

**ROCKY MOUNTAIN POWER  
AVOIDED COST CALCULATION**

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

**SUMMARY OF TABS IN APPENDIX 1\_AC STUDY\_OCTOBER 21  
2014 WITH PEAK AND OFF-PEAK PRICE SHAPING**

**UTAH – JANUARY 2015**

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**Table 1**

**Table 1** presents the timing of deferrable resources as listed in Table 5.5 of the Company's 2013 IRP Update dated March 31, 2014. The 423 MW CCCT scheduled for 2027 is the Company's next deferrable resource in the 2013 IRP Update and 2027 marks the start of the avoided cost resource deficiency period.

**Table 2**

Based on the timing of the next deferrable resource shown in **Table 1**, the avoided cost calculation is separated into two distinct periods: (1) the Short Run – a period of resource sufficiency (2014 through 2026); and (2) the Long Run – a period of resource deficiency (2027 and beyond).

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. Avoided energy costs are differentiated into on-peak and off-peak rates based on the relationship of Palo Verde On-Peak and Off-peak market prices to Palo Verde flat market prices, respectively. The outputs of the GRID production cost model run and the differentiated on-peak and off-peak avoided energy costs are provided in **Table 2A**. **Tables 2B, 2C, and 2D** are provided for wind, solar-fixed and solar-tracking QF types, respectively, which include the impact of integration costs during the short run period.

**Tables 3- 6**

During the resource deficiency period (2027 and beyond), 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”).<sup>1</sup> Since CCCTs are assumed to be built as base load units that provide both capacity and energy under the Utah Schedule 37 methodology, it is appropriate to split the fixed costs of this unit into capacity and energy components. **Table 3** shows the capitalized energy costs.

**Table 4** shows the CCCT fuel cost, the addition of capitalized energy costs at an assumed 51.9%<sup>2</sup> capacity factor and the total avoided energy costs.

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

**Table 6** shows the calculation of on-peak and off-peak avoided energy prices. During sufficiency period, avoided energy costs are differentiated into on-peak and off-peak rates based on the relationship of Palo Verde On-Peak and Off-peak market prices to Palo Verde flat market prices, respectively. During deficiency period, the Company assumed that all capacity costs are incurred to meet on-peak load requirements. Avoided capacity payments during deficiency period are adjusted by capacity contribution values of each QF resource. The Commission adopted interim values for capacity contribution, setting wind at 20.5 percent, and Fixed and Tracking Solar at 68 percent and 84 percent, respectively.

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<sup>1</sup> 423 MW CCCT Dry "J", Adv 1x1 - East Side Resource (5,050') as listed in the 2013 IRP Update. Fuel costs are from the Company's March 2014 Official Forward Price Curve.

<sup>2</sup> The 51.9% capacity factor is the combined energy weighted capacity factor of the CCCT Dry "J", Adv 1x1 resource (56%) and the CCCT Dry "J", Adv 1x1 duct firing (16%) included in the 2013 IRP. See Table 6.2 in the 2013 IRP.

**Table 7**

For informational purposes, **Table 7** shows a comparison between the avoided costs currently in effect in Utah and the proposed avoided costs in this compliance filing based on the October 21, 2014 Commission order with adjustments made to differentiate on-peak and off-peak rates during the sufficiency period.

**Table 8**

**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**.

**Tables 9-10**

The natural gas price used in this filing is from the Company's Official Forward Price Curve ("OFPC") dated March 31, 2014. Forward prices for electricity are based on the March 31, 2014, OFPC but have been adjusted to remove the impact of a carbon tax.

**Table 9** shows the natural gas price used to calculate the fuel costs of the CCCT that is the proxy resource for the Long Run avoided costs, and **Table 10** shows the electricity prices at Mid-Columbia and Palo Verde that are used in the Company's avoided cost calculation on a heavy-load hour and light-load hour basis.

**Table 11**

**Table 11** summarizes the monthly capacity deficits as modeled in GRID, even though they are no longer applicable since capacity payments during the sufficiency period are removed.

**Table 12**

**Table 12** provides the details of the approved level of integration costs for wind and solar resources.