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December 10, 2015

***VIA ELECTRONIC FILING***

Public Utility Commission of Oregon  
201 High Street SE, Suite 100  
Salem, OR 97301-1166

Attn: Filing Center

**RE: UM 1734—PacifiCorp's Reply Testimony**

PacifiCorp d/b/a Pacific Power encloses for filing in the above-referenced docket the Reply Testimony of Bruce W. Griswold.

If you have questions about this filing, please contact Erin Apperson, Manager of Regulatory Affairs, at (503) 813-6642.

Sincerely,

A handwritten signature in cursive script that reads "R. Bryce Dalley/hsw".

R. Bryce Dalley  
Vice President, Regulation

Enclosures

Docket No. UM 1734  
Exhibit PAC/200  
Witness: Bruce W. Griswold

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**PACIFICORP**

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**Reply Testimony of Bruce W. Griswold**

**December 2015**

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1 **Q. Are you the same Bruce W. Griswold who previously submitted direct testimony**  
2 **in this proceeding on behalf of PacifiCorp d/b/a Pacific Power (PacifiCorp or the**  
3 **Company)?**

4 A. Yes.

5 **Q. Describe your previously filed testimony in this docket.**

6 A. The direct testimony presented the Company's request to modify the maximum  
7 allowable fixed price contract term from fifteen (15) years to three (3) years for  
8 qualifying facility (QF) contracts that the Company must enter into under the Public  
9 Utility Regulatory Policies Act of 1978 (PURPA). The Company is seeking to  
10 modify the maximum fixed price contract term of QF contracts executed under both  
11 Oregon Schedules 37 and 38. I also presented the Company's request to modify the  
12 nameplate capacity of solar and wind projects eligible for standard fixed prices under  
13 Schedule 37, reducing the eligibility cap from 10 megawatts (MW) to 100 kilowatts  
14 (kW).

15 **PURPOSE AND SUMMARY OF TESTIMONY**

16 **Q. What is the Company asking the Commission to approve in this proceeding?**

17 A. The Company is requesting an order from the Public Utility Commission of Oregon  
18 (Commission) directing the implementation of a reduction of the maximum fixed  
19 price contract term for Oregon Schedule 37 and 38 PURPA contracts from 15 years to  
20 three years, to be consistent with the Company's hedging and trading policies and  
21 practices for non-PURPA energy contracts and more aligned with the Integrated  
22 Resource Plan (IRP) cycle. The Company is also requesting an order from the  
23 Commission to reduce the Schedule 37 eligibility cap for solar and wind projects

1 from 10 MW to 100 kW. While the Commission issued interim Order No. 15-241 on  
2 August 14, 2015, reducing the Schedule 37 eligibility cap to 3 MW, the Company's  
3 position remains that a 100 kW cap for solar and wind is the most effective means to  
4 ensure the "ratepayer indifference" standard required under PURPA.

5 **Q. Is the Company seeking to develop new standards applicable to QF purchases by**  
6 **all investor owned utilities in Oregon?**

7 A. No. PacifiCorp does not seek to establish a rule of general applicability.  
8 PacifiCorp's application seeks to modify the standard pricing eligibility threshold and  
9 fixed price term only for QF contracts with PacifiCorp.

10 **Q. To which witnesses are you responding to in your reply testimony?**

11 A. I respond specifically to the response testimony of Public Utility Commission of  
12 Oregon Staff (Staff) witness Ms. Brittany Andrus; Renewable Energy Coalition  
13 (REC) witness Mr. John Lowe; Oregon Department of Energy (ODOE) witness Mr.  
14 John Hobbs; Community Renewable Energy Association (CREA) witness Mr. Brian  
15 Skeahan; Obsidian Renewables and Cypress Creek Renewables (Obsidian) joint  
16 witness Mr. David Brown; and Sierra Club witness Mr. Patrick McGuire. I also  
17 respond to the cross-response testimony of the intervenor parties including Staff, and  
18 joint testimony from Obsidian, Cypress Creek, REC, and Oregonians for Renewable  
19 Energy Progress.

20 **Q. After reading intervenors' response and cross-response testimony in this docket,**  
21 **what are your general observations?**

22 A. In seeking to maintain the ratepayer indifference standard required by PURPA, my  
23 direct testimony explains and illustrates how the required 15-year fixed price contract

1 term is: (1) inconsistent with the Company's hedging practices implemented after  
2 careful review by stakeholders in a recent collaborative, (2) inconsistent with resource  
3 acquisition policies and practices for non-PURPA energy purchases, and (3) not  
4 aligned with the Company's IRP planning cycle and action plan. My direct testimony  
5 further describes how, without the requested modification to contract term and  
6 eligibility cap, PacifiCorp will be forced to continue to acquire long-term, fixed-price  
7 PURPA contracts even though PacifiCorp's 2015 IRP, which was filed in March  
8 2015, shows new resources are not required until 2028. Additionally, my direct  
9 testimony captures the rationale for reducing the eligibility cap for solar and wind  
10 from 10 MW to 100 kW, resulting in more accurate avoided cost prices for those  
11 types of resources and further reducing the divergence between standard Schedule 37  
12 avoided cost prices and actual avoided cost prices based on project operating  
13 characteristics.

14 The response and cross-response testimony of the intervenors carry similar  
15 messages in response to the Company's application, and I have categorized them  
16 here.

17 1. Elimination of PURPA obligation. The parties suggest PacifiCorp is trying to  
18 eliminate or find a mechanism to avoid its PURPA must-purchase obligation,  
19 even though my direct testimony is clear that the must-purchase obligation  
20 remains. The parties are more concerned with ensuring continued QF  
21 development under any scenario, funded on the back of customer's electric bills  
22 despite the lack of an identified need for new generation, than they are with  
23 balancing customer rate and risk impacts against QF rights under PURPA.

- 1           2. QF contracts are not a commodity but a Company resource. The parties suggest a  
2           QF contract is not similar to commodities, which are currently limited to three  
3           years or less under the Company's hedging policies, even though the current QF  
4           contract is clearly a fixed price purchase of energy for up to a 15-year term in  
5           Oregon. They also suggest that a long-term contract can expose customers to  
6           price risk but conversely deliver benefits if avoided costs are lower than actual  
7           costs through the life of the agreement. The parties suggest that a QF contract is  
8           similar to a Company resource, even though procurement of a Company resource  
9           is driven by need, can be dispatched and backed down when more economic  
10          alternatives are available, and can pass through savings from lower fuel and other  
11          operating costs because the total cost of the energy is not locked-in for the long  
12          term like a QF contract.
- 13          3. Few if any of the solar QFs with PPAs will be constructed. The parties carry the  
14          theme that the Company is crying wolf about the volume of solar development  
15          and one only has to look at the Company's generation interconnection queue on  
16          OASIS to see that no solar QF projects have been constructed in the past couple  
17          of years without noting that the majority of the 243 MW of solar QF projects were  
18          only executed in 2014 and 2015, for construction completion in 2016 and 2017.
- 19          4. No QF projects can secure financing under a three year term. Parties speculate  
20          that, if the Company's request is granted, QF development in Oregon, including  
21          renewal of existing QF contracts, will effectively cease because no QFs will be  
22          able to secure financing to construct a new project or overhaul an existing project.
- 23          5. A contract eligibility cap of 100 kW will severely hamper wind and solar QF

1           development in Oregon. Parties speculate that any contract eligibility cap below  
2           10 MW will severely hamper solar and wind QF development in Oregon because  
3           of economy of scale, limited access to financing of small projects, and inaccuracy  
4           of avoided cost pricing for solar and wind projects under Schedule 38.

5           6. Renewable benefits of QFs. The parties suggest QFs are able to meet the  
6           Company's future environmental compliance obligations, even though those  
7           obligations are not currently known and measurable. First, this supports the  
8           notion that shorter-term contracts in the face of uncertainty are a better option and  
9           more importantly, these parties point to the use of renewable energy credits for  
10          compliance while ignoring the critical fact that the QF contracts prior to August  
11          20, 2014, retained 100 percent of the renewable energy credits and under the  
12          Schedule 37 and 38 implemented after August 20, 2014, the Company will only  
13          share a portion of the renewable energy credits with the renewable QFs over the  
14          term. These renewable energy credits represent the environmental attributes that  
15          the parties are touting as beneficial to the Company.

16          7. Other issues. Lastly, I will address a few other issues identified by the intervenors  
17          including capacity payments for existing QFs when renewing their QF contract.

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

19       A.    I respond specifically to the intervening parties' arguments as categorized above;  
20          however, many of the arguments across the response and cross-response testimony  
21          are similar in nature by each of the parties so I will provide detailed responses and  
22          evidence and refer to those parties who provided testimony on those issues. For any  
23          outlying issues specific to an individual party, I will respond directly to that party,



1 such as REC, who recommends including a capacity payment for existing QFs that  
2 are renewing their contract.

3 Consistent with my direct testimony, my reply testimony focuses on the  
4 reasons these changes in contract term and eligibility cap are necessary in order to  
5 maintain the “ratepayer indifference” standard required by PURPA.

6 **ELIMINATION OF PURPA OBLIGATION**

7 **Q. The intervenors argue that the Company’s application to change the QF  
8 contract term is contrary to the intent of PURPA. Do you agree?**

9 A. No. Staff, Sierra Club, and CREA witnesses all make statements that the requested  
10 change in the contract term is inconsistent with and a violation of PURPA.<sup>1</sup> Nowhere  
11 in PURPA does it specifically state that contract terms for a QF must be of sufficient  
12 length for a QF to obtain financing. In fact, there are multiple examples where states  
13 have the ability to not only set an appropriate contract length but to reduce contract  
14 lengths to protect the ratepayer indifference standard. Let me provide three examples.  
15 Most recently, the Idaho Public Utilities Commission decision affirming its August  
16 2015 order<sup>2</sup> indicating that it was “reasonable and consistent with PURPA that the  
17 standard IRP contract be reduced from 20 years to two years.”<sup>3</sup> The Idaho  
18 commission made its findings based, in part, on the same undisputed evidence  
19 presented by the Company in this proceeding. One can also look to the state of  
20 Washington which limits its QF contract term to five years. Finally, the Exelon

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<sup>1</sup> Sierra Club/100, McGuire, page 6, line 3-6, Staff /100, Andrus, page 15, lines 14-18, CREA/100, Skeahan, page 6, lines 10 -12.

<sup>2</sup> In The Matter Of Rocky Mountain Power Company’s Petition To Modify Terms And Conditions Of PURPA Purchase Agreements, CASE NO. PAC-E-15-03, Order No. 33357, August 20, 2015.

<sup>3</sup> In The Matter Of Rocky Mountain Power Company’s Petition To Modify Terms And Conditions Of PURPA Purchase Agreements, CASE NO. PAC-E-15-03, Order No. 33419, p. 27.

1 Wind 1, LLC Fifth Circuit court opinion supports a state’s ability to set contract  
2 length. In that case, the Fifth Circuit court held that the Public Utility Commission of  
3 Texas had the discretion to determine the specific parameters for when a wind farm  
4 can form a legally enforceable obligation which requires rates set ... years in  
5 advance.<sup>4</sup> In that case, the court upheld the Texas Commission’s decision to limit the  
6 long-term pricing available through legally enforceable obligations to wind farms that  
7 could deliver firm power.<sup>5</sup>

8 The foundations of PURPA are: 1) the must-take purchase obligation and 2)  
9 the ratepayer indifference standard. The Company’s request in this docket does not  
10 alter the must-purchase obligation. The Company will continue to purchase energy  
11 from QFs, in compliance with the letter and the intent of PURPA, for as long as the  
12 QF seeks to sell the power to the Company as a QF for the duration of a QF’s useful  
13 life. The Company’s application is more directly concerned with the second  
14 foundation of PURPA – the ratepayer indifference standard. The Company’s request  
15 aligns the maximum contract term for QFs with the Company’s hedging and trading  
16 policies and practices for non-PURPA energy contracts and with the IRP cycle. This  
17 alignment is necessary to maintain the ratepayer indifference standard required by  
18 PURPA.

19 **Q. On pages 13 through 18 of his testimony, Mr. McGuire implies that the**  
20 **Company is trying to end its PURPA must-purchase obligation. Do you agree?**

21 A. No. The Company’s requested relief in this docket does not seek to eliminate its  
22 must-purchase obligation; in fact my direct testimony is very clear on this issue. Mr.

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<sup>4</sup> *Exelon Wind 1, LLC*, 766 F.3d 380 (5<sup>th</sup> Cir. 2014).

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

1 McGuire opines heavily on Section 210(m) of PURPA in which utilities can petition  
2 the Federal Energy Regulatory Commission (FERC) for relief from the must-  
3 purchase obligation, and further opines on Oregon and other state renewable portfolio  
4 standards (RPS) and state energy policy in general. Those topics are not relevant to  
5 this proceeding, so I will not address those issues in detail except to note that Mr.  
6 McGuire himself advocates for eliminating a utility's federal PURPA must-take  
7 obligation by pursuing an increase in the state's RPS mandate and using a  
8 competitive RFP process to secure long-term resources. On one hand, Mr. McGuire  
9 states the Company is violating its PURPA must-take obligation, and on the other  
10 hand, he is advocating expanding the RPS obligation so that the PURPA must-take  
11 obligation can be eliminated.

12 **Q. Does PURPA require the Commission to establish QF contracting terms that**  
13 **guarantee a QF will be economically viable?**

14 A. No. Mr. Skeahan of CREA suggests that a three year term makes financing  
15 impossible.<sup>6</sup> Mr. Hobbs of ODOE seems to counter that in his response testimony  
16 suggesting that from his experience in the industry, a series of three year financing  
17 contracts is not unusual over the life of any asset; however, it does introduce much  
18 price risk and might exceed the risk tolerance of most lenders.<sup>7</sup> Mr. Hobbs seems to  
19 imply that while it may have a risk premium attached to the financing cost it does not  
20 make financing impossible. In fact, with the development of financing vehicles such  
21 as "yieldcos," new financing structures and opportunities are available. Stated another  
22 way, PURPA does not address economic viability of QFs or financing obligations.

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<sup>6</sup> CREA/100, Skeahan, page 6, line 4.

<sup>7</sup> ODOE/100, Hobbs, page 2, lines 16-23.

1                   **QF CONTRACTS - COMMODITY OR COMPANY RESOURCE**

2   **Q.   Staff and other intervenors have suggested that aligning QF contracts with the**  
3           **Company hedging strategy may minimize risk but not promote QF development.**  
4           **Do you agree?**

5   A.   No. The Company maintains that its must-take obligation under PURPA provides the  
6           QF with an option that no other developer has. A QF can require the utility to  
7           purchase its output and secure a power purchase agreement for that output. It is that  
8           single option that promotes QF development as well as the oversight by the state  
9           commission. A non-QF project cannot do that; rather it must “sell” the advantage of  
10          its project to the utility on a competitive basis in order to even begin any form of  
11          negotiation. And as discussed in my direct testimony,<sup>8</sup> the Company has witnessed a  
12          dramatic increase in PURPA contract executions and pricing requests in Oregon and  
13          system-wide in the last several years thus requiring a revision to contract term to  
14          manage price risk for our customers. This material increase could not have been  
15          anticipated by the Company when the Commission reviewed the issue of contract  
16          term in previous cases, even as recently as its decision in Phase I of docket UM 1610.  
17          Furthermore, the hedging collaborative from the 2012 TAM order resulted in a  
18          review and application of Company gas hedging practices that resulted in the  
19          Company moving its hedging time horizon from 48 months to 36 months for both gas  
20          and electricity. The QF contract term must be re-evaluated in light of these new  
21          practices to ensure consistency across all Company commodity transactions while  
22          still providing the QF with the must-take purchase obligation advantage over the non-  
23          QF developers.

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<sup>8</sup> PAC 100/Griswold, page 10, lines 2-17.

1 **Q. Staff asserts that QF projects are not comparable to a commodity hedge. Do you**  
2 **agree?**

3 A. No. In fact, it was the Commission's direction in Order No. 11-435<sup>9</sup> that initiated the  
4 collaborative process with Staff and stakeholders resulting in the Company moving to  
5 a three year hedging horizon on all its commodities. And aligning a QF contract  
6 within the hedging time horizon does not preclude the QF from exercising its must-  
7 take option with the Company for renewal of its QF agreements over the life of the  
8 asset.

9 Ms. Andrus also seems to confuse "hedging" with "trading." Hedging  
10 attempts to reduce or to eliminate volatility while trading, also known as speculative  
11 trading, attempts to profit from betting on the direction in which a market will move.  
12 Ms. Andrus suggests that market prices may be higher or lower than the avoided cost  
13 price over the life of a QF contract. Ms. Andrus then speculates (without any  
14 supporting data or evidence) that over the life of a contract, the over-market portion  
15 of the fixed price portion is generally off-set by the under-market portion. Having  
16 reviewed the Company's population of QF contracts, both in Oregon and system-  
17 wide, it is my experience that overestimation is more normal and that QF contracts  
18 tend to be higher than market for the majority of their term. On that basis, Staff  
19 seems to be comfortable with the customers shouldering the financial risk of a fixed  
20 price 15-year contract. Under that scenario, the Company should lock in as many  
21 long-term contracts as possible regardless of whether they are QFs or non-QFs

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<sup>9</sup> In the Matter of PacifiCorp, dba Pacific Power, 2012 Transition Adjustment Mechanism, Docket No. UE 227, Order No. 11-435 (Nov. 4, 2011).

1 because the risk over time balances out, which is clearly not the directive given in the  
2 2012 TAM.

3 **Q. Sierra Club suggests that the QF process provides a thorough screening of**  
4 **potential QF resources and is on an equal basis with IRP-based screening**  
5 **process<sup>10</sup>. Do you agree?**

6 A. No. I do agree with Mr. McGuire that the IRP is the guiding process for the utility  
7 resource procurement needs and is relied upon for development of avoided cost  
8 pricing under Oregon's methodology; however, the must-take obligation of PURPA  
9 provides a clear distinction. Under the QF process, if a project is eligible to be a QF  
10 as defined in Schedule 37 or 38, then it has access to the pricing and contracting  
11 process. There is no competitive RFP process for QFs as there is for utility-owned  
12 resources subject to due diligence by independent evaluators and commission scrutiny  
13 of the selected resources.

14 **Q. Sierra Club, CREA, Obsidian, and Staff all suggest that accurate avoided cost**  
15 **pricing is the only method needed to manage the QF development and therefore**  
16 **the financial risk to customers. Do you agree?**

17 A. No. Ms. Andrus of Staff suggests that energy prices are low and have remained low  
18 for a significant amount of time, and when combined with anticipated changes in the  
19 tax credits, the solar QF development in Oregon will slow considerably even with a  
20 long-term contract.<sup>11</sup> Mr. McGuire of Sierra Club also states that in his review, solar  
21 QFs are marginally economic; few will be developed at current Oregon avoided cost  
22 prices and even those that have QF contracts with the Company will likely not be

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<sup>10</sup> Sierra Club/100, McGuire, page 11, lines 26-27.

<sup>11</sup> Staff/100, Andrus, page 14, lines 7-22.

1 built, all due to drop in avoided cost prices in Oregon.<sup>12</sup> Mr. Brown of Obsidian  
2 states he could not build a solar QF project in Oregon at the current avoided cost  
3 prices.<sup>13</sup> And CREA witness Mr. Skeahan suggests the most effective method for  
4 customer risk protection is through appropriate avoided costs. He goes on to state  
5 that the Company has reduced its avoided cost rates in August 2014 and further in  
6 June 2015.<sup>14</sup> While the Company agrees that an accurate avoided cost rate is a key  
7 component to QF development, these remarks miss the point. Avoided cost price  
8 updates suffer a distinct time lag between preparation and approval, partly as a result  
9 of the due diligence process engaged to approve the prices but generally to the  
10 detriment of the prices further out the 15-year contract term. A 15-year term contract  
11 will have a wider divergence between the avoided cost prices and actual avoided  
12 costs as compared to a three-year term, mainly due to the commodity and market  
13 information available to the utility in preparation of their avoided costs.

14 **Q. Why is this important in the context of the Company's request to limit QF**  
15 **contract terms to three years?**

16 A. There are two key points: 1) predictions regarding the future level of prices are often  
17 wrong, and 2) price changes over just a few years can be significant. One of the  
18 primary assertions made by intervenors in this docket, including Ms. Andrus, is that  
19 energy prices have been low for an extended period of time implying that long-term  
20 contracts at current avoided cost prices could benefit customers in the long run.<sup>15</sup>

21 This same type of prediction, if made a year ago, would have proved to be wrong.

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<sup>12</sup> Sierra Club/100, McGuire, page 9-10, lines 5-21.

<sup>13</sup> Obsidian and Cypress Creek/100, Brown, page 12, lines 4-9.

<sup>14</sup> CREA/100, Skeahan, page 6, lines 15-22.

<sup>15</sup> Staff/ 100, Andrus, page 14, lines 7-13.

1 Such predictions are not relevant in this proceeding, and the inaccuracy of long term  
2 predictions supports the Company's proposal to shorten QF contract terms.

3 Customers should not be exposed to the increased price risk that comes with 15-year  
4 QF contracts because those same customers are not exposed to that same risk under  
5 the Company's current hedging practices and policies. As stated in my direct  
6 testimony, if recent QF projects are priced higher than the market alternative by just  
7 10 percent, it would create a \$4.3 million impact in 2015 for Oregon customers.

8 **Q. What do you conclude regarding the Company's hedging policies and a 15-year**  
9 **fixed price QF contract term?**

10 A. The hedging collaborative with Staff and stakeholders held in 2012 resulted in the  
11 Company adopting a policy that clearly delineates between hedging and speculative  
12 trading. The Company does not engage in speculative trading. The Company hedges  
13 within certain boundaries established as a result of the collaborative. The hedges are  
14 intended to limit price volatility in the three year time horizon to which the hedging  
15 policy applies. The 15-year fixed price QF contract term currently in place falls well  
16 outside this three year time horizon. A 15-year fixed price QF contract term impacts  
17 customer rates the very same way as a 15-year commodity hedge. A 15-year  
18 commodity hedge is a fixed price purchase of energy for a fixed duration, which is  
19 exactly the same as a 15-year QF contract, but with one distinction that makes it  
20 worse – the QF contract throws in volume risk over the term as well. This  
21 inconsistency does not maintain the ratepayer indifference standard required by  
22 PURPA.



1 **Q. Sierra Club asserts that QF contracts are comparable to the Company's**  
2 **generation resources. Do you agree?**

3 A. No. Mr. McGuire discusses at length the reasons why a QF contract is actually less  
4 risky to the customer than a utility-owned asset including performance guarantees,  
5 and where the QF is not paid if not generating or not built, and the QF assumes all the  
6 operating risk.<sup>16</sup> First it is instructive to review how new Company resources are  
7 acquired. As I explained on pages 24-25 of my direct testimony, new Company  
8 resources, both plant or transactions, are procured differently than PURPA contracts.  
9 PURPA contracts do not go through the same extensive IRP process to determine if  
10 they are needed, and they do not go through the same competitive RFP process,  
11 which includes oversight by an independent evaluator to ensure selected bids are  
12 lowest cost.

13 Of greater importance is that QF resources cannot be dispatched in the same  
14 manner as a Company resource. In fact, QFs as must-take obligations cannot be  
15 dispatched at all except under system emergency conditions directed by PacifiCorp  
16 Transmission grid operations. This is a critical difference that impacts customer  
17 costs. For example, if the marginal cost of a Company gas plant is \$40 per MWh, but  
18 another alternative, such as a short-term firm market purchase, costs only \$30 per  
19 MWh, the Company would dispatch down the gas plant and buy from the market,  
20 saving customers \$10 per MWh. If a QF contract has a \$40 per MWh price, but  
21 another alternative costs \$30 per MWh, the Company cannot curtail or dispatch down  
22 the QF contract – it must continue to purchase the output at \$40 per MWh even  
23 though a less expensive alternative exists.

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<sup>16</sup> Sierra Club/100, McGuire, page 12-13, lines 17-6.

1 I agree with Mr. McGuire that most QF contracts have performance  
2 guarantees, which are generally minimum delivery obligations with damages if  
3 minimums are not met. However, they are still must-take contracts, meaning that the  
4 Company cannot dispatch them down so while the QF may be generating at a  
5 minimum level, it is still a must-take obligation. He also goes on to say that the  
6 performance risk is with the QF, so if the QF does not generate or does not build the  
7 project, the QF does not get paid. However, he does not address the risk the customer  
8 faces when the generator does not generate or does not get built. The QF contract is a  
9 resource used to serve Company network load, it is being counted in its load and  
10 resource balance, the Company has acquired network transmission to move that QF  
11 generation to load, and if the QF does not generate, the Company would need to  
12 secure replacement power, having incorporated expected generation from the QF  
13 resource in its system position, to the detriment or benefit of the customer. The  
14 difference with a Company resource is the control of the resource, both on  
15 performance and operation.

16 Additionally, Company resources are not guaranteed a specified rate of return  
17 through the life of the asset. Company resources face review during each rate case  
18 and are subject to changes in the Company's allowed rate of return, multi-state  
19 allocation protocol issues, and other such cost recovery risks.

20 **FEW IF ANY SOLAR QFS WITH PPAS WILL BE CONSTRUCTED**

21 **Q. Please summarize your understanding of the intervening parties' position.**

22 A. My summary is based on Obsidian's witness Mr. Brown. Many of the other  
23 witnesses, including CREA's Mr. Skeahan and Sierra Club's Mr. McGuire, echo Mr.

1 Brown's position and point to his response testimony in a joint cross testimony filing.

2 Mr. Brown indicates that PacifiCorp has not experienced an extreme or  
3 unprecedented spike in PURPA power development and any modest surge has passed  
4 with the 30 percent federal investment tax credit (ITC) window closing at the end of  
5 2016. He states that no solar QF projects have been built to date and few will be built  
6 in 2016. He also goes on to state that any project that does not have its  
7 interconnection agreement executed or is not in the final stages of execution will miss  
8 the 30 percent ITC cut-off.<sup>17</sup> Mr. Brown explains his response by comparing  
9 PacifiCorp's interconnection requests and the projects actually constructed and  
10 operating as evidenced by the lack of completed projects for 2014 and 2015. He  
11 points out that solar projects have a lower success rate. He also suggests that  
12 PacifiCorp's ratepayers are not being forced to purchase unwanted or overpriced solar  
13 QF power because no solar QF projects have been built in PacifiCorp's Oregon  
14 service territory. In fact, PacifiCorp's current avoided cost rate is so low that building  
15 a solar QF project is not profitable citing his own experience with a Schedule 38  
16 project in Oregon.<sup>18</sup>

17 **Q. What is the misconception in Mr. Brown's position and statements?**

18 A. First, I would like to acknowledge that Mr. Brown used accurate data so I am not  
19 disputing the OASIS information, which is a public source. Nor do I dispute his  
20 understanding of the industry. He has successfully developed two solar projects for

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<sup>17</sup> Obsidian and Cypress Creek/200, Brown, page 9, 15–19.

<sup>18</sup> *Id.* at 12, 4-5.

1 the Company in Oregon to meet Oregon's solar capacity mandate:<sup>19</sup> a 2 MW project  
2 that is operating and a second 5 MW that he has recently sold to NextEra Energy and  
3 is scheduled to be operational by the end of the year.

4 As a developer, one would think Mr. Brown would clearly understand the  
5 length of time it takes to move from development to operation, yet he seems to  
6 discount that fact when stating there are no commercial solar QFs in 2014 and 2015.  
7 That is not quite true; the Company expects to begin receiving energy from a solar  
8 QF in December 2015. Of the 28 solar QF projects totaling 234 MW, all were  
9 executed in 2014 and 2015. The Company initially began receiving solar QF  
10 inquiries in 2013. In fact, the Company did not receive formal PPA requests for solar  
11 projects until the first quarter of 2014. Of the 28 executed contracts, 21 have  
12 scheduled commercial operation dates (COD) in 2016, one in 2015, and six in 2017,  
13 so Mr. Brown's statement of no solar QF constructed and operating in 2014 and 2015  
14 is close but not quite accurate. And as a developer, he should know that the  
15 development and construction schedule for solar from the execution date to  
16 commercial operation date is approximately 12 to 24 months depending on  
17 interconnection which aligns with the scheduled commercial operation dates in the  
18 contracts.

19 In regard to current status of these executed contracts, only one project has  
20 requested termination due to a permitting issue that would prohibit construction,  
21 versus an economic decision, and has been removed from the queue. A couple of

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<sup>19</sup> Under Oregon statute (ORS 757.370), PacifiCorp's total solar photovoltaic generating capacity from qualifying systems must be at least 8.7 megawatts of alternating current on or before January 1, 2020. All costs prudently incurred to comply with the solar energy capacity standard, including above-market costs, are recoverable in rates.

1 projects have indicated their CODs may be delayed a few months due to additional  
2 interconnection work while others have indicated they would like to move their COD  
3 forward from 2017 into 2016. This is a very typical development and construction  
4 cycle. While the QF contracts do not have a monthly pre-COD progress report  
5 requirement like other QF contracts in other states, the Company maintains an active  
6 and open communication with the developers on progress of their projects against  
7 their contract milestones. Based on those discussions, information from OASIS, and  
8 other public records (i.e., county permitting, etc.), the Company's expectation is that  
9 the majority of these projects will reach commercial operation versus the doom and  
10 gloom prediction by Mr. Brown. Notably, new QFs with CODs during 2016 are  
11 included in the Company's Oregon 2016 Transition Adjustment Mechanism (TAM)  
12 submittal, supported by an attestation that "PacifiCorp has a commercially reasonable  
13 good faith belief that these QFs will reach commercial operation during the rate  
14 effective period based on the information known to PacifiCorp."<sup>20</sup> I also disagree  
15 with Mr. Brown's suggestion that with current avoided cost prices there is no need for  
16 any form of contract term or eligibility cap limit since no solar QF projects of any  
17 size will be developed. Again, this is not about eliminating solar QF or any QF  
18 project but about ratepayer indifference standard in PURPA.

19 **PROJECTS CANNOT SECURE FINANCING UNDER A THREE YEAR TERM**

20 **Q. Mr. McGuire implies that PURPA requires a contract term that ensures a QF**  
21 **can obtain financing<sup>21</sup>. Do you agree?**

22 **A.** No. As noted earlier in my testimony, I explain how the issue of contract term is not

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<sup>20</sup> Advice No. 15-041, Attestation of Joseph Hoerner (Nov. 16, 2015); Docket No. UE 296, Direct Testimony of Brian S. Dickman, PAC/100, Dickman/42-43 (Apr. 1, 2015).

<sup>21</sup> Sierra Club/100, McGuire, page 19, lines 3-4.

1 addressed in PURPA or in FERC regulations. There is no requirement to ensure a QF  
2 can obtain financing. The obligation is must-take, not “must ensure economic  
3 viability.”

4 **Q. What is your response to intervenors’ suggestion that a three year contract term**  
5 **will end the development of renewable QFs in Oregon?**

6 A. The fact that a PURPA contract only has a term of three years does not mean that the  
7 project will have only a three year life. The must-take relationship between QF  
8 projects and the Company will not change with the shortening of the contract term.  
9 The Company will be required to purchase the power produced by the project as long  
10 as PURPA requirements exist and the project qualifies as a QF under PURPA.

11 Limiting the term of the contract to three years simply means that the price the  
12 Company and its customers will be required to pay to the QF will be subject to  
13 adjustment every three years and will be more closely aligned with the Company’s  
14 current avoided costs. After each three year contract term, the Company will still be  
15 required by PURPA to contract with the QF for another term. The Company is not  
16 seeking to limit its PURPA purchase obligation to three years – it is simply proposing  
17 to align the pricing terms with the time horizons used in other commodity hedges and  
18 the IRP action plan.

19 **A CONTRACT ELIGIBILITY CAP OF 100 KW WILL SEVERELY HAMPER WIND**  
20 **AND SOLAR QF DEVELOPMENT IN OREGON.**

21 **Q. Staff and other intervenors have suggested alternatives to the requested 100 kW**  
22 **eligibility cap. Do you agree with their recommendations?**

23 A. No. On August 14, 2015, under Order No. 15-241, the Commission implemented an

1 interim eligibility cap of 3 MW for Schedule 37 wind and solar projects. Ms. Andrus  
2 of Staff has suggested that the eligibility cap should be set somewhere between 2 and  
3 4 MW for wind and solar to allow for larger wind turbine projects, protect small  
4 developers from market barriers, and help prevent gaming through the disaggregation  
5 of large projects to smaller projects.<sup>22</sup> In Staff's cross-response testimony, Ms.  
6 Andrus provides an alternative to changing the eligibility cap, recommending that the  
7 Commission could wait to see if the lower avoided cost prices currently in Schedule  
8 37 provide the relief sought by the Company.<sup>23</sup> Mr. Lowe of REC asserts that  
9 existing small base-load QFs, specifically those eligible for rates under Schedule 37,  
10 are not causing the same harm as new, large solar and wind QFs.<sup>24</sup> Small 15-year  
11 contracts carry the same fixed price risk as larger contracts, but I agree with Mr.  
12 Lowe that the magnitude of the risk is much smaller.

13 The Company's concern with a 15-year QF contract term is largely driven by  
14 the limitless nature of PURPA's must-purchase obligation. A very large number of  
15 megawatts, even if through a large number of small contracts, could be put to the  
16 Company at a fixed price for 15 years, introducing a considerable amount of fixed  
17 price risk to customers. This concern is currently not lessened for small projects  
18 executed under Schedule 37,<sup>25</sup> primarily because Schedule 37 is unlimited in total  
19 capacity that can be executed under the schedule. While the Company continues to  
20 recommend that the three year contract term apply to all QF contracts, the Company  
21 acknowledges the risk from Schedule 37 QFs is less while the 3 MW interim cap

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<sup>22</sup> Staff/100, Andrus, page 19, lines 16-23.

<sup>23</sup> Staff/200, Andrus, page 11, lines 6-9.

<sup>24</sup> Coalition 100/Lowe page 5 lines 19-24.

<sup>25</sup> The Company recognizes the 3 MW interim order is in place but is basing its response based on the published 10 MW Schedule 37.

1 being applied to Schedule 37 is in place during this proceeding.

2 While the Company has been operating under that Order, the Company does  
3 not believe it is sufficient. As noted in my direct testimony, setting the solar and  
4 wind eligibility threshold to 100 kW will allow project-specific characteristics to be  
5 applied to a larger and more appropriate population of QF projects resulting in more  
6 accurate avoided cost pricing by allowing avoided costs to reflect a QF's unique  
7 characteristics. This will, in turn, help minimize the difference between prices paid to  
8 QFs and actual avoided costs, and ensure that customers are indifferent to QF  
9 purchases.

#### 10 **RENEWABLE BENEFITS OF QFS**

11 **Q. Mr. McGuire, as well as several other witnesses, asserts that QFs could be a**  
12 **means of gaining compliance with environmental regulations. What critical fact**  
13 **are they ignoring?**

14 A. The critical fact that is being ignored is that the Company does not retain 100 percent  
15 of the renewable energy credits from these QF projects. Under current Schedule 37  
16 and 38 methodologies, the Company shares renewable energy credits with the QF  
17 based on resource sufficiency/deficiency periods. Prior to the renewable fixed  
18 avoided cost streams being implemented in Schedule 37, the QF retained 100 percent  
19 of the renewable energy credits and could sell renewable energy credits to a third  
20 party or retire its renewable energy credits. In either case, the Company cannot claim  
21 the environmental attributes associated with the renewable generation from a QF  
22 without retaining the rights to the renewable energy credits. Therefore, any argument  
23 made by parties in this docket relative to the perceived benefit to customers of



1 acquiring “renewable” QF resources is deceiving and should not be a consideration  
2 when evaluating the appropriate contract term for QFs.

3 **Q. Please summarize your understanding of the Sierra Club’s position in this**  
4 **docket.**

5 A. Sierra Club witness Mr. McGuire implies that the Company is trying to change the  
6 state’s competitive energy market and is trying to be relieved of its PURPA must-  
7 purchase obligation. He then suggests three reasons why a 15-year contract term  
8 should be continued: 1) a QF contract term of this length is necessary to realize  
9 PURPA’s goal of supporting QF development, 2) the current pricing mechanism will  
10 act on its own accord to limit QF development, and 3) there are many tangential  
11 benefits of renewable generation.

12 **Q. Mr. McGuire suggests that the contract term should remain at 15 years because**  
13 **there are many benefits to renewable generation.<sup>26</sup> Is his characterization and**  
14 **valuation of those alleged benefits accurate?**

15 A. No. As a general response, the objective of this docket is not to re-evaluate the  
16 avoided cost calculation for renewable generation. This docket strictly addresses the  
17 contract term and not the contract price. Notwithstanding that objective, I find  
18 several flaws in Mr. McGuire’s calculation of his suggested benefits. Since this  
19 docket is not focused on the valuation of QFs, I will only briefly address each  
20 suggested benefit:

21 • REC sales revenues – Mr. McGuire suggests that the Company can sell renewable  
22 energy credits and achieve additional revenue. He ignores that fact that the  
23 Company does not retain 100 percent the REC from a QF, making this argument

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<sup>26</sup> Sierra Club/100, McGuire, page 20, lines 20-24.

1 somewhat irrelevant. The second point here is that for those renewable energy  
2 credits acquired by the Company, they are allocated to each state since a QF is a  
3 system resource. Under current allocations, Oregon receives approximately 25  
4 percent of the renewable energy credits which are first applied to Oregon's RPS  
5 requirements before even being deemed marketable. All of those points truly  
6 diminish the impact of an Oregon QF on REC sales revenue.

- 7 • Hedging benefit – Mr. McGuire suggests long-term renewable QF contracts are a  
8 better hedge than Company resources because the fuel price is locked down (since  
9 there is no fuel cost). He fails to acknowledge that a Company resource is only  
10 acquired if a long-term need is identified through the IRP process. No such needs  
11 assessment occurs with a QF contract. And he further argues that QF contracts  
12 protect against spikes in natural gas prices. He fails to acknowledge how they  
13 also can hurt customers when QF prices are locked-in and gas prices decline  
14 (which has been the case over the past several years). He also fails to  
15 acknowledge that QFs cannot be backed down even when lower cost alternatives  
16 are available, while Company resources are dispatched economically.
- 17 • Market price mitigation – Mr. McGuire suggests that the addition of large  
18 amounts of renewable generation will decrease demand on the wholesale markets  
19 and thus decrease prices in general. His argument makes little sense– why would  
20 one acquire as much as possible of something now when the affect will be to  
21 make it cheaper in the future? Why not acquire nothing now and wait for the  
22 cheaper prices? Notwithstanding the illogical nature of this position, as I  
23 described earlier in my reply testimony, guessing on the direction of future prices

1 is purely speculative.

2 • Capacity optionality – Mr. McGuire asserts that additional QFs will add  
3 generation capacity to the Company’s system, but then acknowledges that the  
4 Company has no need for capacity. He also goes on to forecast that if certain  
5 actions occur through early retirement of coal plants or compliance needs, that  
6 customers are better off because they have paid for these long-term renewable  
7 contracts as “insurance.”<sup>27</sup> However, he is wrong to state the insurance is at no  
8 cost; in fact, the customer has paid a significant premium at the avoided cost price  
9 for that insurance on a long-term basis with no option to terminate.

10 • Local economic benefits – Mr. McGuire suggests the construction of solar  
11 generation provides an economic benefit to Oregon. Local economic benefit is  
12 not relevant in this proceeding and has not been considered in the past when  
13 valuing QFs. And if such a consideration were to be made, one would have to  
14 compare the economic benefit of a solar resource to other resource types, which  
15 Mr. McGuire has not done.

16 **Q. Mr. McGuire concludes by declaring the time as “a window of opportunity” and**  
17 **QF contracts executed now “will be a good deal for ratepayers.” Should these**  
18 **types of statements be considered in the Commission’s implementation of**  
19 **PURPA?**

20 A. No. These statements represent speculation. I have witnessed Oregon solar QF  
21 prices fall from the high \$70s per MWh for Schedule 37 contracts executed in mid-  
22 2014, to the high-\$60s per MWh for another batch of contracts in early 2015, to the  
23 low-\$60s per MWh for the current batch of solar QFs executed. Each time, I was

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<sup>27</sup> Sierra Club/McGuire, page 30, lines 1-6.

1 skeptical that the price could go lower and still be economically viable for QFs,  
2 largely based on representations by QF developers each time that the bottom had been  
3 reached. Mr. McGuire also points to the fact that the federal ITC will decrease from  
4 30 to 10 percent, essentially slamming the door on further solar project development,  
5 yet almost 20 percent of the Company's recent solar QFs were executed with  
6 commercial on-line dates in 2017.<sup>28</sup> This suggests that the solar industry as a whole  
7 will continue to find ways to expand.

8 Notwithstanding this experience, whether one believes the QF avoided cost is  
9 low or high at any given time does not change the fact that the Company is being  
10 forced to enter into 15-year contracts for energy that it otherwise would not procure  
11 under the current IRP action plan and the current hedging policies and practices.

#### 12 OTHER ISSUES

13 **Q. What are the specific issues raised by the Renewable Energy Coalition?**

14 A. REC witness Mr. Lowe makes an overarching recommendation to reject the  
15 Company's request to shorten the contract term to three years or reduce the eligibility  
16 cap; however, he then goes on to recommend that in the event the Commission does  
17 shorten the term or reduces the eligibility cap to solar or wind, it should not apply to  
18 base-load Schedule 37 eligible QFs.<sup>29</sup> While the eligibility cap recommendation is  
19 consistent with the Company's request, he suggests two alternatives: an annual cap on  
20 the capacity of wind and solar projects added, and/or a more stringent security  
21 deposits on larger wind and solar projects. Mr. Lowe also recommends that a

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<sup>28</sup> Market information from SEPA and other solar industry sources support a slight rise in project costs followed by a downward trend in project costs. The main drivers are continued improvement in construction efficiencies, manufacturing costs, and increasing demand for renewable resources at state levels.

<sup>29</sup> In the case of REC's testimony, this refers to non-intermittent small renewable QF resources, almost exclusively small hydroelectric projects. Coalition 100/Lowe page 1, lines 20-24.

1 capacity payment be included for existing QFs that renew their contracts, even if the  
2 shorter term contract period does not include a resource need.

3 **Q. How do you respond to these two recommendations?**

4 A. I have already addressed the eligibility cap earlier in testimony so I will focus on his  
5 request for a capacity payment to existing QF contracts when renewed.

6 **Q. Mr. Lowe recommends the Company make payments for capacity to existing  
7 QFs when they renew their contract. Do you agree?**

8 A. No. I do not agree that capacity payments should apply to existing QFs even if the  
9 Company does not have a forecasted capacity need during the three year term. There  
10 is no guarantee a QF will continue to sell to the Company at the expiration of any  
11 contract term. Providing or bringing value forward from time periods that are not  
12 included in the contractual obligations of both parties is not prudent and does not  
13 provide protection to customers that they will receive the future capacity benefits for  
14 which they have prepaid. I recommend the Commission reject this proposal.

15 **SUMMARY**

16 **Q. Please summarize your key conclusions after reviewing parties' response  
17 testimony.**

18 A. First I will summarize the Company's request for a three-year fixed price contract  
19 term. No intervening party has provided credible evidence to refute the key facts  
20 upon which the Company bases its request. No one has disproven the fact that a  
21 15-year fixed price QF contract term is:

22 1. Inconsistent with the Company's hedging practices. A 15-year fixed-price QF  
23 contract impacts customers in the same manner as a 15-year energy hedge and

1           therefore should be subject to the same term limitations established for non-  
2           PURPA energy hedges.

3           2. Providing minimal if any environmental benefits to the Company. Parties suggest  
4           that the environmental benefits associated with renewable QFs justify the  
5           continued use of a 15-year fixed price contract term, but they fail to acknowledge  
6           that the Company receives only a portion of the renewable energy credits from  
7           Oregon renewable QFs. Customers receive all of the fixed price risk and limited  
8           environmental benefits.

9           3. Inconsistent with resource acquisition policies and practices for non-PURPA  
10          energy purchases. The Company's resource acquisition policies for non-PURPA  
11          are based on need defined through its IRP and secured through a highly  
12          scrutinized RFP process.

13          4. Not aligned with the Company's IRP planning cycle and action plan. Without the  
14          requested modification to the maximum allowable contract term, the Company  
15          will continue to be forced to acquire long-term, fixed-price PURPA contracts  
16          even though PacifiCorp's 2015 IRP shows no new resource is required until 2028.

17          I continue to recommend the implementation of a three-year fixed price contract term  
18          for all QF contracts.

19                 Second, let me address the Company's request to implement a 100 kW  
20          eligibility cap for solar and wind QF contracts under Schedule 37. Similarly, no  
21          intervening parties have proven the fact that a 100 kW eligibility cap would prevent  
22          solar and wind QF projects from getting built in Oregon. Only one of the 29 solar QF  
23          projects executed in 2014 and 2015 has self-terminated due to permitting issues and

1 the first solar QF project of 0.8 MW will be energized this year. Additionally, the  
2 Company has continued to receive large Schedule 38 solar QF requests during the last  
3 half of 2015 as well as general inquiries on developing solar QF projects, both large  
4 and small. I continue to recommend the implementation of a 100 kW eligibility cap  
5 for wind and solar QF contracts under Schedule 37.

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

7 A. Yes.