

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Acknowledgment of PacifiCorp's 2008 Integrated Resource Plan	Docket No. 09-2035-01
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COMMENTS OF WESTERN RESOURCE ADVOCATES

Western Resource Advocates (WRA) appreciates the opportunity to briefly comment on the PacifiCorp 2008 IRP Update ("Update").

Acknowledgement

When PacifiCorp filed the Update with the Commission, the cover letter indicated PacifiCorp considered the filing to be informational. WRA believes this is the correct approach.

The Update does not warrant a formal acknowledgement process as it is not the result of a formal integrated resource planning process but is in fact the Company's 2010 Business Plan. While the IRP team provided information into the process, the 2010 Business Plan was not developed in a manner consistent with the IRP Standards and Guidelines, nor does it incorporate the Commission's three-step approach to ascertaining risk and uncertainty. Finally, the significant resource decisions incorporated in the plan were exogenously determined. Therefore, WRA does not believe the Plan could be acknowledged were it put through a formal acknowledgement process.

Nevertheless, the Update is a useful document because it provides transparency into PacifiCorp's strategic planning. WRA appreciates the transparency and the work that went into producing the report.

Strategic Business Plan

According to the Update, PacifiCorp's strategic business plan is to eliminate and/or defer resource acquisition, which it identifies as its strategy to bridge the current economic downturn, tight credit market and uncertainty associated with climate change policies.

The Business Plan begins with the 2008 IRP Preferred Portfolio, eliminates resources and alters acquisition schedules, applies a new load forecast and updated modeling assumptions and then uses the Capacity Expansion Model (CEM) to optimize gas additions and Front Office Transactions (FOTs).

As compared to the 2008 IRP,¹ the Business Plan eliminates 482 MW of wind, 121 MW of Class 1 and 2 DSM,² 46 MW of distributed standby generation, 43 MW of CHP, and 35 MW of geothermal. The wind that remains is added late in the planning period, providing little fuel cost risk mitigation.

In addition, the Business Plan eliminates 115 MW of plant capacity upgrades and a 261 MW IC Aero SCCT, but adds a second CCCT for an overall increase in gas resources of 312 MW. Tables 5.5 and 5.7 show FOTs to be reduced in the early and late years but to increase on the east side between 2014 and 2016. However the FOT information provided in the report does

¹ The actual comparison made in the Update is to a portfolio that is similar to the final Preferred Portfolio—5B_CCCT_Wet; however the portfolio was developed using a November 2008 load forecast rather than the February 2009 load forecast. Since the November load forecast was significantly higher than the February forecast, the FOTs in 5B_CCCT_Wet are higher than in the February 2009 Preferred Portfolio. (See Table 5.5 on page 50 and Table 5.7 on page 53.)

² Class 1 DSM declines by 152 MW. Class 2 DSM increases by 31 MW.

not accurately depict the changes from the 2008 Preferred Portfolio. Declines are overstated while increases are understated.³

The majority of eliminated resources are those that past planning studies demonstrate reduce the significant risks facing the Company and its customers, market and fuel price risk and the cost of complying with the regulation of carbon dioxide emissions. Therefore, while the Company provides no risk metrics for the Business Plan Portfolio, it appears portfolio risk has increased from the already risky strategy inherent in the 2008 Preferred Portfolio.⁴ Indeed more natural gas will be burned under the Business Plan than would have been burned with the 2008 Preferred Portfolio.

The Company's plan to eliminate and delay the acquisition of energy efficiency programs and renewable resources is at odds with its own analysis of what could be required to comply with proposed regulations of green house gas emissions by 2020. Page 21 of the report states:

The potential requirements to reduce greenhouse gas emissions could have a profound impact on PacifiCorp's generation fleet. In the nearer term (e.g., through at least 2020), to reach the emissions caps proposed in the federal bills, PacifiCorp would need to consider converting coal units to burn natural gas and retiring other coal units and replacing them with lower carbon emitting resources

³ The changes in FOTs depicted in Table 5.5 and 5.7 are not accurate because they reflect changes between the Business Plan (October 2009 load forecast) and a portfolio developed using the November 2008 forecast (5B_CCCT_Wet), not the final Preferred Portfolio developed with the February 2009 forecast. PacifiCorp indicates comparisons of the Business Plan with the actual Preferred Portfolio developed using the February 2009 forecast are not available, so the actual difference in FOT must be deduced.

The difference in the load forecasts between November 2008 and Oct 2009 and February 2009 and October 2009 can be assessed by comparing Table 3.4 with Table 5.7. For example, Table 5.7 illustrates that the decline in system load between the November 2008 forecast and February 2009 forecast for the year 2010 is 452 MW (-196 MW + - 256 MW). However as shown in Table 3.4, the change in the 2010 forecast between February 2009 and October 2009 is 271 MW—a difference of nearly 200 MW.

Given that the load forecast between November and February declined, logic would suggest that if the Preferred Portfolio using the February forecast had been used to compute the differences shown in Table 5.5 and 5.7, the FOT declines would be smaller, some declines might change direction and be increases, and the increases would be larger.

⁴ The IRP 2008 Preferred Portfolio was suboptimal from a cost/risk perspective. Of the B Series portfolios (removal of Lake Side 2 as an existing resource, manually adjusted wind schedule) it was the riskiest as measured by upper tail risk and production cost standard deviation.

and expanded DSM. In the longer term, replacement of baseload fossil-fueled plants with non-emitting baseload resources currently in development...will be necessary to achieve reduction targets such as those in the federal bills, assuming continuation of the energy policy that requires electric utilities provide service on demand in the quantity demanded.

Given that PacifiCorp recognizes the potential need within the current planning period to undertake fairly drastic action with a potentially significant price tag, presumably at the same time other utilities are scrambling to meet the same targets with similar actions, the Company's unwillingness to acquire the levels of DSM and renewable resources shown by its planning studies to be *cost effective* appears short-sighted and perhaps imprudent.⁵

Waiting will not ameliorate the need for action, but it may increase its cost, perhaps significantly.⁶

Resource Changes—Apparent Inconsistencies in Logic

PacifiCorp appears to have used inconsistent transmission on-line dates to justify deferral of wind resources and deferral of gas resources. In explaining the decision to defer wind, the Update states:

Construction of the first segment is underway and remains on schedule for completion in 2010. In an effort to maintain schedule flexibility for future segments, in-service dates have been updated to provide flexibility while

⁵ See IRP 2008 Results Section and Comments of WRA on IRP 2008 in Docket No. 09-2035-01 for results of past planning studies showing that the addition of demand side management and renewable resources reduces risk, while the addition of market and gas-fired resources increase risk.

⁶ WRA notes a potential parallel between the late 1990s and today. During the second half of the last decade, many utilities in the west, and PacifiCorp in particular, were unwilling to acquire new facilities to meet growing load as the western surplus disappeared, because each feared potential load loss and stranded investment resulting from potential changes in state and federal regulation of the electric industry (deregulation). When a drought hit, lowering production from the west's hydro facilities, market tightness contributed to severe market disruptions. Utilities, including PacifiCorp, that had opted to bridge the regulatory uncertainty with market resources paid dearly. WRA not only recognizes the potential for a repeat of this phenomenon but for a similar phenomenon to take place in the markets for carbon allowances and offsets. If utilities expect that allowances and offsets will be available at an economic price, and therefore opt to buy allowances rather than make real and significant emissions reductions, there will be an excessive demand for allowances and the price for allowances will soar, well beyond the anticipated "economic" level that drove the decision to buy.

maintaining the urgency to complete the project. These date adjustments, [*shown in Table 2.2 on page 23 as one to two year delays*] combined with the lack of additional transmission capacity on the existing system prompted deferral of planned wind resources dependent on the availability of new transmission.⁷

With regard to explaining the deferral of natural gas resources the Update says:

The resource portfolio modeling, which used the 2008 IRP preferred portfolio as the starting point, indicated that new gas plant capacity could be deferred by one year: 2014 to 2015 for a combined-cycle plant, and 2016 to 2017-2018 for simple cycle units. *These resource deferrals were made possible by assuming that Energy Gateway transmission access to the Mead market in Nevada was available in 2014 rather than the 2017 date assumed for the 2008 IRP* [emphasis added].⁸

Thus, the Company assumes delays in completing the Energy Gateway transmission project as an explanation for its decision to defer wind, but assumes that transmission into the Mead market will be available 3 years early in order to defer gas resources.⁹

The decision to eliminate 482 MW of wind while increasing natural gas fired resources by more than 300 MW is also inconsistent with the direction of change in capital costs between the 2008 IRP and the Update. For the Update, PacifiCorp increased the capital cost of gas-fired resources by between 1% and 3% and decreased the capital cost of wind by between 5% and 9%.

⁷ Page 4

⁸ Page 45

⁹ How the Mead market plays into this Update is somewhat puzzling. The quote from page 45 indicates that the gas deferral decision is based on the assumption that the Energy Gateway project into the Mead market is completed 3 years early, by 2014, which seems unlikely given the 1-2 year delays suggested by Table 2.2 on page 23. So WRA searched for an alternative transmission-based explanation for the gas deferral decision.

On page 41, the text indicates that PacifiCorp acquired transmission service from Mead into Utah beginning in 2012. According to Table 4.2 on page 42, the purchased transmission service provides the Company with access to 300 MW from Mead in 2012-2014 and 100 MW in 2015-2016 and then drops to 0 in 2017 and thereafter. It further indicates that for the 2008 IRP, no access into Mead was assumed prior to 2017; 600 MW was assumed thereafter.

WRA considered that the gas deferral decision might have been based on this transmission service purchase rather than the early completion of the Energy Gateway Project. But, other information provided in the report indicates otherwise. Page 41 of the report indicates that with the transmission service acquisition into Mead, PacifiCorp no longer needs to access the Nevada Utah Border (NUB) hub, and, as reflected in Table 4.2, assumed transactions at NUB are reduced to 0 from 164 MW in 2012 and 579 MW in 2013. Since the effect of the transmission service purchase is a net decrease rather than a net increase in the use of market hubs, it does not appear that the gas deferral decision is based on the transmission service purchase.

Evaluation of Coal Retirements in next IRP

PacifiCorp indicates that it intends to make investments in environmental controls for sulfur oxides (SOx) and nitrous oxides (NOx).¹⁰ Given PacifiCorp's analysis of its need to convert or retire its coal units to meet expected federal CO2 emissions targets, WRA urges the Company to include a thorough analysis of coal retirements prior to committing capital to install additional environmental controls.

Water Use for Power Generation

PacifiCorp's proposed 2015, 607 MW capacity rated, combined cycle natural gas plant would have important consequences for Utah's water resources, since as proposed, the plant would rely on wet-cooling technologies. Compared to a dry-cooled combined cycle plant, a wet-cooled plant would consume an additional 2.4 million gallons of water each year, or enough water to meet the annual needs of over 5,000 households.

Dry cooling is a real and viable alternative for PacifiCorp. Utilities in climates similar to Utah, Nevada and Arizona, now assume any new combined cycle gas plant will rely on dry cooling. While the capital cost of a dry cooling system is higher today than a wet-cooled system, the water savings will become increasingly valuable as the opportunity cost of water increases with increasing water scarcity.

Significantly, climate change may already be impacting western water resources. Scientists analyzing long-term observational trends report evidence of increased drought severity and duration in the western U.S.¹¹ Scientists have found that warming in the Southwest is

¹⁰ Page 4

¹¹ Andreadis, K.M. and D.P. Lettenmaier. 2006. Trends in 20th century drought over the continental United States, *Geophysical Research Letters* 33, L10403, doi:10.1029/2006GL025711.

among the most serious in the nation, with rising summertime temperatures and challenging water cycle changes:

Recent warming is among the most rapid in the nation, significantly more than the global average in some areas. ... Projections suggest continued strong warming, with much larger increases under higher emissions scenarios compared to lower emissions scenarios. Projected summertime temperature increases are greater than the annual average increases in some parts of the region, and are likely to be exacerbated locally by expanding urban heat island effects. Further water cycle changes are projected, which, combined with increasing temperatures, signal a serious water supply challenge in the decades and centuries ahead.¹²

Conclusion

The Company's updated resource plan appears at odds with its own analysis. The discussion included in the Update on climate change policy, and the lessons learned from the body of sensitivity analysis produced over the past several IRP cycles, appear overlooked by those within PacifiCorp who make the financial decisions. As in the past, it appears that the Company's strategic business plan is determining the resource acquisition strategy rather than the integrated resource planning process informing the strategic business plan in a meaningful way. The 2010 Business Plan appears riskier and potentially more costly than the 2008 Preferred Portfolio.

WRA recognizes the significant uncertainties facing the industry today and appreciates PacifiCorp's desire to have more complete and better information before committing to a long-run risk mitigating resource acquisition strategy. WRA even understands why Company management might prefer to manage business risk through mechanisms such as an ECAM while continuing to acquire known resources with risky cost profiles. However, as discussed earlier, waiting does not ameliorate the need for action and comes with significant risks of its own.

¹² U.S. Global Change Research Program. 2009. *Global climate change impacts in the United States*, p. 129. New York. <http://www.globalchange.gov/usimpacts>.

WRA urges the Company to heed the results of its analyses and proactively pursue the levels of energy efficiency and renewable resources shown by its studies to best protect customers and shareholders alike.

Dated this 15th day of June 2010.

Respectfully submitted,

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