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May 12, 2009

***VIA ELECTRONIC FILING  
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Oregon Public Utility Commission  
Attention: Filing Center  
550 Capitol Street NE, Ste 215  
Salem, OR 97301-2551

Attn: Filing Center

**RE: UM 1396 – Rebuttal Testimony of Peter G. Warnken on behalf of PacifiCorp**

PacifiCorp d/b/a Pacific Power submits for filing an original and five (5) copies of the Rebuttal Testimony of Peter G. Warnken in the above-referenced matter.

PacifiCorp respectfully requests that all data requests regarding this matter be addressed to:

By e-mail (preferred): [datarequest@pacificorp.com](mailto:datarequest@pacificorp.com)

By regular mail: Data Request Response Center  
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Please direct informal correspondence and questions regarding this filing to Joelle Steward, Regulatory Manager, at (503) 813-5542.

Very truly yours,

Andrea L. Kelly  
Vice President, Regulation  
Enclosures

cc: UM 1396 Service List

## CERTIFICATE OF SERVICE

I hereby certify that on this 12<sup>th</sup> day of May, 2009, I caused to be served, via E-Mail and US Mail (to those parties who have not waived paper service), a true and correct copy of the foregoing document on the following named person(s) at his or her last-known address(es) indicated below.

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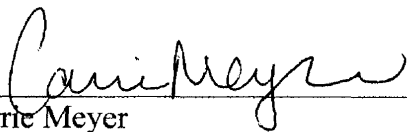
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Carrie Meyer  
Coordinator, Administrative Services

1 **Q. Please state your name, business address and present position with**  
2 **PacifiCorp (“Company”).**

3 A. My name is Peter G. Warnken. My business address is 825 NE Multnomah,  
4 Portland, OR, 97232. I am currently the Manager of Integrated Resource  
5 Planning for PacifiCorp.

6 **Q. Have you previously provided testimony in this case?**

7 A. Yes, I submitted direct testimony on April 13, 2009.

8 **Q. Has your position with the Company and duties changed since then?**

9 A. No.

10 **Q. What is the purpose of your testimony?**

11 A. My testimony is in response to the testimony of Mr. Randall J. Falkenberg and  
12 Mr. Ed Durrenberger, representing the Industrial Customers of Northwest  
13 Utilities (“ICNU”) and the Oregon Public Utility Commission Staff (“Staff”),  
14 respectively, regarding the establishment of the resource sufficiency/deficiency  
15 periods for the purpose of determining avoided costs.

16 **Summary**

17 **Q. Would you summarize your testimony?**

18 A. Both Staff and ICNU assert that the utility’s determination on the timing for when  
19 a major long-term resource is needed (specifically a natural gas-fired combined-  
20 cycle combustion turbine (“CCCT”)), is not sufficient for establishing the  
21 sufficiency/deficiency periods. Staff and ICNU present alternative approaches for  
22 determining the sufficiency/deficiency periods based on their respective views on  
23 the relative importance of resource energy and capacity requirements for making

1 Qualifying Facility (“QF”) avoided cost payments. Staff and ICNU take opposite  
2 views in this regard: Staff contends that capacity has no value in the  
3 determination, while ICNU contends that energy has no value in the  
4 determination. The purpose of my testimony is to explain the Company’s  
5 concerns with both of these positions. The approach proposed by the Company  
6 defines the sufficiency/deficiency periods as the time periods before and after the  
7 addition of the next CCCT, as indicated in the utility’s IRP or IRP update. My  
8 rebuttal testimony explains that the utility’s IRP appropriately indicates the  
9 timing of resource need for sufficiency/deficiency periods determination. I further  
10 explain that Staff’s and ICNU’s proposed approaches are unnecessarily complex  
11 and do not provide benefits over the Company’s proposed approach.

12 **Q. Why do you believe that defining the deficiency period as the time period**  
13 **after the addition of the next CCCT, as indicated in the utility’s IRP, is**  
14 **satisfactory and appropriate?**

15 A. The deficiency determination is intended to identify the point in time when a QF  
16 provides added value to the utility’s system beyond what market purchases would  
17 provide. This point in time is not defined by the utility’s independent need for  
18 capacity or energy only, as suggested by Staff and ICNU. Rather, the point in  
19 time when a QF adds value is when a CCCT is necessary to serve load most  
20 economically, considering both capacity and energy requirements. This criterion  
21 reflects a comprehensive and robust assessment of resource suitability for meeting  
22 loads reliably; as opposed to focusing on a single value attribute of a future  
23 resource as Staff and ICNU propose. Using the IRP determination for when the

1 next CCCT is needed helps ensure that customer costs are in line with the system  
2 value that the utility ascribes to QF-based generation.

3 **Q. Staff proposes that only the utility's energy load and resource balance be**  
4 **used for resource sufficiency determination. On the other hand, ICNU claims**  
5 **that the sufficiency/deficiency periods should be based solely on peak**  
6 **demand and that energy is not a reasonable basis for determination of**  
7 **sufficiency. How do you reconcile these two views?**

8 A. Neither view accurately portrays how energy and capacity factor into the  
9 determination of resource need, or how these resource attributes are accounted for  
10 in PacifiCorp's IRP. A resource, including a QF, may have capacity deferral  
11 value, energy deferral value or both, depending on the following factors: the time  
12 in which the resource (and others) are added to the utility's portfolio; the capacity  
13 size or energy output profile of the resource; the relative dispatch costs of the  
14 resource; and the relative capital or demand payment costs of the resource.

15 **Q. Please explain what you mean by capacity and energy deferral value. Under**  
16 **what circumstances would a QF have both energy and capacity deferral**  
17 **value?**

18 A. In the context of PacifiCorp's IRP, energy deferral value pertains to the ability of  
19 a lower-cost resource to reduce or eliminate the need for higher-cost spot market  
20 balancing purchases and short-term firm market purchases in a given year,  
21 thereby resulting in a net system power cost benefit. Capacity deferral value  
22 pertains to the ability of a lower-cost resource to eliminate or defer a higher-cost  
23 long-term resource for at least one year, resulting in deferred or reduced capital

1 and net power costs. These concepts relate to portfolio analysis and not to a one-  
2 on-one comparison of specific resources to each other, or to a direct comparison  
3 of a resource against a forward market price curve.

4 To determine if a resource has energy or capacity deferral value,  
5 PacifiCorp uses a capacity expansion optimization tool, called System Optimizer,  
6 to develop alternative resource portfolios for detailed cost and risk analysis with a  
7 production cost model. System Optimizer accounts for capacity adequacy  
8 requirements and dispatch economics when selecting resources to address needs  
9 for a given period. Modeling experience has shown that even energy-only  
10 resources can have both energy and capacity deferral value. In other words, the  
11 model can defer or reduce the need for long-term resources, short-term market  
12 purchases, system balancing purchases, or a combination of these, depending on  
13 the factors mentioned earlier in my testimony. For example, the energy available  
14 from QFs at the time of system peak load could defer the need for a small peaking  
15 resource and reduce market purchases at the same time.

16 **Q. Does Staff's proposal, which deems a utility resource deficient if its normal**  
17 **monthly load requirements are greater than the normal monthly resources**  
18 **available for six or more months out of any rolling twelve month period,**  
19 **provide any advantages over using the date of the next CCCT to determine**  
20 **the start of the deficiency period?**

21 A. No. Staff's proposal only provides an alternate indicator of energy resource need  
22 with respect to what utilities are already providing in their IRPs. Staff does not  
23 provide justification as to why a six-month rolling average energy balance is

1 superior to the energy balance for the utility’s peak load month. Moreover, Staff’s  
2 proposed approach does not account for the peak capacity valuation aspect of IRP  
3 described in this rebuttal testimony. Disregarding this aspect of the IRP appears to  
4 contradict the statement made by Staff in direct testimony that “[i]t is not  
5 appropriate to determine resource sufficiency in a completely different manner  
6 than resource needs for the IRP.” [page 7, Exhibit Staff/100] Similarly, excluding  
7 planning contingencies from the determination, which is a key aspect of resource  
8 planning, would deviate from reliance on the utility’s determination of resource  
9 need.

10 Finally, PacifiCorp sees no advantage to Staff’s recommendation to  
11 expand the deficiency criterion to account for regional power pool deficiency.  
12 The regional power pool may help address capacity and energy shortfalls in times  
13 of emergency and through such arrangements as reserve sharing. However, it is  
14 not standard resource planning practice to rely on such support for meeting  
15 resource needs. Additionally, the power pool’s assessment of resource adequacy  
16 can differ from individual utility member’s own assessments with respect to  
17 methodology and timing, which could unduly complicate the deficiency  
18 determination process. PacifiCorp considers market depth, market liquidity,  
19 transmission, and generation deliverability in the IRP process. Therefore, regional  
20 resource adequacy is implicitly accounted for in the resource acquisition planning  
21 upon which the sufficiency/deficiency determination is based.



1 **Q. ICNU proposes a three tier approach be used for resource**  
2 **deficiency/sufficiency periods determination. These three different periods**  
3 **include when a utility is: 1) peak demand and reserve sufficient; 2) peak**  
4 **demand sufficient, but reserve deficient; and 3) peak demand deficient. Do**  
5 **you believe that this proposal provides any advantages over using the date of**  
6 **the next CCCT to determine the start of the deficiency period?**

7 A. No. ICNU’s proposal actually has several disadvantages compared to the  
8 approach advocated by PacifiCorp. As discussed earlier, the deficiency  
9 determination is intended to identify the point in time at which a QF begins to  
10 provide added value to the utility’s system beyond what market purchases would  
11 provide. Unlike the approach that PacifiCorp supports, relying on a capacity-only  
12 criterion fails to account for the type of resource that a QF could economically  
13 replace based on portfolio modeling, which is important for ensuring that a QF is  
14 not over-compensated by customers. For example, a utility’s IRP may indicate  
15 that for a certain year, incremental capacity needs can be met most economically  
16 with third quarter heavy-load hour market purchases or peaking resources. Under  
17 that scenario, it would be inappropriate to start the deficiency period in that year,  
18 and as a consequence, to begin compensating the QF at a higher cost for  
19 generation that has less value than other resources.

20 ICNU’s multi-tier deficiency approach is also needlessly complex and  
21 presumes that resource types are mutually exclusive for the purpose of slotting  
22 capacity into the resource need “gaps” defined from the tiers. Firm market  
23 purchases and long-term resources can both be added to address a significant

1 capacity deficit. It would, therefore, logically follow that for the calculation of QF  
2 avoided costs, the utility should calculate a weighted average of the CCCT and  
3 firm market purchases based on the expected megawatt contribution of both  
4 resources. For example, if the utility was short on capacity by 800 MW to meet  
5 peak load only, and the capacity for the proxy CCCT was 600 MW, then the  
6 avoided cost would be 75 percent of the all-in combined-cycle gas resource cost  
7 plus 25 percent of the firm market purchase cost.

8 **Q. Does this conclude your testimony?**

9 A. Yes.