**Witness CCS – 1**

**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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| **In the Matter of the Application of PacifiCorp for Approval of an IRP-based Avoided Cost Methodology for QF Projects Larger than Three Megawatts** | **:** **:** **:** **:** **:** | **Docket No. 03-035-14** |

**SURREBUTTAL TESTIMONY OF**

**PHILIP HAYET**

**ON BEHALF OF**
**THE COMMITTEE OF CONSUMER SERVICES**

**September 19, 2005**

**Q. ARE YOU THE SAME PHILIP HAYET THAT FILED DIRECT AND REBUTTAL TESTIMONY IN THIS DOCKET ON BEHALF OF THE COMMITTEE OF CONSUMER SERVICES?**

A. Yes I am.

**Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

A. I provide support concerning an issue that Division witness Andrea Coon discussed in her rebuttal testimony.

**Q. PLEASE EXPLAIN MS. COON'S CONCERN REGARDING THE USE OF 93% OF PALO VERDE TO PRICE AVOIDED ENERGY COSTS IN CERTAIN PERIODS.**

A. In Ms. Coon's rebuttal testimony, she explained, "Several Parties have suggested that energy payments during certain periods should remain linked at 93% of Palo Verde as allowed in the stipulation. The Division is not comfortable with continuing this practice."[1] Ms. Coon explains that based on evidence that the Division evaluated, "Palo Verde may still overestimate the avoided cost."[2]

**Q. DOES THE COMMITTEE SHARE THE SAME CONCERN?**

A. Yes, it does. The Committee believes that avoided energy costs computed based on the energy costs of a combined cycle combustion turbine ("CCCT") unit for the high load hours, and 93% of Palo Verde for the low load hours, fails to accurately reflect PacifiCorp's avoided energy costs. In my direct testimony, I explained that the most accurate way to

[1] Ms. Coon Rebuttal Testimony, Page 3.

capture the complex interaction of different resources used to serve PacifiCorp's load is to use production cost modeling incorporated within the DRR approach.

**Q. IS THERE ANY OTHER EVIDENCE TO SUGGEST THAT 93% OF PALO VERDE SHOULD NOT BE RELIED ON FOR PACIFICORP'S AVOIDED ENERGY COSTS DURING LOW LOAD HOURS?**

A. Yes, besides the evidence that Ms. Coon provides, the Committee relies on a Division data response to UAE, DR 2.2, and an exhibit to Mr. Townsend's direct testimony, Exhibit TNT-2, p.1.

**Q. WHAT DOES THE DIVISION DATA RESPONSE TO UAE DR 2.2 DEMONSTRATE?**

A. Table 1 below contains historic Palo Verde data for the period May 1997 to August 2004. I present a portion of that data in Table 1, and for each month I have computed the ratio of off-peak to on-peak Palo Verde energy prices for both firm and non-firm energy. I have also computed averages over the entire period. For the energy with the highest ratio, non-firm energy, the table shows that off-peak energy averages only 65.8% of the price of on-peak energy. This demonstrates that there is a substantial difference between off-peak and on-peak energy pricing.

[2] Ms. Coon Rebuttal Testimony, Page 4.

## Table 1

## DIVISION RESPONSE TO UAE DR2.2
## PALO VERDE HISTORIC PRICES

| Date | Firm On-Peak | Firm Off-Peak | Non Firm On-Peak | Non Firm Off-Peak | Ratio Off-Peak to On-Peak Energy Prices: Firm Energy | Ratio Off-Peak to On-Peak Energy Prices: Non-Firm Energy |
|---|---|---|---|---|---|---|
| **May-97** | 29.36 | 9.09 | 22.36 | 10.54 | 31.0% | 47.1% |
| **Jun-97** | 25.37 | 8.61 | 18.19 | 9.95 | 33.9% | 54.7% |
| **Jul-97** | 35.10 | 9.99 | 26.16 | 11.88 | 28.5% | 45.4% |
| **Aug-97** | 35.52 | 15.58 | 30.52 | 13.63 | 43.9% | 44.7% |
| **Sep-97** | 42.56 | 16.74 | 33.42 | 17.16 | 39.3% | 51.4% |
| **Oct-97** | 27.24 | 12.27 | 24.37 | 14.63 | 45.1% | 60.0% |
| **Nov-97** | 24.19 | 14.63 | 21.89 | 15.13 | 60.5% | 69.1% |
| : | : | : | : | : | : | : |
| : | : | : | : | : | : | : |
| : | : | : | : | : | : | : |
| **Sep-03** | 45.22 | 32.27 | 41.48 | 26.03 | 71.4% | 62.7% |
| **Oct-03** | 45.99 | 29.04 | 42.45 | 26.64 | 63.2% | 62.8% |
| **Nov-03** | 37.99 | 28.58 | 36.47 | 27.54 | 75.2% | 75.5% |
| **Dec-03** | 45.56 | 32.85 | 40.38 | 36.09 | 72.1% | 89.4% |
| **Jan-04** | 46.95 | 33.72 | 43.72 | 33.48 | 71.8% | 76.6% |
| **Feb-04** | 43.87 | 36.79 | 40.07 | 36.25 | 83.9% | 90.5% |
| **Mar-04** | 42.35 | 31.35 | 41.37 | 36.42 | 74.0% | 88.0% |
| **Apr-04** | 46.93 | 33.30 | 40.60 | 36.30 | 70.9% | 89.4% |
| **May-04** | 53.98 | 36.62 | 47.84 | 36.25 | 67.8% | 75.8% |
| **Jun-04** | 52.30 | 31.59 | 43.05 | 29.71 | 60.4% | 69.0% |
| **Jul-04** | 62.71 | 37.43 | 49.58 | 32.55 | 59.7% | 65.7% |
| **Aug-04** | 53.02 | 35.11 | 45.88 | 29.13 | 66.2% | 63.5% |
| | | | | Average | 56.9% | 65.8% |

However, UAE's proxy approach, a portion of which is shown in Table 2 below, determines that off-peak energy is approximately equal to 91% of on-peak energy. UAE's proxy method, based on 93% of Palo Verde for off-peak prices, clearly does not reflect the difference in prices that exists between on-peak and off-peak periods.[3]

[3] See Exhibit TNT-2, p.1 to Mr. Townsend's direct testimony

**TABLE 2**

**Total Avoided Cost Price Using UAE's Proposed Proxy Model Method**

| | | HLH % of Hours | 57.00% | |
|---|---|---|---|---|
| | | LLH % of Hours | 43.00% | |
| Year | Year | HLH Energy Costs ($/MWh) | LLH Energy Costs ($/MWh) | Total Energy Costs ($/MWh) |
| 1 | 2006 | $56.99 | $45.71 | $52.14 |
| 2 | 2007 | $52.05 | $42.74 | $48.05 |
| 3 | 2008 | $48.25 | $39.72 | $44.58 |
| 4 | 2009 | $45.48 | $37.62 | $42.10 |
| 5 | 2010 | $42.69 | $35.76 | $39.71 |
| 6 | 2011 | $44.63 | $39.08 | $42.24 |
| 7 | 2012 | $50.19 | $45.00 | $47.96 |
| 8 | 2013 | $52.91 | $49.29 | $51.35 |
| 9 | 2014 | $53.24 | $50.20 | $51.93 |
| 10 | 2015 | $53.96 | $51.99 | $53.11 |
| 11 | 2016 | $55.21 | $53.73 | $54.57 |
| 12 | 2017 | $56.48 | $56.09 | $56.31 |
| 13 | 2018 | $57.92 | $57.92 | $57.92 |
| 14 | 2019 | $59.42 | $59.42 | $59.42 |
| 15 | 2020 | $60.99 | $60.99 | $60.99 |
| 16 | 2021 | $62.57 | $62.57 | $62.57 |
| 17 | 2022 | $64.21 | $64.21 | $64.21 |
| 18 | 2023 | $65.86 | $65.86 | $65.86 |
| 19 | 2024 | $67.50 | $67.50 | $67.50 |
| 20 | 2025 | $69.02 | $69.02 | $69.02 |
| 20 Year Levelized Price | | $53.70 | $49.02 | $51.69 |

| | |
|---|---|
| Low Load Hour Price as a Percent of High Load Hour Price | 91.29% |

**Q. BESIDES DEMONSTRATING THAT THE PROXY METHOD PRODUCES NON-INTUITIVE AVOIDED ENERGY COST RESULTS IN LOW LOAD HOURS, HAS THE COMMITTEE DEMONSTRATED THERE ARE ALSO PROBLEMS WITH HIGH LOAD HOUR RESULTS?**

A. Yes we have. The Committee demonstrated in its Rebuttal Testimony that UAE's proposal to use a CCCT-based energy price to compute avoided

energy costs in high load hours would overstate PacifiCorp's high load hour avoided energy prices.

**Q. DOES THIS CONCLUDE YOUR PREFILED SURREBUTTAL TESTIMONY?**

A. Yes, it does.