BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1208

In the Matter of PacifiCorp Draft 2012 Request for Proposals	STAFF'S REPLY COMMENTS ON PACIFICORP'S REVISED RFP

Pursuant to Judge Grant's memorandum on October 26, 2006, staff submits its reply comments on PacifiCorp's November 1, 2006, revisions to its Draft Request for Proposals for Base Load Resources (Draft RFP). Staff organizes its comments using the three criteria for RFP approval the Commission laid out in Order No. 06-446.

I. Alignment With the Company's Acknowledged Integrated Resource Plan (IRP)

Thermal Resource Need

The Commission did not acknowledge the natural gas-fired plant or the conventional coal plant in the company's 2004 IRP Action Plan. The Commission further said the company should not assume its large interruptible contracts do not continue.[1] The Commission also stated PacifiCorp failed to reevaluate the appropriate level of renewable resources to acquire or fully analyze demand-side resources.

When considered altogether, plus the planning margin issue, it is clear the Commission did not acknowledge thermal resource targets. Fundamentally, the Commission said that because of deficiencies in the analysis, it could not tell how much thermal resources the company should acquire, or when. The order states, "In considering approval of an RFP for such a resource, the Commission would first need to determine whether the Company has demonstrated the need for it." *See* Order No. 06-029 at 51.

Staff reviews this issue in the following sections.

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[1] The company changed this assumption in its informational 2004 IRP Update, filed November 3, 2005.

Front Office Transactions

The Commission acknowledged 1,200 MW of these short-term market purchases, a distinct part of the company's 2004 IRP Action Plan. Some 700 MW of these purchases targeted the east side of the company's system.

In fact, the Commission stated that *additional* short-term market purchases should be considered as part of a portfolio of bridging resources that would allow the company to delay its next coal resource until Integrated Gasification Combined Cycle (IGCC) coal technology was ready for adoption. *See* Order No. 06-029 at 51 and staff's recommended condition #1b(ii).

Until its latest filing, the company was not planning to evaluate short-term market purchases in any manner as part of the RFP process. Further, the company has failed to provide any analysis in this proceeding that justifies abandoning a resource strategy that includes the acknowledged level of short-term purchases.

In the letter accompanying PacifiCorp's most recent filing, the company states (at 1-2):

> In order to more closely align the RFP with its acknowledged IRP, PacifiCorp has made several changes to the RFP in the modeling process. PacifiCorp is treating planned ... front office transactions consistent with its acknowledged 2004 IRP.... PacifiCorp is reviewing its approach to front office transactions ... in PacifiCorp's 2006 IRP. As redesigned, the RFP avoids prejudging the outcome of this review, while permitting PacifiCorp to move forward now with an approved RFP to meet its minimum resource needs.

PacifiCorp's recent filing does not commit the company to continue these short-term purchases. Nor does the filing commit the company to include in its RFP evaluation the acknowledged 700 MW of such purchases for the east side of its system. Instead, "...the FOT will be inputs into the Capacity Expansion Model ... based on IRP forecasted price." *See* November 1, 2006, Draft RFP at 6. Staff assumes the company is referring to 2006 IRP forecasted prices.

Staff understands that for the 2006 IRP, unless a constraint is imposed on this economic optimization model, it selects large levels of short-term market purchases. It is unclear, however, whether PacifiCorp would eliminate consideration of such purchases in later evaluation stages of the RFP process. The company should clarify its proposed process to account for short-term purchases.

Planning Reserve Margin

The Commission did not acknowledge the company's 15 percent planning reserve margin, based on the single peak hour of the year. The company provided no analysis in this proceeding that justifies continuing to plan on this basis, relying instead on the same flawed analysis from its 2004 plan.

However, the company's recent filing states (at 6), "For purposes of this RFP the planning margin has been adjusted to 12%." The letter accompanying the filing states (at 1), "...the downsizing of this RFP is consistent with application of a more aggressive planning reserve margin than the 15 percent margin used but not acknowledged in the 2004 IRP. PacifiCorp is reviewing ... the proper planning reserve margin in PacifiCorp's 2006 IRP."

Staff's recommends condition #1c to address this issue in the RFP process. This is consistent with the Commission's acknowledgment order for the company's 2004 IRP. That order requires at a minimum that PacifiCorp "...build all portfolios to a set planning margin, test them stochastically, and adjust top-performing portfolios to higher and lower planning margins for further stochastic evaluation." *See* Order No. 06-029 at 61.

Resource Gap

PacifiCorp's latest revisions to the RFP reduce the time period for which resources are solicited by one year, to 2012-2013.[2] Further, as staff indicated in its written comments on October 25, and at the public meeting on October 26, 2006, staff has updated its capacity and energy analyses taking into account:

1. The company's agreement to assume in its RFP evaluation its commitment to acquire 1,400 MW of renewable resources by 2015

2. The acknowledged level of short-term purchases in the company's 2004 IRP Action Plan, including 700 MW on the east side of its system

3. The company's previously assumed planning reserve margin of 15 percent and its revised assumption of 12 percent for the purpose of the RFP

Capacity Position[3]

As staff stated previously, PacifiCorp plans to meet the highest forecasted hourly load during each year of its planning horizon. The peak hourly load on the east side of the system is forecast to be 7,549 MW in 2012. Adding the wholesale

[2] Previously filed versions of the RFP included resource needs in 2014.
[3] Staff relied on PacifiCorp's supplemental response to Staff Data Request No. 48 in updating staff's capacity and energy analyses.

sales obligation of 595 MW and a 15 percent planning reserve margin, totaling 1,170 MW, results in forecasted east-side requirements of 9,314 MW in 2012.

PacifiCorp estimates that its existing resources will be able to provide 8,046 MW in 2012. The overall result is a capacity shortfall on the east side of its system of 1,268 MW in 2012 and 1,451 MW in 2013.[4] *See* Staff's Reply Comments on October 13, 2006, at 11.

Adding the company's commitment to acquire 1,400 MW of renewable resources yields a summertime east-side capacity gap of 1,160 MW in 2012 and 1,343 MW in 2013. These numbers should be considered an upper bound on overall east-side capacity acquisition targets.[5]

After adding the acknowledged 700 MW of Front Office Transactions from the company's 2004 IRP Action Plan, the summertime east-side capacity gap is as follows:

- 355 MW in 2012
- 538 MW in 2013

These figures are comparable to the resource need the company is now seeking to fill through the RFP: 340 MW in 2012 and 500 MW to 575 MW in 2013.

Staff performed the same analysis using a 12 percent planning reserve margin. The following table compares the results of both analyses:

East-Side Load/Resource Balance

	15% planning margin		**12% planning margin**	
	2012	**2013**	**2012**	**2013**
Raw load/ resource balance	98 MW	257 MW	98 MW	257 MW
With planning margin	1,268 MW	1,451 MW	1,048 MW	1,226 MW
After adding wind commitment	1,160 MW	1,343 MW	941 MW	1,119 MW
After adding 700 MW of Front Office Transactions[6]	355 MW	538 MW	157 MW	335 MW

[4] The company's "raw" resource shortfall (gap without planning margin) on the east side of its system is 98 MW in 2012 and 257 MW in 2013.
[5] Resources to meet that need could include thermal resources, short-term market purchases, incremental renewable resources and peak contributions from demand-side measures.
[6] Front Office Transactions come with reserves. They reduce planning margin needs by 105 MW under a 15% margin (15% * 700 MW), and 84 MW under a 12% margin (12% * 700 MW).

As staff stated in previous comments, the company needs additional capacity resources on the east side of its system only in summer.

Energy Position

The energy graphs in staff's earlier Reply Comments[7] do not reflect the energy contribution from approximately 1,000 MW of renewable resources associated with PacifiCorp's 1,400 MW commitment. In its supplemental response to Staff Data Request No. 48, PacifiCorp provided annual, rather than monthly, estimates of energy associated with the renewable resources beyond the 400 MW the company already has acquired, or is in the process of acquiring, toward its commitment. Therefore, staff has not updated the monthly energy graphs.

Comparing the "MWa" (average megawatts) tab of the company's initial and supplemental responses, the additional 1,000 MW of renewable resources would contribute 183 MWa of energy on an annual basis on the east side of the company's system. Before adding Front Office Transactions or resources solicited in the Draft RFP, this results in the following annual energy position:

- 598 MWa surplus in 2012
- 468 MWa surplus in 2013

On a system-wide basis, the resulting energy position of the company, before adding Front Office Transactions or resources from the Draft RFP, is as follows:

- 443 MWa surplus in 2012
- 260 MWa surplus in 2013

As staff stated in previous comments, the company needs additional energy resources on the east side of its system in 2012-2013 only during summer on-peak hours.

Base Load Resources

Staff's analysis shows that PacifiCorp needs capacity resources on the east side only in the summer months. Further, there is no need for additional energy resources on the east side except for on-peak hours in summer.

The company's most recent filing does not respond to staff's concern that base load resources may be the wrong resources to meet this seasonal, on-peak gap. Staff further stated that it appears PacifiCorp's definition of base load resources prohibits proposals targeting this summertime on-peak shortfall. Staff recommended that the company encourage proposals targeting this need. Specifically, staff pointed toward market purchases, natural gas-fired resources

[7] *See* October 13, 2006, comments at 12-13.

with peaking capability, and demand-side resources that target a seasonal on-peak shortfall, rather than 24/7 base load resources. *See* staff's Reply Comments at 13-15.

Staff is concerned that the company could have a hard time selling the excess energy from new base load plants, especially if they are conventional coal plants. The company's modeling may assume these sales at forecasted market prices, but they may be tough to transact in reality over the plants' 40-year amortization period. *See* staff's Reply Comments at 15-16.

Staff recommends that the Commission not approve the Draft RFP unless the company amends it to allow proposals that target summer on-peak hours on the east side of its system. Further, the advantages of such proposals should be reflected in bid evaluation, in consultation with the Utah and Oregon Independent Evaluators and stakeholders. *See* recommended staff conditions #1a and 1b.

Bridging Strategy

For thermal resources, the Commission's acknowledgment order directed the company to explore a bridging strategy until IGCC plants are commercially ready. *See* Order No. 06-029 at 51. Specifically, the Commission called for additional short-term purchases, demand-side measures and distributed resources.

For its 2006 IRP, the company is constraining the Capacity Expansion Model to include no more than historical levels of Front Office Transactions, including 700 MW on the east side.[8] The company also is planning to include in its 2006 IRP 63 MW of incremental direct load control measures on the east side. *See* PacifiCorp's presentation at the IRP Public Input Meeting on October 31, 2006, at 13 and 23.

The Commission further called for analysis of additional renewable resources, beyond the 1,400 MW assumed as planned resources in the 2004 IRP. *See* Order No. 06-029 at 33. The company is including 600 MW of additional renewable resources in some of the portfolios it is testing in the 2006 IRP. *See* PacifiCorp's October 31, 2006, presentation at 10.

The company's first Benchmark Resource in the Draft RFP is a conventional coal plant; the second resource is an IGCC plant. Also, the company is now proposing that Hunter 4, a conventional coal plant, be evaluated as an alternative to the IGCC plant. At the same time, the Draft RFP allows bidders to propose an IGCC plant in 2012. *See* Draft RFP at 7.

The ability to delay capital investment in base load resources may have significant option value. Waiting for further information about the viability of IGCC

[8] Some model runs preclude such purchases.

technology and future regulation of CO_2 emissions may allow PacifiCorp and its customers to avoid potential future losses. Adding capacity in small increments provides flexibility to respond to such uncertainties.

This options value analysis should be a condition of RFP approval. *See* staff recommended condition #1b.

CO_2 Risk Analysis

The Commission stated in its IRP acknowledgment order (at 50):

> Both resource types present significant risks – fuel price uncertainty and volatility for the gas-fired CCCT and possible CO_2 regulatory costs for the pulverized coal plant....
>
> While it is impossible to predict CO_2 regulatory costs over the expected life of a new coal plant, all parties commenting in this proceeding, including PacifiCorp, recognize the associated uncertainties and risks for ratepayers. That makes an IGCC plant, with the ability to later add CO_2 sequestration, an attractive option....

In addition to the required CO_2 scenario analyses, staff would expect the company to include as part of its RFP evaluation an analysis similar to the one the company used for its 2004 IRP showing how high CO_2 regulatory costs would have to be in order to tip the decision between a pulverized coal plant and an IGCC plant. *See* PacifiCorp's 2004 IRP, Figure 6.1, page 91. Staff is unclear whether PacifiCorp intends to include such analysis in its RFP. *See* Attachment A, PacifiCorp's response to Oregon Department of Energy Data Request No. 40. The company should clarify its intention to do so.

II. Whether the RFP Satisfies the Commission's Competitive Bidding Guidelines

Resource Diversity

In prior comments staff raised concerns about resource diversity on the initial and final short-lists. First, staff raised concerns about resource *duration*, considering that short-term resources — those less than five years duration — are not allowed to bid. This concern would be somewhat mitigated if staff's analysis found that the level of base load resources the company is seeking through the RFP reflects the acknowledged levels of short-term market purchases. *See* staff's Opening Comments at 12-13 and Reply Comments at 7-9.

Staff's analysis shows that using a 15 percent planning margin, the remaining east-side capacity gap after accounting for 700 MW of short-term purchases is roughly equivalent to the Benchmark Resource levels. However, under a 12 percent planning margin, the remaining capacity gap in 2012 is only 157 MW, and in 2013 the gap is 335 MW. These gaps fall short of the Benchmark Resource levels.

Second, staff raised concerns that the proposed RFP fails to provide a process to evaluate whether there should be a preference to acquire resources that target summer on-peak hours, rather than base load resources. *See* staff's Reply Comments at 13-16. The company's filings continue to sidestep this concern. Such an analysis should be a condition of RFP approval. *See* recommended staff conditions #1a and 1b.

III. Overall Fairness of the Utility's Proposed Bidding Process

Staff raised concerns that potential bidders do not have a meaningful opportunity to propose IGCC plants because the RFP limited these plants to power purchase or tolling agreements, neither of which may make sense given the status of the technology. *See* staff's Reply Comments at 16-17. For example, staff was concerned about bidders' ability to finance an IGCC project under such agreements.

The company is now proposing to allow bidders to propose an Asset Sale and Purchase Agreement for an IGCC plant at the bidder's site, subject to a 12-year operations and maintenance (O&M) agreement to guarantee availability and reliability. *See* Draft RFP at 12. The Oregon IE will review issues related to the O&M agreement. However, this change reduces staff's concern. While it certainly is possible that an RFP is not the appropriate vehicle for acquiring an IGCC plant at this time, we will not know for sure without encouraging this opportunity.

The company also has included a separate bidding category for IGCC plants to ensure they will not be screened out in initial short-listing. Along those lines, the company also added a separate bidding category for geothermal and biomass plants. These are welcome improvements.

Finally related to the third criteria for RFP approval, staff previously identified areas for the Oregon Independent Evaluator to review further, following RFP issuance. *See* staff's Reply Comments at 21-23. The Oregon Independent Evaluator also should review the most recent changes to the RFP, including the new and revised non-price factors, changes to pro forma agreements and O&M agreements, credit and security requirements, accounting treatment, affiliate bidding, refreshing of bids and Benchmark Resource costs, minimum eligibility requirements, and evaluation process – including the new Step 4 to occur after formulation of the final short-list, but before any request for Commission acknowledgment.

This new step is to take into account Oregon competitive bidding guideline 10(d) (unique risks and advantages of Benchmark Resources vs. market bids) as well as Utah Energy Resource Procurement Act requirements that are not expressly or adequately factored into the formal evaluation process.

IV. Staff Recommendation

In light of reductions in the resource levels being sought in the RFP to better reflect the actual level of capacity needed, as well as changes that make the RFP better conform to the Commission's competitive bidding guidelines and improvements that make the process more fair for bidders, staff recommends:

1. The Commission conditionally approve PacifiCorp's Draft RFP pursuant to Order No. 06-550 (i.e., the Commission's initial approval would be subject to the Oregon Independent Evaluator's assessment of the RFP, after which the Commission may reconsider its initial approval) if PacifiCorp amends the RFP to:

    a. Allow bids that target summer on-peak hours on the east side of the system.

    b. Conduct evaluation, in consultation with the Utah and Oregon Independent Evaluators and stakeholders, prior to selection of the final RFP short-list, of potential bridging strategies for the east side of the system based on combinations of:

        i. renewable resources incremental to the 1,400 MW by 2015 commitment;
        ii. short-term market purchases incremental to the levels acknowledged in the 2004 IRP Action Plan;
        iii. incremental conservation and demand response resources that target summer on-peak hours; and
        iv. market bids targeting peak summertime hours (*See* 1a, above).

    c. Prior to selection of the final RFP short-list and in consultation with the Utah and Oregon Independent Evaluators and stakeholders, conduct evaluation of top-performing portfolios at 12 percent and 15 percent planning margins, including potential bridging strategies in 1b, above.

2. Staff further recommends that the Commission's order granting conditional approval contain language that reflects the following concepts:

a. RFP approval does not imply endorsement of any of the company's Benchmark Resources.

b. RFP approval does not imply acknowledgment of the proposed level of resource acquisitions, the level of resources for which the company is seeking five-year minimum commitments, or the level of base load resources that should be acquired to meet its resource needs beginning in 2012.

c. The Commission does not acknowledge a departure from 700 MW of Front Office Transactions in the 2004 IRP Action Plan on the east side (and 500 MW of these transactions on the West side).

d. The Commission is neither approving the pro forma or O&M agreements included in the RFP in their entirety, nor endorsing any specific term therein.

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Please indicate PacifiCorp's willingness to determine the critical values for the key input assumptions (CO2 cost adder, natural gas or coal price, etc.) that drive important decisions in the 2012 Baseload RFP/IRP. (A critical value analysis shows how high an uncertain but important input value would have to be to tip the decision from one project to another. For example if the decision were between a baseload geothermal plant and a baseload pulverized coal plant, a critical-value analysis would show how high the 2020 CO2 cost adder would need to be to tip the decision to the geothermal plant. Similarly, if the decision were between similar coal plants that had different heat rates, the analysis would show what price of fuel would tip the decision to the more efficient plant.)

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The company intends to analyze CO2 costs and risks, natural gas prices, coal prices and other variables in the RFP in a manner that is consistent with the analysis of such values in the Integrated Resource Planning process. The company does not intend to address the specific "critical values" analysis requested above, but will include both stochastic and scenario analysis to assess the risk associated with the key input assumptions.

CERTIFICATE OF SERVICE

I certify that on November 9, 2006, I served the foregoing upon all parties of record in this proceeding by delivering a copy by electronic mail and by mailing a copy by postage prepaid first class mail or by hand delivery/shuttle mail to the parties accepting paper service.

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