BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of PacifiCorp for Approval of a 2009 Request for Proposals for Flexible Resource	)))))	Docket No. 05-035-47

POST HEARING BRIEF OF WESTERN RESOURCE ADVOCATES

Western Resource Advocates (WRA) requests that the Utah Public Service Commission (Commission) accept this post hearing brief on PacifiCorp's November 1, 2006 Revised Draft Request for Proposals for Baseload Resources (Revised 2012 RFP).

I. Improvements in the Revised 2012 RFP

As WRA stated at the hearing, we believe PacifiCorp's Revised Draft RFP contains several significant improvement over prior drafts of the RPF. WRA appreciates the Company's willingness to address several of WRA's key issues. Notably, WRA no longer objects to the Company's treatment in this RFP of integrated gasification combined cycle (IGCC) technology as inconsistent with Commitment U15 in the MidAmerican acquisition Docket No. 05-035-47. We support the Company's proposed IGCC 2013 benchmark option at Jim Bridger and its decision to include IGCC as a separate bid category, and its inclusion of a greater array of factors and impacts in the initial screening criteria. In addition, the Revised Draft RFP includes important provisions for soliciting information from bidders on the costs, risks and impacts of their proposed projects, which (hopefully) will provide the Commission and stakeholders with the information necessary to evaluate the costs, risks and impacts of competing project proposals under the public interest factors set forth in the Energy Resources Procurement Act. Finally, the

Company's revised treatment of front office transactions (FOT) makes the RFP more consistent with the 2004 IRP and 2004 IRP Update.

II. IPP3 and Hunter 4 Benchmark Options

WRA continues to object to the choice of pulverized coal technology for the Company's IPP3 and Hunter 4 benchmark options. WRA firmly believes that the development of highly carbon-intensive resource options with limited flexibility for addressing carbon dioxide emissions does not meet the public interest standard under the Energy Resource Procurement Act. WRA recommends that a far more advisable strategy than the development of a new round of pulverized coal plants would be to focus on bridging options, like short-term transactions, demand-side management (DSM), renewable energy resources and QF power, for deferring these major capital expenditures to gain greater clarity on future climate change regulations and until such time as IGCC technology and other technologies better suited for addressing CO2 emissions can be deployed. WRA therefore recommends that the scope of the RPF should be narrowed to include only the Company's 2013 IGCC benchmark option at Jim Bridger.

WRA, in its opening comments, highlighted the extraordinary challenges posed by global climate change for PacifiCorp, its ratepayers and for the citizens of Utah. *See* WRA Comments, pp.5-11. We stated our belief that the imposition of financial penalties on emissions of CO2 by utilities is a near certainty within the lifetime of new coal power plants, and is likely within the next decade. *Id.* at pp.5-6. We stated that our judgment on the likelihood of CO2 regulation of CO2 is based, first, on the overwhelming scientific evidence that human activities are warming the climate, with the potential for serious harm to humans and the species with which we share this planet, and, second, on the multiplicity of initiatives to manage and reduce greenhouse gas emissions that are sprouting up across the United States and internationally, including important actions here in Utah. *Id.* at pp.6, 9.

WRA summarizes in its opening comments the current scientific consensus on climate change, along with a discussion of efforts underway both domestically and globally to curb CO2 emissions. We will not repeat that discussion here, except to highlight one critical aspect of that analysis which bears directly on the Energy Resource Procurement Act's directive to consider long-term impacts as part of the public interest evaluation. At p.7 to our opening comments, we explain that the need for "prompt action" derives from the longevity of emissions of CO2 in the atmosphere. Much of the CO2 we are emitting today will still be in the atmosphere decades from now. Indeed, the full impact of the GHGs already in the atmosphere will not be felt until around 2050. Even if we stopped emitting GHGs now, the climate will continue to warm for decades.[1] The result is that we cannot wait to reduce our GHG emissions until some later time. Indeed, scientists say that to stabilize Earth's climate at an average temperature 2 degrees Fahrenheit higher than today's temperatures will require at least a 70 percent <u>reduction</u> in CO2 levels by 2050 from 1990 levels.[2]

WRA encourages the Commission to review the Company's selection of benchmark options from a long-term perspective. As WRA explains in its reply comments, developing pulverized coal as a means for protecting ratepayers from short-term market price volatility simply substitutes one short-term risk for a potentially even greater long-term risk. *See* WRA

[1] *See* WRA Comments at p.7, *citing* "Stabilisation and Commitment to Future Climate Change," Hadley Centre report, United Kingdom: Met Office, October 2002.
[2] See WRA Comments at p.7, *citing* "The Weathermakers, How Man is Changing the Climate and What it Means for Life on Earth," Tim Flannery, Atlantic Monthly Press, New York, 2005, p. 168.

Reply Comments, p.8. This asymmetry in risk may be obscured through the use of discount rates in production cost modeling, but it is potentially an enormous legacy and burden for future generations. *Id.* Consistent with the Energy Resource Procurement Act's directive to consider "long-term impacts," WRA submits that it is well within the Commission's purview to consider such issues of intergenerational equity when evaluating the Company's choice of technology for its benchmark proposals. *Id.*

To the extent that additional baseload resources are needed, WRA believes that IGCC, with its more efficient design, reduced water use and ability to capture and store its CO2 emissions, is poised to displace pulverized coal as the preferred technology for electricity generation from coal in the very near future. Multiple studies have confirmed that IGCC is the least expensive way to generate electricity from coal once the costs of capturing and storing the carbon emissions are included. *See* WRA Comments, Attachment 3.[3]

WRA continues to question whether a projected 2012 in-service date for IPP3 is realistic. As WRA noted previously, IPP3 continues to face significant development risks due to the refusal of the project proponents to even consider more advanced fuel combustion techniques like IGCC. The air permit for IPP3 is current subject to litigation before the Utah Supreme Court. One of the principal arguments advanced by the appellants before the Division of Air Quality and Environmental Appeals Board was that IGCC technology should have been evaluated as part of the air permit analysis. Furthermore, as the Commission is well aware, the

[3] WRA is cautiously encouraged by information presented to the IGCC working group that the costs of CO2 capture and storage from pulverized coal units may come down in the future. However, this technology is still very much in the development stage, and WRA has not seen any concrete plans for managing CO2 from the IPP3 expansion or the Hunter 4 expansion as pulverized coal units. Further, because the Company's existing resource fleet is already overwhelmingly dependent upon pulverized coal technology, which makes the case for diversification of coal combustion technologies even more compelling.

Company's selection of pulverized coal for IPP3 continues to raise significant multi-state approval risks. An evaluation of IGCC technology for any IPP3 expansion could help reduce some of these development risks.

III. Resource Need and Reserve Margin

WRA continues to have concerns about whether high capacity factor baseload resources are the appropriate benchmark options for meeting what is essentially a growing peak demand during a limited number of hours during the year. *See* WRA Reply Comments at pp.2-3; WRA Exhibit 1. The 2004 IRP and 2004 IRP Update did identify the need for one additional coal unit, but recent developments in California suggest that the Company's assumptions about off-system sales of surplus energy from pulverized coal units may be dated. *See id.*, at p.3.

At a minimum, the load and resource balance indicates that it would be ill-advised to procure baseload resources up to a 15 percent planning reserve margin, as some parties have suggested. Even if the Commission determines that a 15 percent reserve margin is appropriate, it does not follow that the entire projected deficit should be met with baseload resources. Rather, some or all of the projected deficit can be met with other options. As WRA pointed out at the hearing, the Company, as part of its commitments in Docket No. 05-035-47, is in the process of evaluating opportunities for incremental investments in demand-side management (DSM) and combined heat and power (CHP), and to evaluate renewable resources beyond the 1400 MW target.[4] Yet, the Company's load and resource balance shows that investment levels for these

[4] It should also be noted that a significant share of the renewable resources could come from geothermal resources, which have higher capacity contributions towards planning reserves than wind resources. *See* Reply Comments of the Oregon Department of Energy, at p.3, Docket No. UM 1208.

resource options will remain constant throughout the resource planning period. *See* PacifiCorp Exhibit 1. The treatment of DSM investment is particularly troubling, given that many of the most cost-effective DSM programs can be designed to target and reduce peak demand growth potentially at much lower cost than the development of baseload resources.

If it is determined additional baseload resources are needed, WRA recommends that the scope of the solicitation should be limited to a market evaluation of the Company's 500 MW IGCC benchmark option at Jim Bridger in 2013. For the reasons discussed above, WRA believes it would be ill-advised to develop additional pulverized coal units at this time.

IV. Modeling of CO2 Regulatory Risk

As stated at the outset, WRA commends PacifiCorp for significant improvements in its bid evaluation of CO2 regulatory risk in the Revised Draft RFP. The Company has agreed to employ the IRP's range of CO2 risk scenario sensitivities in evaluating bids. In addition, the RFP solicits important information from bidders on project-specific and site-specific characteristics relating to CO2 mitigation. This includes important project design characteristics and proximity to CO2 storage opportunities – information which cannot be evaluated for generic proxy resources in the IRP process. With that said, WRA believes that the Company's use of an $8 per ton CO2 adder as its base case assumption is too low.

WRA does not object to evaluating bids at a wide range of potential CO2 costs, including the $8 per ton scenario, but we disagree that $8 per ton represents the most likely scenario. As previously mentioned, many scientists believe that, to stabilize global temperatures at no more than 2 degrees Fahrenheit more than today's temperatures in order to avoid some of the more extreme consequences of global warming, it will be necessary to reduce CO_2 emissions by at least 70 percent from today's emissions levels. Achieving this goal will require not only that new power plants emit or offset 100 percent of their CO_2 but also that existing plants offset roughly for 70 percent of their emissions as well. It does not seem likely that under this scenario the cost impacts of CO_2 emissions offsets would remain at or near at $8 per ton while only escalating at inflation. As an additional point of reference, WRA introduced at the hearing Exhibit 2, which documents recent price trends in European Union emissions trading market. It shows that prices have fluctuated significantly over the past year or two, but they have consistently remained above $8 per ton of CO_2 equivalent.

V. Conclusion

Wherefore, WRA requests that the Commission accept these comments on the Revised 2012 RFP.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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