

ORDER NO. 17 019

ENTERED JAN 24 2017

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

UE 313

In the Matter of

PACIFICORP, dba PACIFIC POWER,

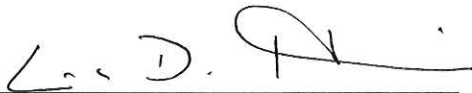
Update to Schedule 203, Renewable Resource  
Deferral Supply Service Adjustment.

ORDER

**DISPOSITION: STAFF'S RECOMMENDATION ADOPTED**

This order memorializes our decision, made and effective at our January 24, 2017 Regular Public Meeting, to adopt Staff's recommendation in this matter. The Staff Report with the recommendation is attached as Appendix A.

Dated this 24 day of January, 2017, at Salem, Oregon.



**Lisa D. Hardie**  
Chair



**John Savage**  
Commissioner



**Stephen M. Bloom**  
Commissioner

A party may request rehearing or reconsideration of this order under ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Circuit Court for Marion County in compliance with ORS 183.484.

ITEM NO. 3

PUBLIC UTILITY COMMISSION OF OREGON  
HIGHLY CONFIDENTIAL STAFF REPORT  
PUBLIC MEETING DATE: January 24, 2017

REGULAR X CONSENT \_\_\_\_\_ EFFECTIVE DATE January 25, 2017

DATE: January 10, 2017

TO: Public Utility Commission

FROM: Lance Kaufman *LK*

THROUGH: *JE* Jason Eisdorfer and *Mc EH* Marc Hellman

SUBJECT: PACIFIC POWER: (Docket No. UE 313/Advice No. 16-011) Update to Renewable Resource Deferral Supply Service Adjustment, Schedule 203.

**STAFF RECOMMENDATION:**

The Public Utility Commission of Oregon should approve PacifiCorp Advice No. 16-011 with an effective date of January 25, 2017, subject to the following conditions:

1. PacifiCorp, Staff, and interested parties hold a workshop to discuss the appropriate forum regarding the issue of bundling treatment of the Renewable Energy Credits (RECs) purchased with the monies collected in Schedule 203.

**DISCUSSION:**

Issue

Whether the Commission should approve Schedule 203 and allow recovery of PacifiCorp's 2017 Renewable Energy Credit (REC) compliance costs associated with seven new long term REC purchase contracts.

Applicable Rule or Laws

- ORS 757.205 requires that public utilities file all rates, rules, and charges with the Public Utility Commission of Oregon (OPUC).
- ORS 757.210 establishes a hearing process to address utility filings and requires rates be fair, just and reasonable.

Docket UE 313  
January 10, 2017  
Page 2

- OAR 860-022-0025 requires that new tariff filings include statements showing the new rates, the number of customers affected, the impact on annual revenue, and the reasons supporting the proposed tariff.
- OAR 860-022-0030 requires that tariff filings which propose increased rates include statements showing the number of customers affected, the annual revenue under existing schedules, the annual revenue under proposed schedules, the average monthly bills under existing and proposed schedules, and the reasons supporting the proposed tariff.
- OAR 860-027-0300(9) establishes deferred accounting procedures for public utilities.
- ORS 469A.075 requires utilities to maintain a renewable portfolio standard implementation plan.
- ORS 469A.120 allows all prudently incurred costs associated with compliance with a renewable portfolio standard to be recovered in rates.

### Analysis

#### *Background*

PacifiCorp filed Advice No. 16-11 on September 9, 2016. This filing updates PacifiCorp's Schedule 203 Renewable Resource Deferral Supply Service Adjustment. Staff analyzed the filing and submitted a memorandum to the Public Utility Commission regarding the filing prior to the December 6, 2016 OPUC Public Meeting. Staff's memo summarized the analysis performed and recommended that the Commission approve the Advice filing. This memo provides an expanded discussion of Staff's analysis as requested by the Commission.

Noble Americas Energy Solutions LLC (now Calpine Energy Solutions LLC or Calpine) filed written comments regarding Advice No 16-11 on December 1, 2016. In its comments Calpine objected to applying Schedule 203 charges to one year and three year direct access customers.

During the December 6, 2016 Public Meeting the Commission questioned Staff, PacifiCorp, and Northwest Intermountain Power Producers Coalition (NIPPC) regarding this matter. At the Public Meeting, the Commission requested that interested parties provide additional information to inform the Commission's decision. Subsequent to the Public Meeting, the Commission issued Order 16-470. This order requested that such parties comment on Calpine and NIPPC's issue by December 30, 2016, and noted that PacifiCorp had extended the effective date of the filing to January 25, 2017. Calpine and PacifiCorp filed comments on the issue on December 30, 2017.

Docket UE 313  
January 10, 2017  
Page 3

This memo responds to the Commission's request for additional information regarding this matter. Staff's analysis and recommendations represented in this memo remain unchanged from the initial memo. Staff has added its review of the Calpine comments to this second memo below.

Senate Bill 1547 (SB 1547) was signed into law by Governor Kate Brown and took effect on March 8, 2016. SB 1547 increased Oregon's renewable portfolio standard (RPS) requirements for PacifiCorp. Under the new standard, PacifiCorp forecasted a REC shortfall beginning in 2025. PacifiCorp issued requests for proposals (RFPs) in April 2016 for new renewable generation resources and for RECs, including bundled RECs and unbundled RECs.

Concurrent with the RFP process, PacifiCorp also filed a revised RPS implementation plan (RPIP) in Docket No. UM 1790 consistent with ORS 469A.075. PacifiCorp filed its 2016 RPIP on December 29, 2015. In Order No. 16-158, the Commission acknowledged PacifiCorp's 2016 RPIP. However, due to the changes to PacifiCorp's RPS standards, the Commission required PacifiCorp to file an updated RPIP by July 15, 2016. PacifiCorp filed a revised RPIP on July 15, 2016. Staff performed a thorough review of the revised RPIP and submitted a report to the Commission regarding the revised RPIP on December 7, 2016. The Commission acknowledged the revised RPIP with conditions in Order 17-010.

Final selection of the RFP submissions was completed on July 15, 2016. However, the associated contracts were not finalized until August 8<sup>th</sup>, after the filing of the revised RPIP. The revised RPIP did not include the selected REC contracts due to the timing mismatch. Staff's review of PacifiCorp's analysis and REC selection indicates that the RFP evaluation and selection process was consistent with the revised RPIP.

PacifiCorp's initial filing contains no description of the analysis performed to support the final REC contract selection. However, PacifiCorp has since provided a detailed narrative of its analysis and decision making process. This narrative is included as Attachment 1 to this memo.

PacifiCorp evaluated various levels of new generation proposals and REC contracts against a base-case alternative of building new generation on a "just-in-time" basis.<sup>1</sup> The just-in-time alternative involves forecasting the future cost of new renewable generation as well as future energy markets and emission regulations. If the present value revenue requirement of early acquisition resources is less expensive, then early acquisition of renewable resources or RECs is justified.

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<sup>1</sup> Highly Confidential Attachment 2 page 21 contains a table summarizing the six levels of resource and REC procurement that were tested against the base case just-in-time approach.



Docket UE 313  
January 10, 2017  
Page 4

Due to uncertainty regarding the future, PacifiCorp evaluated numerous scenarios for the just-in-time comparison. The scenarios were built off of three different technology cases.<sup>2</sup> Each technology case was tested under expected market conditions, low market price conditions, high market price conditions, and the inclusion of emissions benefits. This resulted in 16 scenarios.

An additional sensitivity scenario was performed to test the impact of early coal retirements.<sup>3</sup> This sensitivity was based on the base market, low renewable cost scenario. These 17 sensitivities are discussed in further detail in the following sections. PacifiCorp found that a least cost method of satisfying the new RPS was to acquire resources with an incremental cost less than [REDACTED]

4

PacifiCorp chose to engage in early REC procurement at a cost point that results in a conservatively low level of early REC procurement. (The basis of this observation is discussed later on in this memorandum.) This decision selects the level of REC contracts that is optimal under a scenario of low future renewable generation costs. PacifiCorp engaged in seven contracts involving the purchase of nearly 6 million RECs over 21 years for a total cost of \$9.8 million.

Staff reviewed 30 responses to information requests submitted in this filing. In addition to the analysis presented in this memo, and the review of PacifiCorp's amended RPIP, a separate team of three Staff independently reviewed the PacifiCorp RFP filing.

#### *Scope of Staff Analysis*

The Commission must make a determination of whether the rates in this filing are fair, just and reasonable. Staff's analysis of this filing is intended to provide information to the Commission needed to make this decision. In general, Staff evaluated the following questions:

- Were the costs included in filing prudently incurred?
- Are the costs fairly allocated to rate payers?
- Are the rates calculated correctly?
- Does this filing comply with the applicable law?

<sup>2</sup> Highly Confidential Attachment 2 page 25 contains a table summarizing the three technology cases. JIT-1 contains the highest renewable cost escalations. JIT-3 contains the lowest renewable cost escalations.

<sup>3</sup> Highly Confidential Attachment 2 pages 34 and 35 contain the [REDACTED] scenario assumptions and results.

<sup>4</sup> See Highly Confidential Attachment 2 page 35.

Docket UE 313  
January 10, 2017  
Page 5

Staff's analysis supports a finding that the proposed rates are fair, just and reasonable. However, Staff observed several issues beyond the scope of this filing related to PacifiCorp's potential future need for RECs. These issues are documented in this memo and they should be considered in future filings.

*The costs included in this filing were prudently incurred*

Staff recommends that the Commission find the costs included in this filing were prudently incurred. Prudence of an investment is measured for objective reasonableness at the time the utility takes action, without the benefit of hindsight, and the standard does not require optimal results.<sup>5</sup> Here, PacifiCorp evaluated seven REC acquisition strategies with varying degrees of early REC acquisition. These strategies were tested across 13 future scenarios, resulting in 89 distinct PVRR calculations.<sup>6</sup> The 13 future scenarios cover a broad range of reasonable market, technology, and regulatory scenarios. Details of the acquisition strategies and future scenarios are provided in pages 20 through 36 of Highly Confidential Attachment 2. A summary of all model results are provided in pages 29 through 36 of Attachment 2 and detailed analysis of the three base case scenarios are provided in pages 37 to 58 of Attachment 2.

Staff reviewed the assumptions and calculations underlying the model results and found them reasonable and accurate. Under every scenario, early acquisition of RECs was less expensive than just-in-time acquisition of RECs. Table 1 below identifies the optimal REC acquisition strategy for each future scenario and the Present Value Revenue Requirement Difference (PVRR(D)) between the optimal strategy and the just-in-time strategy with no early REC acquisition. The last column in Table 1 provides the PVRR(D) of the REC acquisition strategy that is closest to the strategy included in this filing.<sup>7</sup>

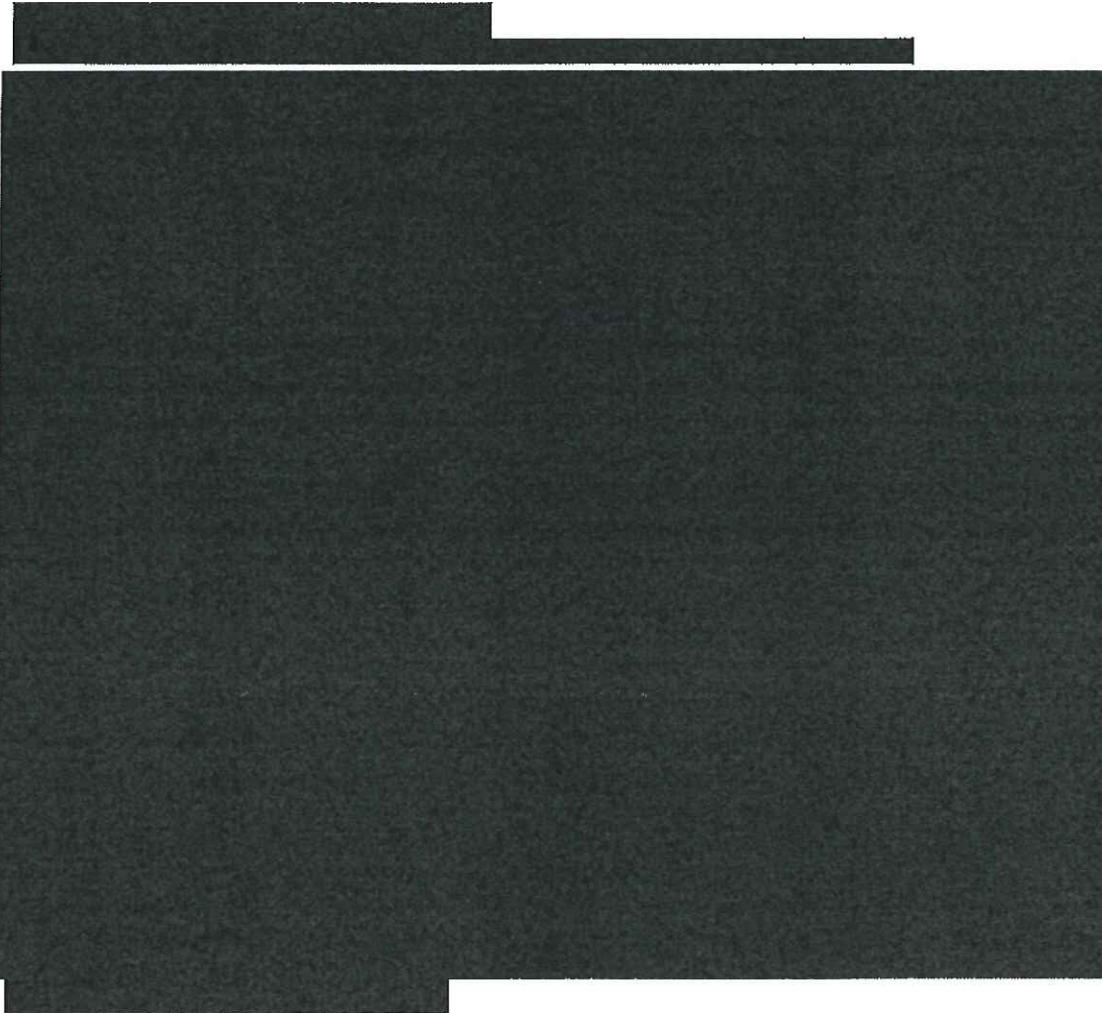
<sup>5</sup> Order No. 12-493 at 25-27.

<sup>6</sup> A full permutation of strategies and scenarios would have resulted in 91 PVRR calculations, however PacifiCorp chose not to calculate the PVRR requirement for two REC acquisition strategies under one scenario. See page 35 of Highly Confidential Attachment 2.

<sup>7</sup> The strategy included in this filing contains [REDACTED]

[REDACTED] See Highly Confidential Attachment 3.

Docket UE 313  
January 10, 2017  
Page 6



The actual strategy pursued in this filing was less expensive than no early acquisition for all 13 future scenarios tested. Furthermore, no future scenario had an optimal acquisition strategy with a lower level of REC acquisition than the actual strategy. For this reason, the strategy chosen by PacifiCorp acquires a conservatively low level of early RECs.

The analysis supports the early acquisition of RECs by PacifiCorp. PacifiCorp has acquired long term contracts for the least expensive RECs resulting from PacifiCorp's recent RFPs. The analysis and methodology used in the Company's analysis are consistent with PacifiCorp's last-acknowledged RPIP in Docket UM 1790. For these reasons, Staff finds that the costs included in this filing were prudently incurred. Staff

Docket UE 313  
January 10, 2017  
Page 7

has a number of caveats to this finding. The caveats are presented at the end of this section.

*The costs included in this filing are fairly allocated*

The cost allocation for this filing is a contested issue. Cost allocation has two components: which service schedules to allocate costs to and how to allocate costs among the selected schedules. PacifiCorp allocates costs to all service schedules except long term direct access schedules. PacifiCorp allocates costs among the selected schedules proportionately to the existing allocation of generation revenue requirement.

Calpine and NIPPC contend that costs should not be allocated to one year and three year direct access schedules. No party contends the use of generation revenue requirement to apportion costs.

All parties agree that this issue is similar in nature to issues raised by Calpine in PacifiCorp's recent power cost dockets, Docket Nos. UE 296 and UE 307. Staff reviewed the similarities and differences between the power cost issue and the current issue. PacifiCorp's proposed treatment appears consistent with the Commission's recent Orders in Docket Nos. UE 296 and UE 307.

In Docket No. UE 296, Noble sought to include the value of freed up RECs in the calculation of the value of freed up energy. This change would have applied to both short term and long term direct access schedules. PacifiCorp's response was that the Commission requires it to bank all freed-up RECs. In Order 15-394 the Commission did not adopt Noble's proposal, providing two supporting reasons:

1. PacifiCorp is required to bank all RECs; and
2. The net present value of freed-up Recs is de minimis.

In Docket No. UE 307 Noble proposed that changing circumstances related to the passage of Senate Bill 1547 justified revisiting the issue of incorporating REC values into the transition adjustment. Commission Order 16-482 added to the findings in Order 15-394 by stating "Over the long run, if there is a guaranteed loss of load due to direct access, then there may be benefits to other customers by altering the point in time when PacifiCorp would need to take resource actions to comply with the RPS. However, based on the record, PacifiCorp would not need to take such action to ensure compliance with the RPS until the mid-2020s."<sup>8</sup>

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<sup>8</sup> See Order 16-482 at page 22.



Docket UE 313  
January 10, 2017  
Page 8

This statement indicates that the Commission was acknowledging the potential for a benefit resulting from long term direct access load related to freed REC values. In this filing PacifiCorp has chosen to pursue an early REC acquisition strategy. This strategy is specifically targeting the mid 2020's compliance requirements identified by the Commission in Order 16-482. For this reason excluding long term direct access customers from Schedule 203 is consistent with past Commission Orders.

Calpine proposes that short term direct access customers also be excluded from paying under Schedule 203. Calpine confounds this issue by relating it to the treatment of RECs in PacifiCorp's net power cost proceedings. However, the Commission should distinguish between treatment in net power costs and treatment of the costs in this filing. PacifiCorp's net power cost proceeding is the appropriate venue to address the value of freed up energy. In this filing, the Commission should only evaluate whether short term direct access customers are appropriately charged for early acquisition RECs.

The costs incurred in this filing are not due to current customers' energy use. A marginal increase in cost of service energy use today would not impact the REC contract costs recovered in this filing. Furthermore, the costs in this filing are primarily driven by PacifiCorp's need to plan for future REC needs. For these reasons, it is appropriate to treat cost of service customers and short term direct access customers on equal footing with regard to Schedule 203.

PacifiCorp allocates this filing's costs according to PacifiCorp's current allocation of generation revenue requirement. The generation revenue requirement allocation was established in 2013 as part of PacifiCorp's last general rate case. The allocation includes both a demand and an energy component. Demand and energy are two different measures of customer size. Customer size is a reasonable proxy for the planning burden that current customers place on PacifiCorp for future REC retirements. For these reasons Staff finds that PacifiCorp's proposed allocation is fair.

*The rates included in this filing are correctly calculated*

Staff reviewed the workpapers used to calculate the rates in this filing. The workpapers appear to correctly calculate the rates in the proposed tariff sheet. These rates are based on expected contract costs and forecasted energy use. Any deviations in actual costs and sales from forecasted amounts should be incorporated into an annual update to Schedule 203.

*PacifiCorp's filing complies with the applicable law*

PacifiCorp's filing complies with the applicable law. The filing include statements showing the new rates, the number of customers affected, the percentage impact of the new rates on average customers, the impact on annual revenue, and the reasons

Docket UE 313  
January 10, 2017  
Page 9

supporting the proposed tariff. The Commission noted that the reasons supporting the proposed tariff contained relatively few details for a filing that requested cost recovery of \$9.8 million. However, PacifiCorp remedied this shortfall with substantial and detailed responses to Staff information requests.

This filing affects all customers except long-term direct access customers. The average bill impact for residential customers is 0.05 percent. The impact on PacifiCorp's total revenues is also 0.05 percent. The need for securing additional RECs is primarily due to Oregon's renewable portfolio standards. As noted above the costs included in this filing are prudently incurred, and the rates are fairly designed.


*Concerns and caveats regarding this filing*

Staff has a number of concerns regarding this filing. These concerns do not negate or conflict with Staff's finding that the rates appear fair, just and reasonable.

- PacifiCorp's conservative approach may lead to higher future RPS compliance costs
- The future scenarios that drive PacifiCorp's conservative approach do not appear to be consistent with PacifiCorp's Integrated Resource Plan scenarios.
- PacifiCorp's bundling treatment of RECs may lead to higher future RPS compliance costs
- PacifiCorp's recent REC sales are not consistent with the early REC acquisition strategy contained in this filing.

*Potential impacts of conservatively low REC procurement*

PacifiCorp selected a conservatively low level of REC procurement. PacifiCorp evaluated early REC procurement against multiple just-in-time scenarios. PacifiCorp chose to acquire fewer RECs than the amount supported by most scenarios. By selecting a lower level of early REC procurement, PacifiCorp reduces the risk that it will procure too many early RECs. However, because nearly all scenarios support a larger procurement of RECs, PacifiCorp is likely increasing future RPS compliance costs. Such costs could be avoided by engaging in a greater amount of early REC procurement. On average across the thirteen scenarios, PacifiCorp's selection is



PacifiCorp's selection does not appear to be the least cost solution within the context of PacifiCorp's evaluation scenarios because it does not minimize cost in nearly all scenarios. However, it may still be justified under a broader set of risk and fairness metrics. Early acquisition of RECs shifts the cost of RPS compliance from future rate

Docket UE 313  
January 10, 2017  
Page 10

payers to current rate payers. In addition, uncertainty regarding future costs, energy use, and environmental regulation may justify a conservative approach to RPS compliance.

*Scenario not consistent with IRP*

The only scenario considered by PacifiCorp which could make PacifiCorp's conservative approach reasonable and justified [REDACTED]

[REDACTED] This sensitivity appears to have been added to the analysis as an afterthought. It does not appear in the revised RPIP, and it is only applied to the base scenario under the most optimistic renewable technology assumptions.

The [REDACTED] scenario was not evaluated in the context of low or high markets or under the presents of emissions benefits. However, [REDACTED] is most likely in a situation where energy prices are low or emission regulations are stricter. The [REDACTED] is so optimistic regarding future renewable cost that building [REDACTED] compared to adding new gas generation.

PacifiCorp's recent IRP filings do not appear to place considerable weight on the possibility of rapid cost declines for solar generation. They also do not indicate that early coal retirements are likely to occur. The planning process in the IRP should be consistent with the planning process for early REC acquisition. This issue was previously discussed

Staff's concern is closely related to concerns raised in UM 1790. The Commission has already established a process to resolve these concerns in Order No. 17-010. In Order No. 17-010 the Commission directs parties to participate in a workshop to identify opportunities for revisions to the RPIP process and requirements.

*Unbundled treatment of RECs*

PacifiCorp indicated through responses to Staff information requests that it intends to treat as unbundled RECs a substantial portion of RECs that might actually qualify for Oregon purposes as bundled RECs.<sup>9</sup> PacifiCorp has indicated that the RECs in

<sup>9</sup> Approximately [REDACTED]



Docket UE 313  
January 10, 2017  
Page 11

question might qualify as bundled.<sup>10</sup> Due to the structure of Oregon's RPS, unbundled are more constrained in how they may be used to meet RPS requirements than bundled RECs. This is an important issue that deserves greater scrutiny and consideration. However, there is not yet a clear precedent for classifying the treatment of PacifiCorp RECs allocated across states in non-traditional circumstances such as in this docket. PacifiCorp states that this issue may be more appropriately addressed through a Multi State Process proceeding.

PacifiCorp does not anticipate retiring the unbundled RECs associated with this filing in the near future. Staff recommends that as a condition for approving this filing, PacifiCorp, Staff, and interested parties hold a workshop to discuss the appropriate forum regarding the issue of bundling treatment of the Renewable Energy Credits (RECs) purchased with the monies collected in Schedule 203. Such workshop should be held prior to January 1, 2018.

#### *PacifiCorp's sale of RECs*

PacifiCorp issued the REC RFP in April of 2016, received bids in May, and identified the final shortlist in July. In response to Staff information requests, PacifiCorp provided information on RECs it sold to third parties between January 2011 and October 2016. PacifiCorp indicated that it

[REDACTED]

Staff finds that PacifiCorp should evaluate and align REC sale and purchase criteria to prevent or minimize any potential for net losses for customers. Other PUC staff have tried to work with PacifiCorp to work up an agreement with willing states to purchase their RECs, but that effort did not result in an agreement.

<sup>10</sup> Attachment 1 contains PacifiCorp's responses to Information Request (IR) 10 and 24. In response to IR 10b PacifiCorp states "Therefore, RECs purchased for this project are bundled under the Oregon RPS... PacifiCorp has agreed for purposes of Oregon RPS compliance, to treat only a system-allocated share of the RECs generated from the project as bundled RECs..." In response to IR 24 PacifiCorp states "There is no specific written agreement." In response to IR 24 PacifiCorp also states that there is no Oregon state law or Commission Order requiring the RECs in question to be treated as unbundled.



Docket UE 313  
January 10, 2017  
Page 12

PacifiCorp has reviewed this memo and Staff has responded to most of PacifiCorp's concerns. PacifiCorp objects to Staff's third recommended condition as it does not wish to provide notice of a sale of RECs that are not allocated to Oregon.

### Conclusion

Under a broad set of futures, PacifiCorp's early REC acquisition reduces the cost of future RPS compliances relative to no early action. Staff's analysis supports a finding that the rates included in this filing are fair, just and reasonable. The costs included in this filing appear prudent.

However, Staff's review of this filing raises four forward looking concerns:

1. PacifiCorp's conservative selection of REC contracts likely increases expected future RPS compliance costs.
2. PacifiCorp's analysis supporting this Docket deviates from the analysis that has appeared in past IRPs.
3. PacifiCorp may treat qualifying bundled RECs that are the subject of this filing as unbundled, to the detriment of Oregon customers.
4. PacifiCorp is actively selling RECs, raising concerns for Staff that the sale and acquisition of RECs should be evaluated together and aligned to avoid any net losses.

None of these concerns are appropriately remedied in this filing. This is because the concerns relate to PacifiCorp's future RPS compliance costs seven or more years in the future, while the current filing recovers certain 2016 and 2017 costs. The costs recovered by the proposed Schedule 203 appear prudently incurred, the rates are calculated in an appropriate manner and the Schedule should go into effect as filed.

### **PROPOSED COMMISSION MOTION:**

Approve PacifiCorp's Advice No. 16-011 subject to the conditions in Staff's recommendation and allow Schedule 203 to go into effect with an effective date of January 25, 2017.

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## OPUC Informal Data Request 1

With regard to the Company's 2016 Resource Request for Proposals (RFP) and the 2016 Renewable Energy Credit (REC) RFP – please provide a detailed narrative regarding the Company's analysis and decision making process.

### Response to OPUC Informal Data Request 1

At the time the Company issued the 2016 renewable resource and renewable energy credit (REC) request for proposals (RFP), it projected it could meet its Oregon renewable portfolio standards (RPS) compliance requirements through 2024. Over this timeframe, the Company could meet its RPS compliance obligations with its existing bank of RECs and with RECs that will be generated from owned and contracted resources on a forecast basis.

With the extension and phase-out of federal tax incentives, reduced renewable resource costs, and improvements in renewable resource performance, PacifiCorp issued the 2016 RFPs to evaluate potential customer benefits from acquiring renewable resources and / or RECs over the near-term. The Company issued the resource RFP and REC RFP concurrently so that the full range of RPS compliance alternatives could be evaluated. The net levelized cost of resource bids, expressed in dollars per megawatt-hour (\$/MWh), were calculated as the differential between resource costs and resource benefits. As applicable, resource costs include the power purchase agreement (PPA) price, the cost to own (i.e., return on and return of capital, operations and maintenance (O&M), taxes, etc.), integration, and transmission service. Resource benefits include energy value and capacity value, net of assumed transmission deliverability costs, as applicable. Considering that one REC = one MWh, the net levelized cost of resource bids is directly comparable to the levelized cost of a REC.

The Company structured its analysis to consider the cost of both resource and REC bids relative to a range of longer-term resource procurement alternatives. The timing of renewable resource and / or REC procurement and its impact on the long-term cost of compliance, as measured by revenue requirement, is driven by the cost and volume of near-term procurement opportunities (i.e., bids) in relation to forecasted, longer-term needs and cost. Early action procurement can be used to build a bank and defer longer-term procurement. If near-term procurement can defer higher cost longer-term procurement needs, then customers benefit. Conversely, if one expects long-term procurement costs will be lower than near-term procurement opportunities, then early action may not be warranted. The Company used inter-temporal RPS compliance scenarios to evaluate these tradeoffs.

Three different just-in-time compliance scenarios served as the benchmark for this inter-temporal analysis. Under these scenarios, it is assumed that a just-in-time compliance strategy is implemented, whereby procurement of qualifying resources occurs when there

is a physical compliance need. Recognizing there is uncertainty in future resource costs, each of the just-in-time compliance scenarios reflected progressively lower future costs for wind and solar resources. The base case data were based on assumptions presented in PacifiCorp's 2015 Integrated Resource Plan (IRP) Update assuming wind costs grow at inflation. Considering that solar photovoltaic (PV) costs have been declining more steeply than wind resource costs, it is assumed that technological advancements in solar PV projects offset inflation, but that O&M costs grow with inflation over time. Cost assumptions for the remaining just-in-time compliance scenarios were derived from projected potential cost declines through 2025 as published in a recent report issued by the International Renewable Energy Agency (IRENA).

In each of the just-in-time compliance scenarios, renewable resources were assumed to be added to the Company's portfolio beginning 2025 and revenue requirement was calculated for incremental renewable resources added to achieve compliance through 2040. Revenue requirement includes return on and return of capital, taxes, run-rate operating costs, integration costs, third-party wheeling costs, as applicable, net of energy and capacity benefits.

The potential benefit of near-term procurement opportunities as bid into the RFPs were analyzed assuming different levels of near-term procurement, progressing from the lowest cost to highest cost opportunities, relative to the just-in-time compliance scenarios outlined above. For the inter-temporal analysis, the Company analyzed near-term procurement at six different intervals, with each interval reflecting groups of bids with increasing levelized costs. In each near-term procurement scenario, long-term procurement is deferred when targeting compliance through 2040.

For each of the just-in-time compliance scenarios, the present value of revenue requirement differential (PVRR(d)) among varying levels of near-term procurement volumes were calculated. This analysis provides an indication of where customer benefits can be maximized while considering uncertainties in future resource costs. The Company performed additional risk analysis to understand how the PVRR(d) results are impacted by forward price assumptions, greenhouse gas (GHG) emission prices, and assumed coal unit retirement dates, which influence potential transmission upgrade costs. The timing of coal unit retirements, which are uncertain, were found to significantly influence the optimal level of near-term procurement of RFP bids by showing that lower procurement levels would lower costs if coal unit retirement assumptions were adjusted to align with the timing of future renewable resource procurement needs. Considering the Company can continue to test the market with future RFPs and considering the broad range of long-term uncertainties evaluated, PacifiCorp chose the level of procurement proposed in this filing as the least cost option that could be delivered with minimal risk.



### OPUC Data Request 10

If any RECs received under purchase contracts resulting from the 2016 REC RFP and associated with this filing are not bundled:

- (a) Please explain why the RECs are not bundled; and
- (b) Please explain whether or not the unbundled RECs could be acquired as bundled.

### Response to OPUC Data Request 10

- (a) Oregon Revised Statute (ORS) 469A.005(3) defines a bundled renewable energy credit (REC) as a REC that is acquired “by trade, purchase or other transfer of electricity that includes the certificate that was issued for the electricity” or “by generation of the electricity for which the certificate was issued”.

ORS 469A.005(12) defines an unbundled REC as a REC that is acquired “by trade, purchase or other transfer without acquiring the electricity for which the certificate was issued”.

PacifiCorp confirms that there are RECs being acquired under purchase agreements that are considered unbundled for Oregon renewable portfolio standards (RPS) compliance purposes. PacifiCorp is acquiring unbundled RECs from six of the seven projects because the purchase agreements do not include transfer of energy. However, the RECs being purchased from four of these six projects are from qualifying facilities (QF) located in Oregon. RECs from QFs located in Oregon do not contribute to the 20 percent unbundled REC limit when surrendered for annual compliance.

- (b) Unbundled RECs purchased from one of the seven projects are older vintage RECs acquired without the transfer of electricity. Therefore, there is no opportunity to acquire these RECs as a bundled product. Unbundled RECs from four of the seven projects are from Oregon QFs, which do not contribute to the 20 percent unbundled REC limit. Therefore, there is no need to acquire these RECs as a bundled product.

The remaining two projects are QFs located in Utah. Due to project financing concerns, the counterparty was unable to amend the QF power purchase agreement (PPA) to include the sale of RECs for one of these two projects. Because the separate REC purchase agreement for this project does not include the transfer of electricity, the RECs are unbundled under the Oregon RPS. The counterparty was able to amend the QF PPA for the second of these two projects to include the sale of RECs with the transfer of electricity. Therefore, RECs purchased for this project are bundled under the Oregon RPS. Oregon customer rates, however, reflect a system-allocated share of the energy cost associated with this QF PPA (~25 percent). Although the definition of a bundled REC is tied to the utility’s acquisition of the energy and the REC and not what is delivered to the customer, PacifiCorp has agreed for purposes of Oregon RPS



UE 313 / PacifiCorp  
October 11, 2016  
OPUC Data Request 10

ORDER NO. 17 019

Attachment 1  
Page 4

compliance, to treat only a system-allocated share of the RECs generated from the project as bundled RECs (~25 percent). The remaining RECs purchased from this project will be treated as unbundled RECs (~75 percent).

**OPUC Data Request 24**

Please refer to PacifiCorp's response to IR 10 in which it states "...PacifiCorp has agreed for purposes of Oregon RPS compliance, to treat only a system-allocated share of the RECs generated from the project as bundled RECs...":

- (a) Please identify the name of this agreement, if any, the terms of this agreement and the parties thereto.
- (b) Does PacifiCorp believe it is required by Oregon state law or a Commission order to treat only the Oregon system allocated share of RECs as bundled? If yes, please identify any such law or order.

**Response to OPUC Data Request 24**

- (a) There is no specific written agreement. The Company's response conveys it is the Company's intent to treat only a system-allocated share of the renewable energy credits (REC) generation from the referenced project as bundled RECs for Oregon renewable portfolio standards (RPS) compliance purposes.
- (b) The Company objects to this request because it calls for a legal conclusion. Without waiving this objection, PacifiCorp responds as follows. No. Oregon Revised Statutes (ORS) 469A.005(3) defines a bundled REC as a REC acquired "by trade, purchase or other transfer of electricity that includes the certificate that was issued for the electricity." This definition requires only the purchase of the electricity and the renewable attributes (in the form of the REC) by the utility; this definition does not limit bundled RECs to only those RECs whose energy costs are allocated to the state of Oregon.

ORDER NO. 17 019

Attachment 2

Page 1 to Page 58 of Attachment 2 contains Highly Confidential Information and is protected  
Under Protective Order No. 16-336.

ORDER NO. 17 019

