6 for any deliveries that it would make during heavy load hours. The only change to

7 that directed by the Commission in Order No. 14-058 was to compensate the QF not

8 at 100 percent of the proxy's capacity cost, but at a *reduced* value commensurate

9 with the solar QF's contribution to peak. The Commission did not direct that the rate

10 be increased because of the fact that the QF may not make deliveries during all

11 heavy load hours. This fact is irrelevant to the determination, and to the change

12 directed by the Commission. Prior to Order No. 14-058, the QF was compensated

13 with 100 percent of the proxy value for all of its heavy load hour deliveries.

14 Subsequent to Order No. 14-058, the QF should be compensated with 32 percent of

15 the proxy value for all of its heavy load hour deliveries. Staff proposes to inflate the

16 capacity component of the rate that was based upon the proxy's value over all heavy

17 load hours and compress that value into a smaller number of hours representing only

18 the hours the solar QF delivers during heavy load. Thus the QF, under Staffs

19 proposal, is paid a rate that far exceeds 32 percent of the proxy value, which was

20 directed by the Commission.

21 In fact, using the numbers from Idaho Power's Schedule 85, and inputs from

22 Idaho Power's 2013 IRP, in Staff and ODOE's proposed methodology, the solar QF

23 capacity rate actually exceeds the 100 percent proxy value capacity rate for a

24 baseload resource. This not only is contrary to the intent and direction of Order No.

25 14-058, but is also an unlawful rate that exceeds the Company's avoided cost—as it

26 exceeds 100 percent of the proxy avoided resource value. (Currently approved solar

capacity adder, Schedule 85 = $4.36; currently approved baseload capacity adder, Schedule 85 = $13.62; proposed Staff/ODOE solar capacity adder = $18.16) Please see the tables below:

Current Commission Approved Standard Avoided Cost Prices for PV Solar QF

Capacity Price	Capacity Cost Allocated to On-Peak Hours	Energy Only Price	PV Solar Capacity Contribution	Capacity Payment On-Peak Hours	On-Peak	Off-Peak
(a)	(b) (a) /(8.76 x 100.0% x 55.5%)	(c)	(d)	(e) (b) * (d)	(f) (c) + (e)	(g) = (c)
$66.20	$13.62	$43.16	32.0%	$4.36	$47.52	$43.16

Proposed Modification by Staff/ODOE for Standard Avoided Cost Prices for PV Solar QF

Capacity Price	PV Solar Capacity Contribution	Energy Only Price	Capacity Cost Avoided By Solar QF	Avoided Capacity Cost Allocated to Solar's Capacity Factor during On-Peak Hours	On-Peak	Off-Peak
(a)	(b)	(c)	(d) (a)*(b)	(e) (d) /(8.76 x 24% x 55.5%)	(f) (c) + (e)	(g)
$66.20	32.0%	$43.16	$21.18	$18.16	$61.32	$43.16

Current Commission Approved Standard Avoided Cost Prices for Baseload QF

Capacity Price	Capacity Cost Allocated to On-Peak Hours	Energy Only Price			On-Peak	Off-Peak
(a)	(b) (a) /(8.76 x 100.0% x 55.5%)	(c)	(d)	(e)	(f) (b) + (c)	(g) (b)
$66.20	$13.62	$43.16			$56.78	$43.16

As shown above in column (f), if Staff/ODOE proposal is accepted, then solar QFs will receive a higher rate for on-peak hours than a baseload QF. This is contrary to Order No. 14-058, contrary to the Public Utility Regulatory Policies Act of 1978, and results in rates in excess of the utility's avoided cost.

1   Idaho Power's Schedule 85 currently implements Order No. 14-058 properly

2   by allocating a capacity payment to solar and wind QFs based upon a reduction from

3   100 percent of the capacity cost of proxy resource to each resource's contribution to

4   peak (90 percent exceedance) from the acknowledged IRP, as directed in Order No.

5   14-058. This method should be affirmed by the Commission in this proceeding and

6   Staff/Intervenor proposals rejected as requiring payment in excess of avoided costs.

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

8 A.   Yes, it does.

RESPONSE TESTIMONY OF MICHAEL J. YOUNGBLOOD

CERTIFICATE OF SERVICE
Docket No. UM 1610

Phase II
Solar Capacity Contribution

I hereby certify that on November 19, 2014, I served the RESPONSE TESTIMONY

OF MICHAEL J. YOUNGBLOOD upon all parties of record in this proceeding by electronic

mail only as all parties have waived paper service.

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