BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

LC 67

In the Matter of PACIFICORP, dba PACIFIC POWER, 2017 Integrated Resource Plan	**SIERRA CLUB COMMENTS**

Sierra Club appreciates the active discussion fostered by the Oregon Commissioners and Commission staff with respect to PacifiCorp's 2017 Integrated Resource Plan (IRP), and this opportunity to respond to PacifiCorp's July 28th reply comments.

These comments focus on the topic Sierra Club believes is of the utmost importance to PacifiCorp ratepayers and regulators: the economic viability of the Company's existing coal plants. In these comments, we respond to the open meeting on July 10th, PacifiCorp's July 28th reply comments, and comments of PacifiCorp and parties during the staff workshop on August 17, 2017.

In Sierra Club's initial, June 23rd, comments, we extensively detailed our concerns with respect to the Company's existing coal fleet and included evidence compiled from workpapers showing that nearly one-third of PacifiCorp's coal capacity is non-economic on a forward-looking basis from 2018.[1] Sierra Club raised concerns that the Company's modeling framework could not present a least-cost/least-risk portfolio because it failed to consider the cost-effective retirement of existing coal boilers, at a ratepayer cost of $600 million. Further, we provided detailed evidence that the Company has previously executed, and continues to maintain, the capability to assess cost-effective retirements, yet has specifically excluded such assessments in the last two IRP cycles, to the detriment of ratepayers.

PacifiCorp's July 28th reply comments in this matter were non-substantive and inappropriately dismissive to the scale of the issue and the concern expressed by other parties and from this Commission during the July 10th open meeting. Rather than responding to the basic question of whether one-third of PacifiCorp's coal-fired units are non-economic on a forward-looking basis; PacifiCorp instead focused on process and sought to deflect from that key question. The Company provided no evidence that its Preferred Portfolio, the basis of its Action Plan or proposed capacity deficiency dates were actually least-cost. Sierra Club has provided – in this

[1] Sierra Club Opening Comments, Section 2.2

IRP as well as in the 2015 IRP – sufficient evidence to burst PacifiCorp's presumption of prudence with respect to capital expenditures at its coal fleet. While this is not a rate case, PacifiCorp bears the burden of proof to establish that its continued – and very real – expenditures at its coal plants are in ratepayers' best interests. It has not met that burden here.

In reply comments PacifiCorp claimed that "Sierra Club is the only party that challenges PacifiCorp's coal resource modeling."[2] This is definitively false. During the July 10th open meeting, multiple parties including Northwest Energy Coalition (NWEC), Renewable Energy Coalition (REC), Citizen's Utility Board (CUB), and Renewable Northwest (RNW) all echoed Sierra Club's concerns, citing specifically to our comments as the basis for concern. Indeed, NWEC specifically stated during that meeting that the Commission should not take NWEC's lack of comment in the matter as a sign that the issue was resolved, but instead that NWEC was actively supporting Sierra Club's comments with respect to coal economics. The public interest parties engaged in this docket have limited resources and not all are able to engage at the level of technical modeling detail performed by Sierra Club; therefore, we disburse issues according to expertise.

PacifiCorp further claims that our "analysis is flawed" because we performed a "unit-by-unit analysis to determine whether each individual unit is economic without examining how the retirement of individual unit(s) impacts the system as a whole."[3] Sierra Club did assess each unit individually, because we are constrained in our ability to assess how the "retirement of individual unit(s) impacts the system as a whole" given our lack of access to the Company's modeling infrastructure, a point raised repeatedly by both Sierra Club and REC. PacifiCorp remains the only party with access to the regional Aurora model, and the system-wide System Optimizer and Planning and Risk (PaR) models. In 2015, Sierra Club invested in the modeling infrastructure for System Optimizer at a cost of tens of thousands of dollars for an extremely limited licensure (restricted time, restricted usage, and absent the PaR module). The costs of learning, operating, troubleshooting, and reporting model results turned out to be cost prohibitive in subsequent IRP cycles. While we remain confident in our 2015 results – which demonstrated substantial non-economic units even at that time – PacifiCorp dismissed those results without evaluating the outcomes either.

To work around an extremely expensive model licensure in this IRP cycle, Sierra Club engaged in the IRP stakeholder process early and actively – and lobbied for the analysis that we believed would meet the needs of this Commission: a retirement analysis of **each and every unit** that examined how each retirement impacted the system as a whole. In reply comments, PacifiCorp's only explanation as to why this analysis was not executed is that assessing the "viability of each

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[2] Reply Comments, page 38.
[3] *ibid*

individual cost unit… is a major change to the coal methodology the Commission adopted in 2014."[4]

First, PacifiCorp is mistaken. The Commission did not adopt a fundamentally new coal evaluation methodology in 2014. Rather, the Commission adopted a requirement that PacifiCorp assess alternative Regional Haze compliance "tradeoff" options specifically for Wyodak and Dave Johnston.[5] The order is silent on whether this analysis was meant to replace, in perpetuity, best practice least-cost planning. Indeed, the same order calls out a requirement to assess – individually – investments at Dave Johnston 3, Naughton 3, and Cholla 4. Sierra Club was party to these discussions with staff and the Company. Had we understood at the time that the Company intended to permanently remove any assessment of its coal units as an outcome of these discussions, we would have made that objection central to our engagement.

Secondly, PacifiCorp is well aware that its projections of future energy prices have fallen so substantially that the existing coal fleet is at risk. Even if PacifiCorp were not assessing its coal unit value at risk, which we assume it must do as part of its fiduciary responsibility to shareholders, the fate of other coal plants in the region should be a clear indication that today's circumstances are far less favorable for coal than in 2014. In New Mexico, Public Service Company of New Mexico has indicated that San Juan 2 & 3 will likely be taken out of service at the end of the existing coal contract in 2022. Idaho Power Company is actively looking to step away from, or close, Valmy 1 as expediently as feasible, and the co-owners of Navajo Generating Station have mutually agreed to close the plant in 2019. In 2017, it no longer requires a large capital retrofit to endanger the economic viability of a coal plant – PacifiCorp's data shows that much of its fleet is at risk today, without any incremental capital expenditures. It is unacceptable that PacifiCorp rely on a flawed interpretation from a 2014 Order to avoid this assessment.

During the staff workshop on August 17, 2017, PacifiCorp objected to Sierra Club's contention that the Company had refused to conduct a reasonable retirement analysis, and further objected that it was too difficult to assess the economics of each element of its coal fleet. We stand by our assertion, and reject PacifiCorp's objection. As we stated during that call, and as PacifiCorp acknowledged, other utilities facing similar questions with respect to their fleet have found a variety of ways to assess the economic value of existing coal plants – and PacifiCorp is more than capable of doing the same.

PacifiCorp's refusal to conduct endogenous retirement modeling is documented in the September 8, 2016 Public Input Meeting where the Company stated that "PacifiCorp **will not allow**

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[4] Reply Comments, page 39.

[5] Oregon Order 14-296, Appendix A at page 2.

endogenous coal unit retirements as this functionality cannot be implemented with accurate cost and performance assumptions."[6] The Company then provided a series of five explanations as to why endogenous retirement is impossible.[7] In comments to PacifiCorp, Sierra Club rebutted each explanation in detail and offered two potential solutions: at least three **full endogenous retirement scenarios** with varying gas price forecasts, or forty-two scenarios testing the economics of the seven coal units with SCR requirements.[8]

At the time those comments were submitted, Sierra Club did not have access to the Company's estimates of the coal unit operating costs or PacifiCorp's assumed energy prices. That information would have quickly made clear that the SCR requirements were effectively immaterial to the poor economics of the PacifiCorp coal fleet.

Sierra Club continues to reject PacifiCorp's claim that modeling its full fleet is too difficult or burdensome. Given the opportunity to earn a return on nearly $3 billion in wind and transmission investments (with ratepayer benefits nearly two orders of magnitude smaller), the Company has not hesitated to run – and rapidly update – multiple modeling runs for approval proceedings before the Utah, Wyoming, and Idaho utility commissions. Faced with substantial (and unrefuted) evidence that large segments of the Company's coal fleet are non-economic today with far larger and more immediate ratepayer impacts, the Company has resorted to an objection that such analyses are too cumbersome.

There are multiple solutions to PacifiCorp's concerns.

1. The Company could assess the relative economics of each of its coal units using a combination of forward energy prices and expected production cost dispatch and fixed costs of operation. This method was employed in 2012 by Cleco Energy to assess the relative merits of retrofitting two different coal units (Louisiana docket U-32507).

2. The Company could test combinations of unit outages in various years to narrow the likely range of unit retirement and date combinations. This method was employed in 2013 by Public Service Company of New Mexico in assessing the relative economic merits of retiring San Juan Generating Station Units 1-4 individually and in various combinations (New Mexico docket 13-00390). It is also similar to the method employed in the 2017 Idaho Power IRP to assess potential retirement dates of Jim Bridger 1 & 2.

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[6] Public Input Meeting materials from September 8, 2016. Slide 2.

[7] *Id.*, Slide 3.

[8] Comments from Sierra Club, Idaho Conservation League, HEAL Utah, NW Energy Coalition, Western Clean Energy Campaign, and Powder River Resource Council. September 14, 2017. http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2017_IRP/Sierra_Club_et.al_2017_IRP_Feedback_Form_9-14-16(joint%20comments).pdf

3. The Company could individually assess each unit in its fleet using its capacity expansion model, and then test the economics of incrementally retiring each unit in reverse merit order. This method was employed in 2011 by Kentucky Utilities / Louisville Gas and Electric to assess eighteen coal units (Kentucky docket 2011-00162).
4. The Company could simply turn on endogenous retirement options on each existing coal plant in the System Optimizer model. PacifiCorp employed this method in the 2013 IRP (Oregon LC 57), and has since refined its model input data to account for the recovery of incremental capital given an early retirement, as well as retirement obligations. A readily achievable first-draft set of retirements could be evaluated through this mechanism and refined with further runs to assess shared operations and maintenance costs and complex fuel clauses.

With respect to the Company's obligations under the Clean Air Act's Regional Haze rule, we note that the Company has still not provided a reasonable explanation of its choices with respect to potential compliance dates, the applicability of tradeoffs, or the absence of a retrofit requirement at Wyodak or Colstrip. Sierra Club is very concerned that the Company's positioning in this IRP effectively asks the Oregon Commission to accept that the current federal administration will successfully strip all environmental compliance requirements from Utah, Wyoming and Montana, prevail in court, and have no requirements at a later date. Employing such a strategy relies on a high risk set of assumptions for ratepayers and, at its core, is antithetical to the protection of public health and wellbeing. PacifiCorp may be correct – that the Pruitt EPA will ignore deadlines and legal requirements during his tenure– but PacifiCorp should not rely on this political assessment in the face of established legal requirements, or at least should characterize the risk and potential outcomes of being incorrect for completeness.

Finally, we note a new development with respect to our comment on the valuation of Dave Johnston relative to new transmission in Wyoming. Sierra Club, CUB, and other parties commented that the Company should assess the relative value of retiring Dave Johnston rather than building new transmission to access central Wyoming wind. In reply comments, PacifiCorp stated that "regardless of the economics, it is simply not physically possible to interconnect 1,100 MW of new wind resources by retiring the Dave Johnston plant. The 762 MW Dave Johnston plant provides critical voltage support to the 230-kV transmission system and without that support, the company could not integrate the level of economic wind resources selected in the preferred portfolio."[9]

The Company appears to have modified the above assertion during the August 17th staff workshop. During that meeting, PacifiCorp's transmission expert stated that it was very possible to retire Dave Johnston and bring new wind online but that it would require "more miles of

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[9] Reply Comments, page 28.

wires."[10] He stated that PacifiCorp would require a synchronous condenser or other means of adjusting system voltage, and would potentially require other incremental transmission improvements to assure grid reliability. During that meeting, PacifiCorp stated that it had, in fact, internally run scenarios where Dave Johnston was retired and the new wind was built, and had started to assess the costs of implementation. It is critical to this proceeding that PacifiCorp present the results of this analysis, and assess the relative merits of retiring Dave Johnston to open new transmission against building new transmission capacity.

PacifiCorp suggested during the staff workshop that most of Sierra Club's concerns could be addressed in incremental workshops and in preparation for either the 2018 update or the 2019 IRP cycle. Sierra Club strenuously objects to yet again deferring critical analyses, and asserts that there is sufficient information in the current IRP (and subsequent filings) to assess the Company's coal fleet today, assess the value of retiring Dave Johnston to free up transmission, and provide a detailed explanation of PacifiCorp's Regional Haze assumptions and obligations.

PacifiCorp should not be permitted to simply ignore the status of its existing fleet and deflect stakeholder concerns. The Company claims to have an open and transparent process: we disagree. We recommend that the Commission not acknowledge the action plan items related to the Company's coal fleet, and require PacifiCorp to submit an expedient compliance filing assessing the value of each coal unit in its fleet.

Sierra Club appreciates the opportunity to respond to PacifiCorp's reply comments.

Dated: August 24, 2017

Respectfully submitted,

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[10] Rough paraphrase.