[Service Date November 25, 2013]

STATE OF WASHINGTON

UTILITIES AND TRANSPORTATION COMMISSION

1300 S. Evergreen Park Dr. S.W., P.O. Box 47250 ● Olympia, Washington 98504-7250

(360) 664-1160 ● www.utc.wa.gov

November 25, 2013

William R. Griffith
Vice President, Regulation
Pacific Power and Light Company
825 Northeast Multnomah, Suite 2000
Portland, Oregon 97232

Re: PacifiCorp's 2013 Electric Integrated Resource Plan
Docket UE-120416

Dear Mr. Griffith:

The Washington Utilities and Transportation Commission (Commission) has reviewed the 2013 Electric Integrated Resource Plan (IRP) filed by Pacific Power and Light Company (PacifiCorp) on March 28, 2012, and finds that it meets the requirements of Revised Code of Washington 19.280.030 and Washington Administrative Code 480-100-238.

Please be advised that this finding does not signal pre-approval for ratemaking for any course of action identified in the IRP. At the time of the Commission's review of a future PacifiCorp request to include costs of resources into rates, the Commission will give due weight to the information, analyses and strategies contained in the most recent IRP along with other relevant evidence when determining the prudence of the company's actions.

Because an IRP cannot pinpoint precisely the future actions that will minimize a utility's cost and risks, we expect that the company will update regularly the assumptions that underlie the IRP and adjust its operational strategies accordingly.

Attached are specific comments from the Commission regarding the IRP. Generally, the Commission provides PacifiCorp with the following suggestions and requests for future IRP filings:

- Update the coal analysis.
- Show the capacity balance in the East and West control areas prior to any transfers.
- Continue acquiring renewable energy credits through requests for proposals issued at regular intervals.
- Continue to work with stakeholders to refine the System Operational and Reliability Benefits Tool.
- Do not use a zero-cost carbon assumption in the base case for the 2015 IRP.
- Explore ways the Company can contribute to Washington's emissions reductions goals and the rate impacts of any such measure.
- Model the East and West control areas separately.
- Update the Company's energy storage study and consider an energy storage demonstration project in the West Control Area.
- Conduct a thorough analysis of anaerobic digester potential in the Company's Washington service territory.
- Ensure that future smart grid analyses provide a fair and full assessment.
- Summarize the expected impacts of the Company's participation in the energy imbalance market with the California Independent System Operator.

Commission Staff will provide additional detailed comments as PacifiCorp develops its next IRP. PacifiCorp should file its next Electric IRP work plan on or before March 31, 2014, and its next Electric IRP on or before March 31, 2015.

Sincerely,

STEVEN V. KING
Executive Director and Secretary

Attachment

Attachment

PacifiCorp 2013 Integrated Resource Plan, Docket UE-120416

WAC 480-100-238 directs investor-owned energy utilities (IOUs) to consider in their integrated resource plans changes and trends in energy markets, cost structures, federal regulatory requirements, and other shifts in the political and market landscape. The rule also requires IOUs to conduct a cohesive analysis of the costs and benefits of various approaches to meeting future resource needs using the best available information. The intent is for each regulated company to develop a strategic approach that fits its unique situation, while minimizing risks and costs for the company and its ratepayers.

Recent developments have created major changes in the utility industry, bringing new opportunities and challenges. Technological advances have increased the supply of low-cost natural gas, while new resources like wind and solar have grown in capability and fallen in price. State policies for renewable portfolio standards, greenhouse gas reduction and mandatory conservation programs have created additional logistical challenges for utilities, and forthcoming federal environmental regulations may restrain the use of coal.

In its 2013 Integrated Resource Plan (IRP or Plan), Pacific Power and Light Company (PacifiCorp or Company) developed a strategic approach and complied with the regulations set forth by the Washington Utilities and Transportation Commission (Commission). In this document, the Commission provides substantive comments on PacifiCorp's 2013 Plan and requests specific process improvement for future IRPs.

General Comments

The Commission, for the most part, is satisfied with the quality and presentation of the analysis contained in PacifiCorp's IRP. The load forecast was driven by data, and the process was clearly explained and well documented. However, the assessment of resource needs lacked sufficient data showing the load balance in the Company's East and West control areas prior to any transfers. Indeed, the way the PacifiCorp presented the information was misleading, making the West Control Area appear to have a large capacity deficit because of transfers to the East Control Area. Although Commission Staff was able to determine the correct load balances using Table 5.12 in the IRP,[1] future IRP analyses should provide a pre-transfer picture of the current capacity balances in the two control areas, or assign transferred capacity to the area where it is used.

[1] PacifiCorp IRP at 99.

In public comments and in Open Meeting testimony, several members of PacifiCorp's IRP advisory group praised the Company for its openness and stakeholder engagement during the preparation of the Plan. The Commission recognizes PacifiCorp's efforts to ensure transparency, and encourages the Company to continue to actively engage stakeholders in future IRP cycles.

Energy Independence Act Analysis

The conservation potential assessment (CPA), performed by a third party for this IRP, was adequate. The Commission will provide additional comments on the CPA during the conservation target setting process in a separate docket.

The Commission appreciates PacifiCorp's added modeling step to analyze options for complying with Washington's renewable portfolio standard. The Commission recognizes the reasoning behind the Company's strategy to achieve compliance through market purchases of renewable energy credits (RECs). PacifiCorp should continue purchasing RECs through requests for proposals at regular intervals to ensure that the REC-based compliance strategy remains the lowest-cost option.

Coal Plant Analysis

Confidential Volume III of PacifiCorp's 2013 IRP includes a series of analyses of the Company's wholly owned coal-fired generation facilities that operate system-wide. The goal of these analyses is to determine whether it is more cost-effective to implement emissions control equipment required by EPA regulations on coal-fired generation, convert the plants to natural gas, or retire the plants early. PacifiCorp applied this analysis to four units: Hunter Unit 1, Bridger Unit 3, Bridger Unit 4, and Naughton Unit 3.

PacifiCorp concluded that the most cost-effective approach for the first three units is to make required environmental retrofits and continue to operate them as coal plants, while the most cost-effective approach for Naughton Unit 3 is to convert it to natural gas.

The analysis was based on simplified assumptions regarding future prices for natural gas and carbon emissions. PacifiCorp assigns carbon prices as a proxy for all potential regulatory outcomes, including a carbon tax, cap and trade, and additional emissions performance standards. The range of prices used in future scenarios is meant to represent the range of stringency with which different policy mechanisms would limit carbon emissions.

The company's assumptions were based on the information available at the time; however, much has changed in the following months. The EPA proposed regulations on new coal and natural gas-fired generating plants on September 20, 2013.[2] On June 25, 2013, President Barack Obama directed the Environmental Protection Agency (EPA) to propose regulations on existing coal plants by June 2014.[3] After these regulations are announced, states will have one year to submit plans to EPA, which will review them during the following year to determine if they meet the requirements for GHG reductions. Each state in the Company's six-state region will have to propose plans to the EPA on its existing generating fleet. While none of PacifiCorp's existing coal plants are located in Washington, the Company's coal-generated power is dispatched on a system-wide basis. Washington accordingly will monitor and review all relevant state plans during the next IRP planning process.

Depending on how the new regulations for existing coal plants are implemented and how much authority and flexibility is afforded to state air quality and economic regulators, these regulations will likely place a price on carbon, either directly or indirectly. Therefore, we request that the Company's modeling account for the possible range of carbon prices consistent with regulations developed under Section 111(d) of the Clean Air Act, 42 U.S.C. Sec. 7411, for existing plants.[4]

Natural gas futures, meanwhile, are trading below $5.00 per million Btu (MMBtu) into the next decade,[5] which is somewhat lower than forecasts available at the time of the Company's coal analysis. The Company's original approach using a wide range of future natural gas price assumptions was instructive. However, a more detailed analysis that focuses on the gaps between the various projections that the Company used and identifies the price level at which it would become cost-effective to switch an existing coal plant to natural gas is required to better inform the Company's decision-making process.

---

[2] Available at: http://www2.epa.gov/carbon-pollution-standards/2013-proposed-carbon-pollution-standard-new-power-plants.

[3] "Presidential Memorandum – Power Sector Carbon Pollution Standards." Available at: http://www.whitehouse.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards.

[4] EPA has suggested questions for state environmental regulators to consider in designing their SIPs, which may be a useful resource in projecting the potential impacts of the forthcoming regulations. The questions are available online at: http://www2.epa.gov/sites/production/files/2013-09/documents/20130923statequestions.pdf.

[5] CME Group, Henry Hub Natural Gas Futures. (Based on data retrieved Nov. 15, 2013). Current data available at: http://www.cmegroup.com/trading/energy/natural-gas/natural-gas.html.

Given these developments, the Commission concludes that PacifiCorp should update its coal analysis as part of its 2013 IRP Update. Moving ahead with the environmental controls identified in PacifiCorp's analysis for the Bridger units requires further justification, particularly in light of forthcoming EPA regulations that may require additional environmental upgrades. This updated analysis is necessary to ensure the Company does not commit itself to investments that later prove not to be cost-effective. As part of its updated coal analysis, PacifiCorp should construct various price curves for carbon regulation representing the range of standards that the EPA could impose, as well as various price curves for natural gas that are more closely aligned with current forward prices. This would enable a more detailed sensitivity analysis, which would allow the Company to identify specific emissions standards and natural gas price points at which a given plant becomes more economical to operate with natural gas.[6]

Transmission

The Commission appreciates the IRP's in-depth attention to transmission planning. The System Operational and Reliability Benefits Tool (SBT) that the Company has developed to analyze potential new transmission investments has the potential to more accurately portray the economics of transmission projects. However, further refinement of this tool is necessary before it can be used effectively to justify investment in transmission facilities. Broadly speaking, some of the tool's benefit categories are too vaguely defined and some of the underlying assumptions may lead to an inflation of benefits in the analysis. The Company should continue to engage stakeholders in the refinement of this evolving and potentially important transmission planning tool.

The Commission declines the Company's request on page 63 of the IRP for "regulatory acknowledgment of the Sigurd to Red Butte transmission project." The Commission believes that this request was a consequence of PacifiCorp's use of a single IRP document for its entire six-state territory, and was intended for regulatory bodies in the states affected by the transmission

[6] In recent years, the EPA has proposed several rules on coal-fired generation that may impact the operation and cost-effectiveness of existing baseload coal plants throughout the West, including those in the Company's portfolio. On slide 13 of its October 3, 2013, presentation to the Commission, the Company implied that it may participate in a challenge to the rule on regional haze for Wyoming, stating: "PacifiCorp finds EPA's re-proposed rule to be an extreme and unlawful interpretation of the Regional Haze Rules and will argue from that position in the ongoing public comment process." As the West Control Area receives some power from coal plants in Wyoming, such EPA actions, and challenges to them, could impact Washington ratepayers. If the Company challenges the Wyoming rules in court, we expect it to justify its challenge, and the costs associated with it, as being in the best interests of Washington state ratepayers. It may be appropriate for this to be done in a formal docket separate from an IRP docket.

line.[7] While the Commission would not generally discuss a specific project in the context of an IRP review, given the Company's explicit request for regulatory acknowledgment in this instance, the Commission wishes to re-emphasize that only projects that are used and useful in providing service to Washington ratepayers may be included in Washington rates.[8] Nothing in the IRP or the Company's comments at the open meeting leads the Commission to believe that this transmission line meets that standard. In any event an IRP would not be the appropriate venue for such a review in Washington.

Modeling Improvements

In its modeling process, several of PacifiCorp's cases (including the base case) assumed that there would be no cost attached to carbon emissions. The Commission recognizes, as the Company indicated in the IRP, that Congressional action in the near term to formally set a price on carbon emissions is unlikely. However, as stated above, the current Administration is establishing a regulatory construct under which a cost of carbon will be assessed, either directly or indirectly. Given all of these factors, it seems almost certain that in the future there will be a price set on, or imputed to, carbon emissions in one form or another. Therefore we believe it is both impractical and unrealistic to use a zero cost of carbon in the base case, or business-as-usual case, in the next IRP cycle. PacifiCorp's next IRP must include a non-zero cost of carbon in its base case. The Company's 2015 IRP should also examine ways in which PacifiCorp can contribute to Washington's goal of reducing carbon emissions to 1990 levels by 2020[9] and evaluate the rate impacts of any such measure.

In its 2011 IRP Acknowledgment letter, the Commission requested that the Company model its West and East control areas separately in the 2013 IRP. The Company did not do so. The Commission is concerned that the current policy of only modeling at the system level may fail to account for the inherent differences of the two areas, including different load growth rates and mix of generation resources, and result in a portfolio that does not efficiently address the needs and resource options in the two separate areas. This is particularly true for capacity needs, since there is no unused long-term transmission capacity to deliver peak generation capacity between the two control areas and no plans by the Company to build any in the next 10 years. The

[7] The Commission recognizes that other states where PacifiCorp operates require a Certificate of Public Convenience and Necessity for transmission resources. Washington has no such requirement. Nor does the Commission regulate the siting of intrastate transmission lines. This function is performed by the Washington State Energy Facility Site Evaluation Council. *See* RCW 80.50.060, RCW 80.50.020.

[8] RCW 80.04.250.

[9] RCW 70.235.020(1)(a)(i).

Company must model the two areas separately in the next IRP as a prerequisite for acknowledgment.

Incomplete Analyses

The 2011 IRP Acknowledgment letter also asked the Company to take a closer look at energy storage and anaerobic digesters, which the Company did not do. On the issue of energy storage, the Commission recognizes that PacifiCorp did an in-depth study of energy storage capability and cost for its 2011 IRP, which it also used in the 2013 IRP. But energy storage is a rapidly advancing technology, and the Commission questions whether the use of 2010 data for the 2013 IRP gave energy storage a fair opportunity to compete with other options. The Commission requests that the Company update its energy storage analysis and use more current data as an input to the 2015 IRP. The Commission also suggests that the Company consider an energy storage demonstration project in the West Control Area. The Commission appreciates the Company's efforts to engage in such a project in Utah. However, given the greater penetration of variable renewable resources and a strong research and development presence in the Pacific Northwest, an energy storage demonstration project may be better suited to the West Control Area.

Regarding anaerobic digesters, the Commission believes that PacifiCorp's modeling in the IRP process did not address adequately the Commission's 2011 request for the Company to analyze the potential for this technology in its Washington service territory. Digesters are potentially a reliable source of cost-effective baseload power for the Company, a revenue stream for Washington farmers, and a mechanism to significantly reduce dairy waste. Therefore, we are disappointed that the Company did not perform the analysis we expected. We expect a rigorous analysis of the potential for this form of generation in the next IRP cycle.

Finally, PacifiCorp's 2011 IRP Action Plan indicated that the Company would take steps in the areas of smart grid technology and electric vehicle integration. The Commission commends the Company for its willingness to explore these new technologies. The Company's subsequent conclusion that there are few electric vehicles in its Washington service territory, and therefore not enough customer demand to justify any undertaking to integrate electric vehicles, may be reasonable for now. However, the Company should review this position going forward.

The Commission is particularly concerned with the Company's apparent reluctance to consider seriously the role of smart grid technologies in its distribution grid. For example, in its 2012 Smart Grid Report, PacifiCorp stated that societal benefits such as reduced outage time are

"difficult, if not impossible, to quantify with any degree of accuracy," and were therefore excluded from the smart grid analysis.[10] However, in the SBT, which was being developed at roughly the same time, the Company committed time and resources to quantify the benefits of reduced outages that could be achieved with additional transmission lines. The Commission is concerned that the Company is applying an inconsistent standard in its analysis of transmission and distribution investments that works against smart grid investment. We request that the Company carefully consider its assumptions when preparing its 2014 Smart Grid Report and ensure that smart grid technology is analyzed objectively and on an equal footing with other transmission investments. Additionally, the Commission expects that PacifiCorp's 2015 IRP will contain a more robust analysis of smart grid technologies and potential opportunities for the Company recognizing that, like electric storage, this technology is dynamic and potentially becoming more cost-effective over time.

Energy Imbalance Market

PacifiCorp's pursuit of an Energy Imbalance Market (EIM) with the California Independent System Operator has the potential to alter the Company's resource needs assessment, particularly in the West Control Area. The Commission recognizes that it is too early in the process for the Company to project the exact impacts that the EIM will have on its strategy and its ratepayers, but expects that the needs of ratepayers will be the Company's primary concern when negotiating the details of the arrangement. The Commission requests that the 2015 IRP contain a detailed analysis, based on up-to-date data, of how participation in the EIM will impact the load-resource balance in the West Control Area, and potentially defer the need for new generation resources. The analysis should also detail how and to what extent customers will benefit from the Company's participation in the EIM.

Conclusion

The Commission acknowledges that PacifiCorp's 2013 Integrated Resource Plan complies with WAC 480-100-238.

[10] PacifiCorp Smart Grid Annual Report at 37 (June 29, 2010) (filed 9/4/2012 in Docket UE-121445).