BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

LC 52

In the Matter of PACIFICORP, dba PACIFIC POWER 2011 Integrated Resource Plan

STAFF'S INITIAL COMMENTS AND RECOMMENDATIONS

Following are Staff's initial comments and recommendations on the PacifiCorp 2011 Integrated Resource Plan (IRP). Staff's comments are grouped by subject. Before issuing final comments, recommendations and a proposed order Staff will further review the Company's filed plan, responses to recent data requests and parties' comments.

Initial Comments

Coal Plant Utilization

PacfiCorp's 2011 IRP fails to provide a comprehensive evaluation of the compliance of its existing coal fired generation resources with new, draft, and anticipated environmental regulations. IRP Guideline 4(g) requires the utility to identify key assumptions about the future, including assumptions about future environmental compliance costs. IRP Guideline 1(c) sets the primary goal of the IRP to be the selection of a portfolio of resources with the best combination of cost and risk for the utility and ratepayers. Without a comprehensive evaluation of these environmental compliance costs, Staff cannot determine whether any of the candidate resource portfolios meet this standard. As a result, Staff believes the PacifiCorp 2011 IRP does not comply with the Commission's IRP Guidelines.

Intermediate/Base-load Thermal Supply-side Resources (Action Item 2)

Resource Needs

Staff confirmed PacifiCorp's forecast of both a capacity and energy deficit in the first ten years of the planning period, under base case assumptions. On a capacity basis with a 13 percent planning reserve margin, Staff confirmed PacifiCorp's forecast of a 326 MW capacity deficit in 2011, growing to a 2,767 MW capacity deficit in 2016.

On an annual energy basis (using maximum dependable capability of existing resources and a 13 percent planning reserve margin), PacifiCorp forecasts heavy load hour resource surpluses through 2014. Staff believes it is most revealing to evaluate the energy balance without a planning reserve margin, based on the economic dispatch of existing resources, and for all hours. On this basis, using

data provided by PacifiCorp, Staff identified for 2011 an energy surplus of 1,546 average MW (aMW). In 2016 Staff identified an energy deficit of 551 aMW, and in 2020 a deficit of 2,016 aMW.

Retail sales by PacifiCorp have been volatile over the past 18 years. Recognizing this fact leads Staff to believe there is good reason to evaluate the company's resources needs across a range of load growth assumptions. Staff will continue to evaluate the need for additional post-2014 thermal resources.

Staff also intends to evaluate the system capacity and energy positions of PacifiCorp's preferred portfolio and other top performing portfolios to assess how well the new resource additions match the capacity and energy need, and to assess market risk.

Portfolio Selection

The preferred portfolio identified in the PacifiCorp 2011 IRP includes addition of gas fired generating units (CCCT) in 2014, 2016 and 2019. These units are proposed to meet the identified capacity deficit. While adding these CCCTs will satisfy its need for capacity, these units will also increase the Company's existing annual energy surplus. Staff believes it may be possible to economically satisfy the portion of the capacity deficit satisfied by the 2016 CCCT through aggressive implementation of demand side management (DSM) Classes 1, 2, and 3, and conservation voltage reduction (CVR), and increasing front office transactions (FOT). Staff issued data requests to obtain stochastic and deterministic results for a portfolio reflecting these changes. Staff will continue to investigative this issue and will provide its recommendation in its final comments in the case.

Firm Market Purchases (Action Item 3)

PacifiCorp presents in Table 6.18 the maximum purchases available at six market hubs. The IRP does not include sufficient data for Staff to confirm these limits. Staff believes market purchases are a credible source of capacity and energy, and the preferred portfolio may not be exploiting these to full advantage. Staff will continue to investigative this issue and will provide its recommendation in its final comments in the case.

Demand Response/ Class 1 and 3 DSM (Action Items 5 and 7)

PacifiCorp categorizes demand response into Class 1 and Class 3 resources. Class 1 is dispatchable load control, scheduled irrigation and thermal energy storage. Class 3 is considered as contributing to system reliability and represents programs such as critical peak pricing, curtailable rates and demand buyback.

In response to the Commission's order acknowledging its 2008 IRP, which required the Company to go farther in evaluating the cost and amount of

resources that can be gained from Class 1 and Class 3 DSM, PacifiCorp updated its 2007 independent study performed by the Cadmus Group. The Cadmus study indicates Achievable Technical Potential of 536 MW of Class 1 DSM and 357 MW of Class 3 DSM by 2030. However, in the preferred portfolio the company selects only an average of 160 MW of Class 1 DSM and no Class 3 DSM.

PacifiCorp continues to exclude Class 3 DSM and include only a minimal amount of Class 1 DSM in its preferred portfolio. Staff believes that these two classes of DSM have the potential to displace the Company's need for a supply-side resource in 2016. Staff will continue to investigative this issue and will provide its recommendation in its final comments in the case.

Energy Efficiency – Class 2 DSM (Action Item 6):

Class 2 DSM savings are described as those achieved through technological advancements in equipment, appliances, lighting and structures. Staff is evaluating whether PacifiCorp's modeling inputs and methodology favor supply-side resources over demand-side resources and whether specific modifications to Action Item 6 (1,200 MW of Class 2 DSM by 2020) will be recommended.

PacifiCorp groups energy efficiency measures into bins based on levelized costs. The size of the bins created by PacifiCorp varies greatly and seemingly arbitrarily. Staff is looking into whether PacifiCorp's designation of which measures go into which bins, and the resulting "average" bin cost, is limiting how much Class 2 DSM is being selected.

Ramp rates are important in energy efficiency modeling. Staff is investigating changes to ramp rates since the last IRP update and examining whether PacifiCorp's method for ramping up efficiency, once a bin is determined by the model to be cost effective, is favoring supply-side resources in the near term.

The 2010 resource potential study completed by Cadmus evaluated Class 2 DSM potential for all states other than Oregon. A study of Oregon's Class 2 DSM potential was completed by the Energy Trust of Oregon (ETO). Staff is evaluating whether efficiency measure levelized costs for other states are significantly higher than for Oregon and the implications of that difference on how much efficiency is selected by PacifiCorp.

Conservation Voltage Reduction

In Order No. 10-066 the Commission acknowledged PacifiCorp's 2008 IRP with the condition that the Company perform an assessment of distribution efficiency potential resources (Conservation Voltage Reduction or CVR) in its next IRP.

The current IRP refers to a draft assessment of economic potential for CVR in the Yakima and Walla Walla service areas. PacifiCorp conducted an optimizer model sensitivity test on the potential from these two areas. This test showed CVR to be a cost-effective resource. However, PacifiCorp's IRP did not use either of these assessments of CVR in a substantive way. The optimizer model CVR sensitivity results indicate CVR should be acquired system wide, but CVR is not included in the preferred portfolio. As a result, Staff believes that PacifiCorp has not fully complied with the Commission's CVR condition in Order No. 10-006.

If PacifiCorp had included CVR for planning purposes it may have affected the preferred portfolio selection results. Even though the likely savings for the whole service area is small (perhaps as much as one percent of loads), it is roughly the same size as other specific additions tested in the stochastic model (PaR). The present value of savings from CVR would be larger than the savings from other adjustments PacifiCorp made to achieve the preferred portfolio.

Staff's initial recommendation¹ is that the Commission require PacifiCorp to:

- Begin acquisition of a CVR project in PacifiCorp's Washington service area in 2012 and complete the project no later than 2018.
- To acquire all of the available cost-effective conservation voltage reduction (CVR) throughout its service area by 2022. This action item will be based primarily on information from Yakima and Walla Walla service areas. Cost-effectiveness analyses should follow the same methodology as the modeling approach used in the Class 2 DSM decrement assessment in the 2011 IRP Addendum.

Planning and Modeling Process Improvements (Action Item 8)

PacifiCorp applied a "long-term reliability planning standard" to come up with its initial planning reserve margin (PRM) target, then adjusted it downwards as a proxy for the Northwest Power Pool's reserve sharing benefit, and came up with a figure of 13 percent. Reliability benefits of using non-firm transmission capacity to access off-system generation were not incorporated in this evaluation.

While the marginal costs for a range of PRMs were presented in Appendix J to the IRP, estimates of the marginal benefits of a12 percent PRM target were absent. Staff also questions the usefulness of the presented marginal cost analysis. In comparing the PVRR of an optimum 12 percent PRM portfolio with the PVRR of an optimum 13 percent PRM portfolio, the incremental PRM values were achieved by adding simple-cycle combustion turbines (SCCTs) to a minimum-PRM portfolio. Staff considers this methodology to be a shortcoming of the risk analysis portion of the IRP. With aggregate loads approaching 15,000 MW in 2020, a one percent increase in PRM translates to 150 MW of extra capacity.

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¹ This recommendation is a substitute for the third bullet in PacifiCorp's Action Item 6.

Transmission Action Item

PacifiCorp requests that the Commission acknowledge four transmission segments (three projects) scheduled to be in service by 2014. These three projects are:

- 1. Wallula to McNary segment (Energy Gateway Segment A);
- 2. Mona to Oquirrh and Oquirrh to Terminal segments (Energy Gateway Segment C); and
- 3. Sigurd to Red Butte segment (Energy Gateway Segment G).

Staff continues to investigate the cost-effectiveness of the Sigurd to Red Butte line. Staff reviewed the information provided by the Company, but found no evidence that the Company had evaluated any alternative to the proposed single circuit 345 kV line. Alternatives could include a transmission line with a different voltage, a new generating resource in the area of the Red Butte substation, or other options. Staff will continue to investigate these issues and will provide its recommendations in its final comments in the case.

This concludes Staff's Initial Comments.

Dated at Salem, Oregon, this 25th day of August, 2011.

Erik Colville

Senior Utility Analyst Electric Rates & Planning

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CERTIFICATE OF SERVICE

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I certify that I have this day served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-001-0180, to the following parties or attorneys of parties.

Dated this 25th day of August, 2011 at Salem, Oregon.

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