ROCKY MOUNTAIN POWER
AVOIDED COST CALCULATION

STANDARD RATES FOR AVOIDED COST PURCHASES FROM QUALIFYING FACILITIES THAT QUALIFY FOR SCHEDULE NO. 37

UTAH – July 2009

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The starting point for the avoided cost calculation is the load and resource balance developed for the Company's 2008 Integrated Resource Plan (IRP). It should be noted that many of the input assumptions for the IRP were fixed in November 2008, in order to enable filing of the IRP in May 2009. Due to the age of the input assumptions, many of the inputs have been updated for known changes for purposes of this avoided cost calculation.

Loads and Resources (L&R)

The Company used the February 2009 load forecast which was included in the 2008 IRP as a sensitivity. Company owned wind resources and long-term sales and purchase contracts were updated to include information available as of May 2009. These changes include the addition or revision of several long-term purchase contracts[1].

Table 1 presents the Company's load and resource balance. Table 1 shows an energy surplus from 2009 through 2013 and then an energy deficit of 126 average megawatts (aMW) in 2014. This result is consistent with the timing of the Company's addition of a Combined Cycle Combustion Turbine (CCCT) as shown in Table 8.44 of the 2008 IRP. Summer peak capacity shows a deficit of 130 megawatts (MW) starting in 2010, growing to 2,411 MW in 2014.

Avoided Cost Calculation

Based on the load and resource balance shown in **Table 1**, the avoided cost calculation is separated into two distinct periods: (1) the Short Run – a period of resource sufficiency (2009 through 2013); and (2) the Long Run – a period of resource deficiency (2014 and beyond).

1. Short Run Avoided Costs

During periods of resource sufficiency, the company's avoided energy costs are based on the displacement of purchased power and existing thermal resources as modeled by the company's GRID model. The model input data includes the monthly load and resource

[1] Additions and revisions to the long-term contracts portfolio include power purchase agreements with the Los Angels Department of Water and Power (LADWP) and CoGen II QF. New company owned wind resources include McFadden Ridge and Three Buttes Wind.

data, which are the basis for the annual summary of loads and resources shown in **Table 1**.

To calculate short-run avoided costs, two production cost studies are prepared. The only difference between the two studies is an assumed 10 aMW increase, at zero running cost. The 10 aMW resource serves as a proxy for qualifying facility generation. The avoided energy cost could be viewed as the highest variable cost incurred to serve total system load from existing and non-deferrable resources. The outputs of the production cost model run are provided as **Table 2**.

Capacity costs in this period are based on capacity purchases for the number of months that the company is capacity deficit. For example, if the company is capacity deficit for five months in a given year, the purchases would be for five twelfths of the year and the annual value as shown in **Table 3** would be five twelfths of the capacity cost of a simple cycle combustion turbine (SCCT).

2. Long Run Avoided Costs

During the resource deficiency period (2014 and beyond) in which new resources are required to provide both summer and winter capacity and energy to meet the Company's resource requirements, avoided costs are the fixed and variable costs of a proxy resource that could be avoided or deferred. The current proxy resource is a combined cycle combustion turbine (CCCT)[2].

Since CCCTs are built as base load units that provide both capacity and energy, it is appropriate to split the fixed costs of this unit into capacity and energy components. The fixed cost of a single cycle combustion turbine (SCCT), which is usually acquired as a capacity resource, defines the portion of the fixed cost of the blended resource that is assigned to capacity. Consistent with the Commission Order in Docket 03-035-14, 50% of the fixed costs associated with the construction of the CCCT resource in excess of the fixed costs of a SCCT is assigned to energy and is added to the variable production (fuel) cost of the CCCT resource to determine the total avoided energy costs. **Table 3** shows the capitalized energy costs.

The fuel cost of the CCCT defines the avoided variable energy costs. The gas price forecast used as the basis for the CCCT fuel cost is discussed later in this document. **Table 4** shows the CCCT fuel cost, the addition of capitalized energy costs at an assumed 51.5% capacity factor and the total avoided energy costs.

[2] CCCT (Wet "F" 2x1) - East Side Options (4500') as listed in Tables 6.2 and 6.4 of the 2008 IRP. Fuel costs are from the Company's June 2009 (0609) Official Market Price Forecast.

Because energy generated by a qualifying facility may vary, we have prepared total avoided costs at 75%, 85% and 95% capacity factor to illustrate the impact of differing generation levels. This calculation is shown in **Table 5**.

Avoided energy costs can be differentiated between on-peak and off-peak periods. To make this calculation, the Company assumed that all capacity costs are incurred to meet on-peak load requirements. On an annual basis, approximately 57% of all hours are on-peak and 43% are off-peak. **Table 6** shows the calculation of on-peak and off-peak avoided energy prices.

For informational purposes, **Table 7** shows a comparison between the avoided costs currently in effect in Utah and the proposed avoided costs in this filing.

Table 8 shows the calculation of the total fixed costs and fuel costs of the CCCT and SCCT that are used in **Table 3** and **Table 4**. In this filing, the Company's next deferrable resource is a CCCT located on the east side of the Company's system. This result is consistent with the Company's addition of an east side Combined Cycle Combustion Turbine (CCCT) as shown in Table 8.44 of the 2008 IRP.

Gas Price Forecast

Gas prices used in this filing utilize the Official Forward Gas Curve as presented in the Company's Official Market Price Forecast. **Table 9** shows the natural gas price used in this avoided cost calculation. Gas prices are based upon the Opal gas index.

The Official Forward Gas Curve consists of a blend of the June 30, 2009 market gas curve and long term gas prices.

	Market	Long Term
Through July 2015	100%	0%
August 2015 – July 2016	50%	50%
August 2016 and beyond	0%	100%