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State of Utah
DEPARTMENT OF COMMERCE
Office of Consumer Services

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To: Utah Public Service Commission

From: Office of Consumer Services
Michele Beck, Director
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Date: June 8, 2012

Re: In the Matter of PacifiCorp's 2011 Integrated Resource Plan Update
Docket No. 11-2035-01

Background

On March 30, 2012, PacifiCorp (the Company) filed its 2011 Integrated Resource Plan Update (IRP Update). The IRP Update revises the preferred portfolio and the Action Plan of the original 2011 IRP which was filed on March 31, 2011.[1] The Company states that the IRP revisions reflect the outcome of the Company's 2012 Business Plan, which was approved by the Company's Board on December 9, 2011. Because the IRP Update included a new Action Plan, the Utah Public Service Commission (the Commission) set a schedule for discovery and comments on the IRP Update filing. Accordingly, the Office of Consumer Services (Office) submits its initial comments on the IRP Update.

General Comment

The IRP Update modifies the preferred portfolio from the 2011 IRP by aligning it with the 2012 Business Plan portfolio. While deterministic analysis (system optimizer model) was relied on to a certain degree to develop the 2012 Business Plan portfolio, this portfolio was not subjected to risk analysis (PaR Model) and there was no attempt by the Company to compare this portfolio to the top-performing portfolios from the 2011 IRP. Thus, the IRP Update portfolio represents the Company's view of future resource needs from a business planning perspective and lacks the necessary deterministic and risk analysis, along with comparison to alternative portfolios, for the Office to conclude whether the IRP Update portfolio is in the public interest.

[1] The Utah Public Service Commission issued its Order on the 2011 IRP on March 22, 2012. In this Order, the Commission identified a number of process concerns and analytical deficiencies with the Company's resource plan and did not acknowledge the 2011 IRP. Due to the timing of the issuance of the Commission's IRP Order, the Company was unable to incorporate guidance provided in its IRP Update.

The Office notes that this portfolio change does not appear to comply with the Commission's IRP Guidelines, which require the IRP action plan to present resource decisions which implement the IRP "in a manner consistent with the Company's strategic business plan."[2] In its April 1, 2010 Order on the 2008 IRP, the Commission clarified this guideline by issuing two related directives to the Company:

> "…the Company must fully support all of the assumptions used in the IRP and demonstrate their appropriateness for serving the public interest, including the use of any business planning assumptions."

> "The objective of the guidelines addressing the link between the Company's strategic business plan and the IRP is to ensure transparency between the two plans such that any differences are easily understood and the benefits of IRP are brought to customers; **it is not to make sure the plans match exactly at any given moment.**" [Emphasis added]

The Company intends to separately meet with Utah IRP stakeholders later this summer to discuss current IRP issues. The Office recommends that the issue of "Aligning the IRP Update portfolio with the current Business Plan" be included on the agenda.

Specific Comments on Key Issues

The revisions to the resource portfolio in the IRP Update are primarily driven by two factors:

1. Reductions in the annual load forecasts over the first 10 years of the planning horizon (2012 to 2021), which range from 516 to 858 MW per year.
2. The Company set revised acquisition targets for wind resources, which were developed outside of the deterministic modeling analysis. While the total amount of wind resources remained at 2,100 MWs over the 20-year planning horizon, the Company reduced wind levels in the near term from 1,000 MW to 450 MW (years 2018 -2021). Overall, the Company shifted 800 MWs in the 2018-2024 time period to years after 2024 (the last 6 years of the 20-year planning horizon).

The Office has comments on the two significant changes described above. We also briefly comment on the issues of transmission planning, loss of QF capacity, stochastic analysis and the Company's Coal Replacement Study Update.

- **Updated Load and Resource Balance – Impact on Front Office Transactions (FOTs)**

  The Company's revised peak load forecast reduced loads by about 500 MW per year in the 2012 to 2015 period and by about 800 MW per year in the 2016 to 2021 period. This new load forecast is the primary reason for the improvement in the

[2] Standards and Guidelines for Integrated Resource Planning, PSC Order, June 18, 1992, Docket 90-2035-01.

near-term system deficit position as compared to the 2011 IRP. However, after 2014, the annual system deficit position increases slightly as compared to the 2011 IRP.[3]

The Company responds to the difference in the system deficit position by changing the level of market reliance (i.e., Front Office Transactions or FOTs) in the IRP Update resource portfolio. Thus, the level of FOTs is lowered in 2012-2014 period, although FOTs are subsequently increased beginning in 2015 due a decline in other resources.[4]

Table 1 below compares the system deficit position in the 2011 IRP with the new position in the IRP Update. Table 2 below shows the corresponding annual changes to the FOTs.

Table 1 - System Position (MW)

	2011 IRP	IRP Update	Diff
2012	(1,601)	(1,218)	383
2013	(1,925)	(1,372)	553
2014	(2,373)	(2,225)	148
2015	(2,546)	(2,594)	(48)
2016	(2,767)	(2,861)	(94)
2017	(2,898)	(2,971)	(73)
2018	(3,139)	(3,204)	(65)
2019	(3,383)	(3,468)	(85)
2020	(3,852)	(3,862)	(10)

Table 2 – FOTs (MW)

	2011 IRP	IRP Update	Diff
2012	1,239	944	(295)
2013	1,429	988	(441)
2014	1,190	1,061	(129)
2015	1,149	1,223	74
2016	775	867	92
2017	822	896	74
2018	967	1,035	68
2019	695	829	134
2020	995	1,096	101

The Office has raised concerns about the levels of market reliance in the Company's recent IRPs. The Office continues to recommend that the Company's proposed levels of market reliance be closely monitored and further evaluated in the context of the 2013 IRP process.

- **Deferral of Wind Resources**

In the IRP Update the Company has established revised acquisition targets for wind resources that reduce wind levels from 1,000 MWs to 450 MWs in the 2018 - 2021 period. These fixed acquisition targets for wind were developed outside of

[3] On average, the system deficit position increases each year by 60 MWs from 2015 to 2020.
[4] Decreases in the amount of resources include the following: (200+) MW in coal generation stemming from the Carbon plant closure and lower efficiencies, (370) MW in purchases due to the expiration of the SE Idaho Exchange Agreement and less assumed generation from hydro and QFs.

the deterministic modeling analysis and shift 800 MW of wind resources in the 2018-2024 period to years after 2024. In addition to the lack of deterministic modeling, there was no stochastic (risk) analysis undertaken by the Company in developing the IRP Update portfolio. Stochastic analysis in recent IRPs has demonstrated that portfolios containing significant amounts of wind and other renewable resources tend to perform better than portfolios that include less renewable resources according to various measures of risk. Thus, the Office does not believe that these manual adjustments to wind acquisition levels comply with the Commission's IRP standard of developing a preferred portfolio that is least cost considering risk.

The deferral of wind appears to be primarily driven by the Company's revised RPS compliance assumptions, which indicate that new renewable resources are not needed as soon as previously assumed in the 2011 IRP. A one year delay in the completion of the Windstar to Populus segment of the Gateway West transmission line is another factor in the wind deferral (see Table 3 below), but appears to be less significant than the Company's updated RPS compliance strategy. Lastly, the Company assumes that the production tax credit (PTC) for wind will not be extended beyond December 31, 2012. While it is unclear how the assumed early expiration of the PTC influenced the Company's new wind deferral strategy in the IRP Update, it clearly will have serious implications for cost effectiveness comparisons of renewables to other resource alternatives in the 2013 IRP process.

Table 3 below compares the addition of wind resources in the IRP Update with the 2011 IRP and the revised timing of key segments of the Energy Gateway Project.

Table 3 - Schedule of Wind Additions

Gateway South – Aeolus to Mona – 1,600 MW capacity - 2020

Gateway West – Populus to Hemingway – 600 MW capacity - 2021

Gateway West – Windstar to Populus – 1,400 to 1,600 MW capacity - 2018

Year	2011 IRP	IRP Update
2018	300	0
2019	300	225
2020	200	225
2021	200	0
2022	200	150
2023	200	100
2024	200	75
2025	100	200
2026	100	200
2027	100	200
2028	100	200
2029	100	250
2030		250
Total	**2,100**	**2,075**

The Office has a number of comments relating to the Company's revised wind deferral strategy:

- The IRP Update continues to assume a full build out of the Energy Gateway Transmission project in order to access new wind resources in Wyoming. However, most of the new wind resources (1,625 MW) are now added in the last 10 years of the 20-year planning horizon. Deferral of these wind resources makes them more speculative and brings into question the need for the full Gateway Expansion. The relationship between new wind resources in Wyoming and the Gateway Project needs to be closely scrutinized in the 2013 IRP process and other forums.

- In the 2011 IRP, the system optimizer model selected wind resources in locations other than Wyoming and earlier than 2018.[5] The Company should continue to evaluate the cost-effectiveness of wind resources and other renewables in locations other than Wyoming. It is possible that certain renewable options would require transmission investment that is less costly than the Energy Gateway Project.

- In the 2011 IRP, the PTC for renewable resources was assumed to expire in 2015 for the majority of (core) portfolio cases. Under certain sensitivity cases, the PTCs were extended through 2020. In the 2013 IRP process, the Company should be required to fully explain and support with evidence its revised assumption that the PTC for renewable resources will expire on December 31, 2012.

- **Evaluation of Transmission Projects**

  In the updated IRP Action Plan, the Company states that it will develop criteria for evaluating transmission additions and a process by which to discuss the estimated benefits and costs of projects with stakeholders. Presumably, this dialogue will apply to a wide range of transmission options, including all incremental segments of the Gateway Project. The Office views this as a positive development and looks forward to participating in these discussions on transmission options.

- **Loss of QF Capacity**

  In the updated IRP Action Plan, the Company asserts that a number of QFs that currently sell capacity to PacifiCorp are expected to opt for self-generation in the 2012 to 2016 period. As a result, the Company expects to lose approximately 160 - 170 MWs of QF capacity. This loss of QF capacity occurs at about the same time

[5] See Page 8, Office of Consumer Services September 7, 2011 comments on PacifiCorp's 2011 Integrated Resource Plan.

as the Carbon Plant is retired (a loss of 170 MWs). Beginning in 2017, QF capacity in the IRP Update is similar to the levels found in the 2011 IRP. There is little detail provided in the IRP Update supporting this estimated 160-170 MW loss in QF capacity. The Office recommends this issue be more thoroughly vetted in the 2013 IRP process.

- **Stochastic Analysis of 2012 Business Plan**

  Since the Company did not subject the 2012 Business Plan portfolio to stochastic (risk) analysis, the Office was unable to determine if the selection of resources in the IRP Action Plan represents a low cost, low risk portfolio. In addition, there is no information available in the IRP update that allows for even a rough comparison of the IRP Update portfolio against the top-performing portfolios in the 2011 IRP, which were evaluated using a number of risk performance measures.[6]

- **Coal Replacement Study Update**

  With the filing of the IRP Update, the Company included Confidential Appendix A – Coal Replacement Study (CRS) Update. Since the CRS Update is confidential, the Office will provide only limited comments and suggestions in this public document.

  In general, the Office is pleased to see the Company include a more refined analysis of environmental control technology investments for coal resources within the IRP. However, in addition to modeling scenarios that include natural gas and CO_2 prices, the Office would also like the Company to include coal price uncertainty, availability and quality factors in these scenarios. We also suggest that the Company document and explain the assumptions relating to off-system market sales from coal units as compared to gas units.

Conclusion

Based on our review of the IRP Update, the Office is unable to conclude that the IRP Update portfolio is in the public interest. The IRP Update raises several significant issues that should be further addressed in the current 2013 IRP cycle. These issues include:

- The Company's revised acquisition targets for Wyoming wind resources were developed without the aid of deterministic and stochastic analysis and result in a substantial shift of wind to the last six years (after 2024) of the IRP planning horizon. Deferral of these wind resources makes them more speculative and brings into question the need for the full Gateway Expansion.

[6] Risk performance measures include risk-adjusted PVRR, production cost impact, 10-year customer rate impact and resource diversity.

- The Company's assumptions regarding the cost-effectiveness of wind resources and other renewables in locations other than Wyoming. Certain renewable options may be closer to loads and require transmission investment that is less costly than Energy Gateway Project.

- The Company's criteria for evaluating transmission additions (including Gateway segments) and a process by which to discuss the estimated benefits and costs of projects with stakeholders. In particular, the relationship between new wind resources in Wyoming and the Gateway Project needs to be closely scrutinized.

- The Company's proposed levels of market reliance need to continue to be monitored and further evaluated.

- The Company's justification for the 160-170 MW reduction in QF capacity in the 2012 to 2016 period.

The Office also notes that the continued submission of IRP Updates provides little value if 1) the revised portfolio and Action Plan are simply derivative of the most recent PacifiCorp Business Plan; 2) the Utah Commission's Order on the most recent IRP is not yet available to influence the Company's IRP Update; and 3) the next full IRP cycle is already underway by the time comments on the IRP Update are being prepared and submitted.

The Office recommends that the value of the IRP Update and the issue of how the business plan should be aligned with the IRP action plan should be topics for the Utah stakeholder meeting later this summer. The Office recommends that the other issues it raised be further evaluated within the current IRP process.