

Rocky Mountain Power  
Exhibit RMP\_\_ ( ARW-2R-RR)  
Docket No. 07-035-93  
Witness: A. Richard Walje

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

---

Exhibit Accompanying Rebuttal Testimony of A. Richard Walje  
Comparison of Generation Costs

May 2008

The following data on resource costs are based upon the costs used from the NWPPE region as configured in the IPM® model. The NWPPE region includes Nevada, Utah, southeast Idaho, and western Wyoming. Updated resource costs for use in PacifiCorp's IRP and business plan have not yet been finalized and may differ from the costs presented below.

All Figures in 2008\$

| Type                | Online Year** | Capital***<br>(\$/kW) | FOM (\$/kW-yr) | VOM (\$/MWh) | Heat Rate<br>(Btu/kWh) |
|---------------------|---------------|-----------------------|----------------|--------------|------------------------|
| Nuclear             | 2020          | \$5,220               | \$114.69       | \$0.50       | 10,400                 |
| CCCT                | 2011          | \$1,105               | \$14.30        | \$1.38       | 6,774                  |
| CT                  | 2009          | \$892                 | \$7.27         | \$2.89       | 10,593                 |
| Supercritical Coal* | 2013          | \$3,113               | \$40.26        | \$2.64       | 9,888                  |
| IGCC*               | 2013          | \$3,833               | \$60.10        | \$2.64       | 9,520                  |
| Coal w/ CCS*        | 2020          | \$5,002               | \$44.70        | \$5.28       | 13,639                 |

\* Assumes subbituminous fuel source.

\*\* Online Year for illustrative purpose only

\*\*\* Includes all soft costs required to take the project to commercial operation.

All Figures in 2008\$

| Type                | Capacity Factor | 2008 Delivered<br>Fuel Price<br>\$/MMBtu | Nom. Lev. Deliv.<br>Fuel Price<br>(\$/MMBtu) | Nom. Lev.<br>Capital (\$/kW) | Nom. Lev. FOM<br>(\$/kWh) | Nom. Lev. VOM<br>(\$/kWh) | Nom. Lev. Fuel<br>(\$/kWh) | Nom. Lev. Emissions<br>(\$/kWh) | Nom. Lev. Total<br>Deliv. Cost<br>(\$/kWh) |
|---------------------|-----------------|--|--|------------------------------|---------------------------|---------------------------|----------------------------|---------------------------------|--|
| Nuclear             | 85.0%           | \$0.75                                   | \$1.56                                       | 9.43                         | 2.40                      | 0.08                      | 1.62                       | 0.00                            | 13.54                                      |
| CCCT                | 56.0%           | \$8.44                                   | \$9.05                                       | 2.59                         | 0.38                      | 0.18                      | 6.13                       | 0.39                            | 9.68                                       |
| CT                  | 21.0%           | \$8.44                                   | \$8.46                                       | 5.71                         | 0.48                      | 0.35                      | 8.96                       | 0.49                            | 15.99                                      |
| Supercritical Coal* | 91.0%           | \$1.50                                   | \$2.07                                       | 4.57                         | 0.70                      | 0.36                      | 2.04                       | 1.16                            | 8.84                                       |
| IGCC*               | 89.0%           | \$1.50                                   | \$2.07                                       | 5.76                         | 1.06                      | 0.36                      | 1.97                       | 1.09                            | 10.24                                      |
| Coal w/ CCS*        | 89.0%           | \$1.50                                   | \$2.34                                       | 8.63                         | 0.90                      | 0.82                      | 3.20                       | 0.01                            | 13.56                                      |

\* Assumes subbituminous fuel source

Additional Assumptions and Caveats Used for Nominal Levelized Delivered Cost Calculations

- \* Nominal levelized delivered costs do not include any incremental transmission investment that might be required to get generation to load
- \* Based upon current corporate finance assumptions, nominal levelized delivered costs are calculated using a 7.363% discount rate
- \* The capacity factors shown above are consistent with the data provided on p.95 of the 2007 IRP (note that "Coal w/ CCS" was not included in the IRP, for purposes of this summary, Coal w/ CCS is assumed to have the same capacity factor as IGCC)
- \* The capacity factors shown above are "inputs" to the calculation, and are held flat over all periods of the asset life, and are not based upon an economic dispatch analysis - a detailed system dispatch model that captures PacifiCorp's control area characteristics (i.e. firm transmission limits, market depth, loads, etc.) would almost certainly show a different dispatch pattern, and thus a different nominal levelized delivered cost
- \* Revenue requirement on capital across all resource types reflects current corporate finance assumptions (i.e. debt/equity ratios, and costs)
- \* Revenue requirement on capital across all resource types is calculated assuming a 20-year tax depreciation schedule - accelerated depreciation on qualifying environmental equipment or potential use of investment tax credits is not reflected in the nominal levelized delivered costs
- \* Capacity and heat rate degradation are not captured in the nominal levelized delivered costs
- \* Fuel prices for the CCCT and CT are based upon the 3/27/08 highly confidential forward price curve for Lakeside
- \* All plant costs, including fuel prices for Nuclear, Coal, IGCC, and Coal w/ CCS are assumed to grow by 1.9% annually from 2008
- \* Plant lives: CCCT = 35 years; CT = 25 years; Coal and IGCC = 40 years; Nuclear and Coal w/ CCS = 40 years (note however, that since the first year of availability is 2020, a 40-year life goes beyond the financial model limits, as such, the nominal levelized delivered costs are calculated through 37 years of the asset life)
- \* Emission costs reflect incremental dispatch costs associated with SO2 cap-and-trade allowance prices and CO2 "allowance" prices consistent with the projections used in the March 2008 forward price curve (CO2 starts at \$8.66/ton in 2012 and grows at inflation thereafter; these amounts are expected to change depending upon the provisions of any federal or state CO2 legislation) - emission costs do not reflect the incremental operating cost for control equipment, which are captured as VOM