State of Utah

DEPARTMENT OF COMMERCE

Committee of Consumer Services

To: PacifiCorp IRP Team

From: Committee of Consumer Services IRP Team

Date: 16 December 2004

Subject: Comments on 2004 Draft IRP Report

1 INTRODUCTION AND SUMMARY

The Committee of Consumer Services' IRP Team (CCS Team) sincerely appreciates the opportunity to provide comments on the 2004 IRP Draft Report. The impact to customers from PacifiCorp's plan to meet the needs of its customers is significant and is cumulative over time. The CCS Team recognizes and appreciates the extensive effort of PacifiCorp staff dedicated to this project. These comments are intended to be helpful to PacifiCorp in meeting the needs of its customers in a least-cost, least-risk manner, and in assuring the Company of a reasonable opportunity to recover the costs of its investments.

Because these comments are to the Company on the draft report rather than comments to the Commission, and because of the need for brevity, we are for the most part limiting ourselves to those comments that are responsive to the Company's request for feedback and to the concerns we have that may be remedied in the near term. We will withhold our more extensive comments, compliments and recommendations for comments to the Commission.

The Company has asked for feedback on its draft IRP in four areas: (1) compliance with Standards and Guidelines; (2) the IRP process; (3) the selection of the Preferred Portfolio as the least-cost, risk-informed portfolio, and (4) the proposed Action Plan. Because of the fairly comprehensive nature of the Utah Standards and Guidelines, providing input on the adherence to Standards and Guidelines necessarily requires addressing items 2-4. Therefore, items 1, 3 and 4 will be discussed below in section 2. We will address the IRP process separately in its own section.

The CCS Team does not believe the current IRP product is in full compliance with Utah's Standards and Guidelines which we will partially detail below. In particular we are concerned that the addition of a fifth new gas plant on the east side of the system in FY 2010, which requires actions within the current Action Plan timeframe, may not be in the public interest. It appears that the industry may be undergoing a fundamental shift that outdates much of the current analysis by not adequately addressing the risk of gas-fueled resources or anticipating the rapid development of commercially viable IGCC technology. Given the fairly recent recognition of this shift in circumstances, and, therefore, the incomplete analysis pertaining to these changes, and given our independent view of wholesale market functionality, the CCS Team can not yet concur with the Company that the Preferred Portfolio is the least-cost, least-risk portfolio.

While we understand the need to lock down assumptions, we also recognize that the results of a planning process must be reasonable in light of current information. If a fundamental shift is indeed occurring, to proceed as if it were not, would not be wise. The CCS Team recommends that PacifiCorp undertake additional analysis to either confirm the reasonableness of the Preferred Portfolio or demonstrate the superiority of an alternative before it finalize its IRP and proceed with the implementation of an Action Plan.

2 COMPLIANCE WITH STANDARDS AND GUIDELINES

As stated above, the CCS Team does not believe the current IRP product is in full compliance with Utah Standards and Guidelines. We note five requirements, in particular, that do not appear to be met. The first arises from the definition of integrated resource planning, the second from estimating but one load and resource balance, the third from incomplete risk analysis, the fourth with the lack of specificity of the Action Plan, and the fifth with inadequate path analysis which is the result of not having a modeling tool with resource addition logic in place in time for this IRP cycle. In addition we have other methodological concerns which may be corrected when the CEM is fully operational.

2.1 Integrated Resource Planning

The Utah Report and Order on Standards and Guidelines, Docket No. 90-2035-01, issued 18 June 1992 states the following.

Integrated resource planning is a utility planning process which evaluates all known resources on a consistent and comparable basis in order to meet current and future customer electric energy services needs at the lowest total cost to the utility and its customers, and in a manner consistent with the long-run public interest. The process should result in the selection of the optimal set of resources given the expected combination of costs, risk and uncertainty.[1]

For a variety of methodological and analytical reasons, the CCS Team is not yet convinced that the Preferred Portfolio is “the optimal set of resources given the expected combination of costs, risk, and uncertainty.” Issues include, but are not limited, to the following:

- Methodological:
  - A modeling tool with resource addition logic was unavailable for the majority of the modeling. As a result, we are unsure that all reasonable portfolios were examined; therefore the optimal portfolio may have been missed. For example,

[1] Pg 41.

Portfolio Q scored exceedingly well with the risk analysis measures, but was added at our request late in the process.

- Inconsistent use of the CEM. The CEM is used to choose DSM programs, justify the hard-wired choice of 1400 MW of wind additions and to produce a supply-side portfolio. No runs were done combining these. (The CCS Team would also recommend that market transactions be entered as resource options in the future rather than modeled as existing resources.)
- Use of DSM to defer resources in the Preferred Portfolio. If effective, DSM alters the initial load and resource balance thus affecting the timing of resource additions. The change in the load and resource balance should be reflected in the building of all portfolios. Whether the ranking of the deterministic runs would be affected by this is unknown, but possible.

♦ Load Related:

- One load forecast leading to but one load and resource balance. Thus the timing of resource additions is invariant across portfolios.
- Utah’s load forecast. While the method for developing the forecast appears to comport with the Standards and Guidelines, the results appear optimistic given current economic conditions and new load control and rate design programs in Utah. Indeed, PacifiCorp’s quarterly load forecast has declined since the IRP load and resource balance was determined. This may overstate the need and affect the proper resource timing.

♦ Price and Cost Assumptions:

- Gas price forecasts appear unreasonably low. This would give an edge to gas-fired resources.
- Coal and IGCC capital cost assumptions appear high. Again, this would give an edge to gas-fired resources.
- If alternative assumptions were used, the ranking of the deterministic runs might change as well as the results of the risk analysis.

♦ Stochastic Risk Analysis:

- 1200 MW of short and medium term market transactions are included in all portfolio runs as an existing resource. The economic justification is based on a single forward price forecast with assertions that markets have returned to normal. The risk of this decision was not evaluated. This decision should have been subjected to stochastic and scenario risk analysis. The risk of these resources may outweigh their cost advantage.

♦ Analysis of Uncertainty—Scenario Risk:

The risk that economic conditions shift in fundamental ways is evaluated through scenario risk analysis. The 2004 IRP Draft Report identifies two such risks, the risk of CO2 emission allowance rates, and the risk of higher gas prices.

The CCS Team agrees that both pose significant scenario risk. However, while the range of carbon tax adders seems to have been adequately addressed, the CCS

Team believes that the most significant scenario risk, a fundamental shift in the natural gas market, was not adequately addressed, and that the scenario risk of a dysfunctional wholesale electricity market was missed entirely. Our concern is that this again gives an unwarranted edge to gas-fired and short and intermediate-term market resources.

For example, if LNG or other sources of gas do not develop as anticipated in PacifiCorp's analysis, gas prices may be an order of magnitude greater than they have been. Indeed, natural gas may not be available at any price for electricity production. A gas price sensitivity that increases already low gas prices by only 20% does not capture this type of fundamental shift.

The risk that the wholesale market could again malfunction as it did in 2000 and 2001 is addressed verbally in Chapter 1 but is not analyzed by the Company as a scenario risk. In discussing the market circumstances of 2000 and 2001, the report reflects the point of view that the market crisis was caused primarily by a resource shortage that has been corrected. From our point of view the IRP does not adequately address the possibility of tight market circumstances recurring or the ability of marketers to manipulate tight circumstances.[2] We disagree with the conclusion that "there is a very low probability of a return to 2000-2001 crisis conditions."[3] The CCS IRP Team believes that market dysfunction could recur, therefore, the decision to include significant amounts of shorter-term market transactions should be subjected to a scenario risk sensitivity.

The most recent WECC Power Supply Assessment shows the possibility of tight circumstances arising in the near future. Under certain conditions deficits develop in the Southern California Mexico region of the interconnection as early as 2005. The interconnection is deficit by 2008. While the Northwest and Canada remain surplus throughout most of the analyzed period, the WECC Power Supply Assessment is based on capacity, not energy, which could overstate these regions' power availability.

Most of the new capacity operating in the western interconnect is gas-fired. If LNG and other sources of supply do not materialize and gas markets fundamentally shift, gas availability could become a serious concern. Not only might the fuel not be available to power the plants, thereby causing real shortages, resource tightness provides the opportunity for major market manipulation.

Another factor that could lead to market dysfunction is the formation and operation of Grid West. The formal energy and ancillary services markets that would be formed could provide ample opportunity for gaming.

Conclusion:

The cumulative effect of the above bulleted points is that the CCS Team believes the Preferred Portfolio appears weighted too heavily toward natural gas and short to medium-term market resources.

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[2] See for example Robert Klein's testimony to FERC.
[3] Draft Report page 12.

As Appendix A indicates, fourteen of the sixteen portfolios analyzed are more than 63% natural gas-fired. Two of the portfolios were 100% gas. While the Company has referred to the portfolios that are roughly 66% gas as "diversified" the CCS Team believes that Portfolios that are roughly an equal mix of gas and coal should be considered "diversified" as well.

2.2 Load Forecasting Requirement:

The Utah IRP Standards and Guidelines state:

PacifiCorp's future integrated resource plans will include:…A range of estimates or forecasts of load growth, including both capacity (kW) and energy (kWh) requirements.[4]

The current IRP uses but one load forecast to determine its load and resource balance and builds all portfolios to meet the resource requirements created by that one load forecast. Without load sensitivities, it is difficult to understand the implications of misforecasting loads—which most certainly will happen.

We would note that the stochastic risk analysis does vary load along with other critical variables, but only the effect on cost is assessed. The timing of resource additions remains invariant to this analysis.

2.3 Risk Analysis requirements:

The Utah IRP Standards and Guidelines state:

PacifiCorp's future integrated resource plans will include:…An evaluation of the financial, competitive, reliability, and operational risks associated with various resource options and how the action plan addresses these risks in the context of both the Business Plan and the 20-year Integrated Resource Plan. The Company will identify who should bear such risk, the ratepayer or the stockholder.

As discussed above, we do not think the risk of gas-fired resources has been fully analyzed. We recommend analyzing a scenario in which LNG does not develop.

The market risk of including 1200 MWs of short to medium-term market transactions as existing resources was not analyzed. We recommend adding this analysis.

Implicit in the Company's discussion of risk is the notion that customers should bear the cost of all Company decisions other than those costs borne by the Company through regulatory lag.[5] The CCS Team believes that when risk is not well analyzed and trade-offs fully identified for the Commission to assess, the shareholders should bear the risk of poor outcomes.

2.4 Action Plan

The Utah IRP Standards and Guidelines state:

PacifiCorp's future integrated resource plans will include:…An action plan outlining the specific resource decisions intended to implement the integrated resource plans in a manner consistent with the Company's strategic business plan. The action plan will span a four-year horizon and will describe specific actions to be taken in the first two

[4] Pg 21,
[5] We would note that the use of a forecasted test year greatly minimizes regulatory lag.

years and outline actions anticipated in the last two years. The action plan will include a status report of the specific actions contained in the previous action plan.[6]

The Action Plan does not appear to provide the detail anticipated by the Standards and Guidelines. The CCS Team recommends itemizing the actions that would be taken to implement the chosen portfolio as was done in the previous IRP report.

2.5 Path Analysis

The Utah IRP Standards and Guidelines state:

PacifiCorp's future integrated resource plans will include:…A plan of different resource acquisition paths for different economic circumstances with a decision mechanism to select among and modify these paths as the future unfolds.[7]

The CCS Team does not believe the discussion in the IRP report is responsive to this directive. The purpose of path analysis is to assist in identifying significant industry shifts or significant changes in the underlying assumptions that would lead to an immediate change in course. This type of analysis is difficult to complete without the assistance of a tool such as the CEM which allows trigger assumptions to be identified.

It appears to the CCS Team that we may be encountering a "different economic circumstance" that is not identified by the path analysis because of the limitations of the modeling tools used.

3 THE IRP PROCESS

The CCS Team commends PacifiCorp on the conduct of its Public Process and the responsiveness of PacifiCorp's IRP Team to public concerns and suggestions through Parking Lot papers and Technical Workshops. The CCS Team particularly appreciates PacifiCorp's willingness to undertake the additional work we have requested such as the modeling and risk analysis of Portfolio Q. While we have not always gained access to the information that we believe we need to recommend acknowledgment to the Commission, we hope that we can remedy this in the future. Finally, the continued use of the video link between Salt Lake City and Portland and the phone links are invaluable in providing interested parties from all states and institutions an opportunity to participate and provide input.

4 CONCLUSION

The CCS Team requests additional analysis be undertaken and requests a meeting with the Company and Utah parties to best determine how to proceed.

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[6] Pg 43
[7] Pg 44