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DEPARTMENT OF COMMERCE  
Office of Consumer Services

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To: Utah Public Service Commission

From: Office of Consumer Services  
Michele Beck, Director  
Dan Gimble, OCS Staff

Date: June 6, 2013

Re: PacifiCorp Energy's 2013 Fossil Fuel Heat Rate Improvement Plan  
Docket No. 13-035-69

### **Background**

On August 10, 2007, the Commission determined that it was in the public interest to adopt the PURPA Fossil Fuel Generation Efficiency Standard. This standard requires PacifiCorp Energy (the Company) to annually file information related to heat rate efficiency and develop a plan to improve generation efficiency. On May 1, 2013, the Company filed its 2013 Fossil Fuel Heat Rate Improvement Plan (HRIP). The Commission requested comments on the 2013 HRIP be filed by June 6, 2013. Accordingly, the Office submits the following comments and recommendations.

### **Importance of the HRIP**

Improving the heat rates of the Company's coal and gas units is not a "paper" exercise. It has real consequences in terms of rates paid by Utah customers and the amount of coal and natural gas burned to power the Company's thermal resources. With the advent of the EBA, Utah customers now bear a portion of fuel risk between general rate cases. Thus, it is important for the Commission to ensure the Company has not only developed and implemented appropriate fuel strategies for its thermal generation stations, but that it also has an effective HRIP in place to maintain and possibly improve the efficiency of its coal and gas units.

### **Comments**

The Office's comments address three deficiencies in the current HRIP: 1) the need to measure the efficiency of gas combined cycle units, 2) the need for a more detailed discussion of the major factors resulting in actual unit efficiencies differing from unit design specifications and 3) whether the availability of gas and coal units with superior heat rates meets current goals and the steps the Company has taken to increase the availability of those units.

- Measuring Efficiency of Gas CCCT Units.

On page 7 of the HRIP, the Company states that a Net Heat Rate Index is calculated for coal units but not for gas units because the latter do not experience the same variability in heat rates. While this may have been the case in the past, gas combined cycle units are now dispatched to follow swings in loads, support resources with intermittent output such as wind, and carry reserves. In addition, with the Lakeside 2 plant scheduled to come on line in 2014, the Company will have five large combined cycle stations on its system.<sup>1</sup> Consequently, the Company should be required in future HRIPs to measure and report on the efficiency of gas combined cycle units in order for regulators and other parties to better understand how those units are performing under current and future operational protocols. This will enable the Company to target areas of efficiency improvement not only for its coal units, but its entire portfolio of thermal resources.

- Design and Actual Efficiency of Fossil Fuel Resources.

Figure 2 on page 10 of the HRIP shows PacifiCorp's Net Heat Rate Index for its coal units. As explained on pages 6 and 7, the index was calculated at the Commission's request and indicates the overall efficiency of the coal units compared to the original engineering design specifications. Figure 2 appears to demonstrate that over the past five years there has been little efficiency improvement (as measured by heat rate) in PacifiCorp's coal fleet relative to design specifications. This could be due to a number of factors including an aging coal fleet, unit loading, reserve requirements, adding pollution control equipment to certain units and the displacement of energy from coal units by wind resources during certain hours. It would be useful in the next HRIP if the Company provided the following: 1) a more detailed explanation of the major factors causing the deviation between the design and actual efficiency of the coal fleet and 2) a similar graph and explanation for the Company's gas combined cycle units.

- Improving Unit Availability on Plants with Better Heat Rates.

On page 3 of the HRIP, the Company lists "improving unit availability on plants with better heat rates" as one of its objectives. In paragraph 5.4 on page 5 the Company generally discusses improvements it has undertaken to increase unit availability but doesn't specifically address whether goals for individual coal or gas units were met. In future HRIPs, the Company should identify the coal and gas units with superior heat rates, indicate whether the availability for those units is consistent with its current goals and discuss the steps it has taken to improve the availability of those units in the future.

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<sup>1</sup>Hermiston, Currant Creek, Lakeside 1 & 2 and Chehalis combined cycle plants.

## **Recommendations**

The Office has the following recommendations regarding the Company's future HRIPs:

- The Company should be required to measure and report on the efficiency of gas combined cycle units in order for regulators and other parties to better understand how those units are performing under current operational conditions.
- The Company should be required to provide a detailed explanation of the major factors causing the deviation between the design and actual efficiency of its coal fleet. The Company should also provide a similar Net Heat Rate Index (see Figure 2, pg 10) for the Company's gas combined cycle units
- The Company should identify the coal and gas units with superior heat rates, discuss whether the availability of those units is consistent with its current goals and indicate what steps it has taken to improve the availability of those units in the future.
- The Company should continue to provide all other information currently contained in its HRIP, including the FERC Form 1 data and 10-year summary.