



STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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November 15, 2007

R. Patrick Reiten, President Pacific Power  
825 N.E. Multnomah, Suite 600  
Portland, Oregon 97232

Re: PacifiCorp's 2007 Integrated Resource Plan  
Docket No. UE-071062

Dear Mr. Reiten:

PacifiCorp filed its 2007 Integrated Resource Plan ("IRP") for operations within Washington state with the Washington Utilities and Transportation Commission ("Commission") on May 30, 2007. The company presented an overview of the IRP at an open meeting on October 10, 2007. After careful review, the Commission has determined that the plan is consistent with the requirements set out in WAC 480-100-238. The Commission reminds PacifiCorp the finding that this plan satisfies existing regulatory requirements does not pre-approve for ratemaking any identified action or expenditure. The Commission will give due weight to the information, analysis, and strategies contained in this plan along with other pertinent information during any evaluation of PacifiCorp's services and rates.

Appended to this letter are several comments and recommendations for improving future plans. PacifiCorp should carefully consider these recommendations, as well as future suggestions by Commission staff.

The Commission reminds PacifiCorp that its next IRP will be due no later than January 20, 2009. We strongly encourage PacifiCorp to file its 2009 plan timely, noting that the current plan was filed late, pursuant to two extensions granted by this Commission in Docket No. UE-070117.

Sincerely,

Carole J. Washburn  
Executive Secretary  
Attachment



## **Washington Utilities and Transportation Commission Review of PacifiCorp's 2007 Electricity Integrated Resource Plan**

### **Overview**

The Commission has reviewed PacifiCorp's Integrated Resource Plan ("IRP" or "plan") and finds that it complies with the requirement of Washington Administrative Code 480-100-238. The IRP's projections of supply- and demand-side resources appear well grounded. PacifiCorp does need to identify and better support significant changes it makes to base demand projections relative to previous IRPs. For example, no explanation is given as to why this IRP cut the expected demand growth in Washington by 50 percent. This concern notwithstanding, the integration of demand and supply projections appears reasonable. The company should also improve the presentation of its two-year action plan. Despite these concerns, the Commission's overall assessment is that this plan is well organized and should assist PacifiCorp as it works to acquire the resources needed to serve the company's customers.

### **Demand Forecasts**

Current demand forecasts have declined from those projected in PacifiCorp's 2005 IRP – whole company 2.5% vs. 3.0%; west region 0.8% vs. 1.5%. The plan discussed two important trends occurring in PacifiCorp's east region that led to a change in east-side demand projections. Unfortunately, no similar explanation was provided to describe why the projected west-side demand growth has fallen by nearly half. In addition, as part of the Commission letter acknowledging PacifiCorp's 2005 IRP, the Commission stated that:

“The accuracy of the demand projections obviously will affect the type and nature of supply options considered to meet the projected demand. Therefore, PacifiCorp should continually test the accuracy and sensitivity of inputs used in its projection and refine those inputs when appropriate.”

It is not clear that PacifiCorp responded to this suggestion.

### **Renewable Resources**

In its previous plan PacifiCorp presumed that 20 percent of the annual average energy output of wind resources could be counted towards available system capacity. This presumption was based on an interim study. The Commission commended PacifiCorp for this approach and anticipated “PacifiCorp's next plan and the further refinement of wind's reserve value and wind's stability effects on power systems.”<sup>1</sup>

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<sup>1</sup> Commission Acknowledgement Letter for PacifiCorp's 2005 Integrated Resource Plan. Docket No. UE-050095.

PacifiCorp has taken another significant step forward in assessing the capacity value of wind resources in this plan. The company used the stochastic "Planning and Risk" model to compute the capacity contributions from different combinations of wind project size and geographic location. The Commission is particularly impressed that PacifiCorp calculated differences in the capacity contribution of wind resources by geographic region, and month. This information should significantly improve the company's ability to determine how well alternative potential wind resources align with company needs.

### **Demand-Side Management**

Since issuing this IRP, PacifiCorp has received from Quantec Inc. a new report entitled "The Assessment of Long term System-Wide Potential for Demand Side and other Supplemental Resources." This report appears to indicate a higher level of cost-effective west-side Class 2 (energy efficiency) conservation resources than included in the IRP. The Commission expects the company to use the Quantec estimates as the basis for its conservation program achievement objective rather than the one included in the IRP.

### **Transmission**

One area that the company should expand upon in its next plan is the discussion of its transmission operation and planning analysis. While the Commission is aware that transmission projects are typically subject to multiple jurisdictions and that many entities are involved in transmission planning, existing transmission constraints poses major barriers to how the company operates its fleet of generating resources. The IRP does not clearly explain how the list of twelve transmission options was created, or the process by which PacifiCorp determined which of those to include in its preferred resource portfolio. In its next plan, the company needs to better explain how it chose the transmission options to study, the process used to integrate the selection of both new generating resources and transmission expansions/enhancements, and how the transmission expansion will affect system operation, dispatch of resources and the flow of electricity throughout PacifiCorp's service territory.

### **Risk Analysis**

PacifiCorp examined many planning risks and uncertainties using a variety of stochastic and scenario risk methodologies. Stochastic risks are quantifiable uncertainties for particular planning variables such as retail loads, natural gas prices, wholesale electricity prices, hydroelectric generation, and thermal unit availability. Scenario risks pertain to abrupt or fundamental changes to underlying planning assumptions. PacifiCorp defines a

scenario risk as an externally-driven fundamental and persistent change to the expected value of some parameter that could significantly impact portfolio costs.

The potential government regulation of carbon dioxide (CO<sub>2</sub>) emissions appears to be the most important scenario risk facing PacifiCorp in its current planning environment. PacifiCorp devoted considerable effort to model the effect of CO<sub>2</sub> emission compliance strategies. Stochastic simulations were conducted with various CO<sub>2</sub> emission cost adders to capture the risks associated with potential CO<sub>2</sub> emission compliance regulations. In addition, potential CO<sub>2</sub> emission costs were treated as a scenario risk. The combining of stochastic simulation with scenario analysis advances the modeling of the likely effect of CO<sub>2</sub> regulation.

With the foregoing improvement acknowledged, the Commission is concerned about the relationship between PacifiCorp's preferred resource portfolio (which includes 900MW of conventional pulverized coal generation) and this state's recently enacted statute (SSB 6001) regarding baseload resources and CO<sub>2</sub> emissions. We recognize that Washington has yet to fully develop the market mechanisms and other methods that will ultimately achieve the state's greenhouse gas emissions objectives. Nevertheless, it is clear that CO<sub>2</sub> emissions from new baseload generation facilities and contracts are now constrained. PacifiCorp asserts that it operates its system as an integrated whole and in other proceedings before this Commission the company has stated that electrons cannot be color-coded or otherwise identified. Therefore, we remind the company that any baseload resources put in service after June 30, 2008 to serve Washington customers, or any transmission that allows the output of such resources to reach Washington must comply with this state's statutory requirements.

### **Reserve Margin**

An important component of PacifiCorp's preferred resource portfolio is the adoption of a 12 percent planning reserve margin. The rationale for this change is to keep portfolio cost down while retaining the flexibility to acquire appropriate incremental resources. While the company asserts that this change does not materially impact supply reliability, PacifiCorp acknowledges that changes in market conditions, revised growth projections, or new regional adequacy standards may prompt an increase in the planning margin. What is unclear from this discussion is how PacifiCorp will determine when a revision in the planning margin is warranted. PacifiCorp needs to identify the metrics it will use or the processes it will monitor that could lead the company to alter its new planning margin.

### **Preferred Resource Portfolio**

Integrated Resource Plans are intended to help utilities determine, in a systematic fashion, the resources that will best minimize costs and risks while at the same time enable utilities to provide reliable service to their customers. PacifiCorp views its selected Preferred Resource Portfolio - Resource Investment Schedule 14 - as "the least-cost and

least economically risky proposition for reliably meeting PacifiCorp's load obligation while accommodating different state policies and interests." However, we note that PacifiCorp's analysis uses proxy resources that are characterized with generic capital cost estimates adjusted to reflect recent project experience and company-specific financial parameters. Therefore, the Preferred Resource Portfolio is not a set of firm acquisition decisions but rather a guide for the company's acquisition efforts.

We also note that the Preferred Resource Portfolio was not least-cost in all scenarios. Moreover, many of the portfolios under consideration had relatively similar projections for most attributes – such as overall costs, emission levels and risk – over a number of different future scenarios. In such circumstances it is important to discuss in some detail why the preferred portfolio was selected. As part of its next plan, PacifiCorp should more thoroughly explain why its preferred portfolio provides greater benefits and/or is lower risk than the alternative portfolios.

### **Avoided Cost**

The Commission, in comments on PacifiCorp's previous IRP, noted that the company "produced short and long-term avoided costs related solely to qualifying facilities and DSM programs" and stated that "PacifiCorp needs to develop avoided costs for energy and capacity in both the short- and long-term." While an improvement over the previous effort, the avoided costs figures included in the current plan are not sufficient. PacifiCorp should derive avoided cost for transmission and distribution resources. These avoided costs will guide generators or suppliers as they determine if they can supply electricity below the company's avoided cost.

### **Action Plan**

The action plan is the least satisfactory part of PacifiCorp's IRP. The action plan asserts that it identifies "the steps the company will take during the next two years to implement this plan."<sup>2</sup> The action plan lists a total of 18 action items. However, only six of these activities will occur over the next two years: one renewable activity, three demand side management activities, and two distributed generation activities. More problematic is that the descriptions of these activities are too general to provide any useful information for parties who may wish to participate in these activities, including regulators. The action plan needs to provide much more specific information regarding the actual steps the company will take to complete the identified action items.

### **Finally**

Commission staff commends PacifiCorp for continuing to improve its abilities to assess the advantages and disadvantages of alternative new resources that the company will

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<sup>2</sup> PacifiCorp 2007 IRP, page 222.

need to acquire during the term of this plan. Nevertheless, we remind PacifiCorp that the conclusion that this plan satisfies the requirements of WAC 480-100-238 should not be construed as pre-approval of any resource acquisition or other costs for ratemaking purposes.