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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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In the Matter of the Application of Rocky Mountain Power for Approval of Changes to Renewable Avoided Cost Methodology for Qualifying Facilities Projects Larger than Three Megawatts	)	DOCKET NO. 12-035-100
	)	<b>DIVISION OF PUBLIC UTILITIES'</b>
	)	<b>POST-HEARING BRIEF</b>

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Pursuant to direction from the Public Service Commission of Utah (Commission), the Division of Public Utilities (Division) files its post-hearing brief in the above referenced docket.

**I. INTRODUCTION**

This docket presents the Commission an opportunity to apply a new, more appropriate avoided cost methodology to renewable qualifying facility projects (QFs) greater than three megawatts. While the Market Proxy methodology (Market Proxy) may have been satisfactory in the past when the Commission implemented it, present and future considerations dictate a different, more nimble methodology. Past experience

provides useful background information and lessons learned. Current conditions are far different than when the Commission first selected the Market Proxy methodology for wind resources up to a certain level.

In 2003, Rocky Mountain Power (Company) sought approval of an avoided cost pricing methodology for QF facilities larger than one megawatt. At the conclusion of that lengthy proceeding, the Commission selected the Market Proxy method for wind QF resources up to an Integrated Resource Plan (IRP) target level and the Partial Displacement Differential Revenue Requirement method (“PDDRR”) for wind resources exceeding the IRP target level (2005 Order).<sup>1</sup> The adoption of the Market Proxy method was justified, in part, because of its simplicity and transparency.<sup>2</sup>

Between 2005 and 2009, many QF projects were being developed and the Company was adding many renewable resources to its portfolio. The Dunlap I contract was executed in 2009 and was subsequently used to determine avoided costs under the Market Proxy method selected by the 2005 Order. In Dunlap I, REC ownership was transferred to the Company along with the energy purchased. RECs were priced at the then Rocky Mountain Power IRP price. While imperfect, the volume and pace of renewable development minimized the Market Proxy method’s flaws.

In its 2011 IRP, the Company indicated that it had met its IRP target. No cost effective wind resources were included in the 2011 IRP’s preferred portfolio.

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<sup>1</sup> See In the Matter of the Application of PacifiCorp for Approval of an IRP-Based Avoided Cost Methodology for QF Projects Larger than One Megawatt, Docket No. 03-035-14.

<sup>2</sup> See Direct Testimony of, Division witness Dr. Abdinasir Abdulle, lines 65-66; see also 2005 Order at p. 21.

In September 2012, based upon the 2005 Order and the information it had before it, the Commission ordered that “RMP shall provide Blue Mountain indicative avoided cost pricing for the Project based on the market price proxy method for wind resources up to the IRP target level using the Dunlap I contract” (2012 Order).<sup>3</sup> However, the Commission also specifically “invite[d] any party believing a re-examination of the 2005 Order (as re-affirmed herein) is warranted, to pursue the changes it desires through a request for agency action.”<sup>4</sup>

In October 2012, the Commission opened this docket in response to the Company’s request that the Commission (1) approve changes to the avoided cost pricing methodology applicable to large QFs under the 2005 Order, as reaffirmed by the 2012 Order, and (2) stay the 2005 Order. The Commission bifurcated this proceeding. In Phase I, the Commission denied the Motion to Stay. Here, in Phase II, the Commission is addressing proposed changes to the renewable avoided cost pricing methodology. The Commission now has before it multiple rounds of expert testimony, live testimony at a June hearing which provided opportunity for the parties to cross examine and for the Commission to question the expert witnesses, a public witness day hearing at which sworn and unsworn testimony was provided, and briefs from the parties.

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<sup>3</sup> See In the Matter of Blue Mountain Power Partners, LLC’s Request that the Public Service Commission of Utah Require PacifiCorp to Provide the Approved Price for Wind Power for the Blue Mountain Project, Docket No. 12-2557-01 (September 20, 2012), at p. 11.

<sup>4</sup> Id. at pp. 10-11.

Except for renewable resources to satisfy Renewable Portfolio Standards (RPS) established by other states, there were no renewable resources selected in the 2013 IRP.<sup>5</sup>

The Commission now has the opportunity to resolve the avoided cost methodology for renewable qualifying facilities greater than three megawatts. Additionally, the Commission has the opportunity to resolve issues relating to REC ownership.

## II. ARGUMENT

### A. THE PDDRR METHOD SHOULD REPLACE THE FLAWED MARKET PROXY METHOD FOR CALCULATING AVOIDED COSTS FOR RENEWABLE QUALIFIED FACILITIES

The Division urges the Commission to adopt the PDDRR methodology for calculating avoided costs for renewable QFs larger than three megawatts now and in the future. As demonstrated below, the Market Proxy method is flawed, the current conditions make it unreasonable, and its use is no longer in the public interest.

The PDDRR method has many strengths and advantages when compared to the Market Proxy method. The PDDRR method complies with the avoided cost theory set forth in the Public Utility Regulatory Policy Act (PURPA). The PDDRR method does not rely upon stale data like the Market Proxy method, but relies upon recent data.<sup>6</sup>

Additionally, the PDDRR method provides a fair calculation of costs regardless of

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<sup>5</sup> The Division has no current position regarding the treatment of RPS resources, and recommends that an investigation proceed through a new docket.

<sup>6</sup> The Company makes quarterly avoided cost filings that the Division reviews. The Division wishes to continue this quarterly review, as well as reviewing avoided costs in the IRP process. See Transcript, pp. 187-188.

whether the Company's IRP preferred portfolio includes wind or not; the PDDRR method can be used and is used to calculate avoided costs for both wind QFs and non-wind QFs. The PDDRR method reflects more accurately the actual location and characteristics of an individual QF. The PDDRR method takes into account the sequential displacement of resources. That is, any new QF coming on line would displace the next most expensive resource after the most expensive one was already displaced by the QF that came on line before it.

Times have changed since the 2005 Order adopted the Market Proxy method. Before and when the 2005 Order was issued, there was a robust demand for energy from renewable qualifying facilities, and market conditions favored their successful development. However, the current economic climate and renewable QF development landscape are far different than when the 2005 Order was issued or in 2009 when the Dunlap I project was selected as the market proxy.

Now, although the Great Recession has ended, its effect on the economy is still significant. While there are signs of economic recovery, the economy is nowhere as robust as it was prior to the downturn. Correspondingly, the demand for power in the U.S. has grown much more slowly than was forecasted before the Great Recession, and, while demand is increasing, it has not yet reached previously forecasted levels. Stricter credit standards have been imposed on projects of all types, including QFs. These developments have increased the difficulty of bringing a renewable QF online. The cost data for Dunlap 1 are no longer current. Operationally, the Market Proxy method assumes that each additional QF is just as valuable as the last QF added, even though in reality each additional QF avoids lower cost power, and therefore is not as

valuable as the earlier additions. Because of changes in the market place and operational deficiencies the Market Proxy method should be avoided now and in the future. Furthermore, the Market Proxy method does not consider the timing of the need for new resources. Accordingly, the Market Proxy method no longer produces avoided costs as contemplated by PURPA but instead produces values that are inconsistent with PURPA's ratepayer indifference standard.

Arguments advanced in favor of retaining the Market Proxy methodology are unpersuasive. A call for renewable resources in the IRP does not and cannot, refresh stale data to make it satisfy the ratepayer indifference standard.<sup>7</sup> Using an inappropriate methodology, as suggested by some parties to facilitate and ease the development of renewable resources, is not in the public interest because the "avoided costs" paid are not the costs avoided but instead are higher costs that benefit generators at the expense of ratepayers. The fact that the Company's forecasts change "in relatively short intervals"<sup>8</sup> and project development may outlast a forecast does not justify using the Market Proxy method because the new forecasts represent the Company's best prediction of the Company's future energy needs.

Tying avoided cost payments in 2013 and beyond to avoided cost payments made in 2009 is unreasonable under these circumstances. Indeed, it is the Division's position that the Market Proxy method should not be used at all in the future. The PDDRR methodology is the appropriate way to calculate avoided costs today and in the future, and its use is in the public interest.

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<sup>7</sup> See Rebuttal Testimony of Utah Clean Energy witness Ms. Sarah Wright at lines 85-90.

<sup>8</sup> Surrebuttal Testimony of Energy of Utah LLC witness Mr. Rocco Vrba, line 54.

## B. IMPLEMENTING THE PDDRR METHOD FOR RENEWABLE RESOURCES

Implementing the PDDRR methodology as approved by the Commission in its 2005 Order requires updating the capacity contribution and integration charges for renewable resources to determine the avoided costs. Where appropriate, an interim value should be applied until the Company provides calculated values. Environmental attributes and benefits are not avoided costs under PURPA, and should not be included in calculating avoided costs.

### 1. Wind Renewable Resources

#### a. Capacity Contribution

When the PDDRR method is used,<sup>9</sup> the Division supports Utah Clean Energy's (UCE) suggestion that the Effective Load Carrying Capability (ELCC) method be used to calculate capacity contribution if the required data are available and the Capacity Factor (CF) method if the data are not available.<sup>10</sup> The approach endorsed by the Division and the UCE correctly focuses on the average reliability of wind to calculate its capacity contribution instead of wind's reliability at the system coincident peak.

Although the Division requested the Company to perform the calculation and provide an ELCC number for the 500 hours in its study and hoped that the Company would also provide a value through the CF calculation, the Company did not do so. Thus, the Division recommends an interim wind capacity contribution in the range of 8.72 – 12.03%, with a midpoint of 10.4%.

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<sup>9</sup> The Market Proxy method already gives value to capacity.

<sup>10</sup> The Division initially did not oppose the Company's method, but later found UCE's suggestion to be more reasonable. See Rebuttal Testimony of Dr. Abdulle at lines 103-180.

The ELCC or CF method is superior to the Company's 100 hour peak load coincident peak method (100 hour method).<sup>11</sup> The flaw in the Company's exceedance method is apparent on DPU Cross Exhibit 1, Attachment 1 hereto. The exceedance method gives the same capacity value at the 90<sup>th</sup> percentile to a resource available just under 4% of the time as it does to a resource available just over 30% of the time. Also, the Company's support for its exceedance measure is weakened by Mr. Duvall's admission that he did not use a formula to calculate the "confidence level" his Surrebuttal Testimony's Figure 1,<sup>12</sup> but rather took the rank number of ordered data corresponding to the suggested capacity factor and called it the confidence level.<sup>13</sup> The Company's conclusion there is not the result of a statistical calculation as the term confidence level implies, but instead is merely the result of elementary graph reading.

Furthermore, the Company incorrectly asserts that the ELCC is an energy value. Including more hourly data than the Company used in its study does not make a capacity value calculation into an energy value calculation.

Additionally, the Company unpersuasively argues that because the IRP uses the system coincident peak load, its 100 hour method should be used to determine avoided costs. The method selected for the capacity contribution of an intermittent resource does not need to be the same method as that used in the IRP for determining how much and what type of capacity the Company will need. The value of a resource for least cost/least risk evaluation is determined using the resource's contribution throughout the year – not just during 100 hours per year.

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<sup>12</sup> See Surrebuttal Testimony of Company witness Mr. Greg Duvall, Figure 1, Wind and Thermal CCCT, Probability of Exceedance in Peak Load Hours 2-07-2011, Comparison of DPU, OCS and Company Exceedance Levels.

<sup>13</sup> Hearing Transcript, p. 24, lines 21-23, and p. 27 lines, 5 – 13.



Likewise, the Company's claims that the average reliability method causes the customer to pay twice to maintain the same level of reliability is without merit. The Company's claim that it would have to purchase additional capacity a second time to serve customers is flawed. First it is predicated on the idea that the parties are advocating an "energy-based" calculation implying that it has nothing to do with capacity. The Company has already assumed that the peak 100 hours in a year define the Company's capacity needs; but this is an arbitrary cut-off. Does that mean, for example, that any contribution in the 101<sup>st</sup> peak hour in the year is energy only? The point of the ELCC method is that there is a probability that load/capacity will be served by the QF in each hour and that the QF should receive "credit" for the probability of its contribution. The Company's simplistic method estimates that the capacity contribution during peak hours totals 4.1 percent. If the more rigorous ELCC, or similarly *accepted* estimation methods supports this, then so be it. However at the present time, the Division believes that this number is significantly too low because it ignores the many times, including during peak hours, when the Company would receive much more power than it planned on from the QF, thereby relieving the Company, and customers, of paying for power that the Company otherwise would have had to acquire.

The OCS' contention that the capacity contribution of wind should be 13.8% is unsupported. OCS Witness Mr. Randall J. Falkenberg's methodology is flawed. The OCS' method does not match the same hour of the same day and month in the same year. Instead, the OCS' method uses hours from different months and different years, resulting in an over or under estimation of wind capacity. Even if the matching problem was remedied, the OCS' method should not be used because it fails to produce reliable

numbers.<sup>14</sup> Significant too, the OCS' method is flawed not only because it does not measure shortfalls due to wind alone but also because it "included the difference in thermal output between different hours, and not simply the capacity shortfall in terms of wind."<sup>15</sup>

b. Wind Integration Costs

The Division agrees with the Company's proposed wind integration costs. The Company proposes using the method currently used in the IRP and in the last general rate case. The wind integration cost would be \$4.35/MWh on a 20 year nominal levelized basis beginning in 2013.

2. Solar Resources

a. Capacity Contribution

The Division proposes the use of NREL's method to determine, on an interim basis, the capacity contribution of solar because the NREL provides, at the moment, the best available data. The NREL method contains some values for Salt Lake City and is based upon WECC-wide load data. The Division proposes that the Commission determine the final capacity value after a technical conference and submission of comments.

The OCS' suggestion that an interim solar capacity contribution value is unnecessary is without merit. The OCS suggests that instead the Commission order

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<sup>14</sup> As precisely explained by Dr. Abdulle, "The added wind capacity required to meet the load associated with the thermal reserve margins from 12 percent to 16 percent would vary from 0.3 percent to 60.2 percent of the nameplate of wind with mean of 25.9 percent, standard deviation of 19.5 percent, and a coefficient of variation of 75.1 percent." See Rebuttal Testimony of Dr. Abdulle, lines 72-80.

<sup>15</sup> Id. at lines 80-85.

the Company (1) to calculate a capacity value using Commission approved methodology and the most recent numbers, (2) submit that information to the Commission within 30 days, (3) provide a short period for comments, (4) resulting in the Commission determining an appropriate capacity value. This suggestion is unworkable because of the uncertainty it produces for QF developments nearing agreement with the Company.

#### b. Solar Integration Charges

The Division proposes that, on an interim basis, solar integration charges be set as a percentage of wind integration charges. For solar peaking resources, integration charges should be set at 50% of wind integration charges, and for energy oriented solar resources, integration charges should be set at 65% of wind integration charges. This approach recognizes the difference between the nature of solar and wind resources.<sup>16</sup>

While interim solar integration charges are being assessed, the Division believes that the Company should complete the required studies by a date certain and file them with the Commission. The Commission would then establish a process that would result in the Commission setting permanent charges.

#### 3. Including the Value of Asserted Environmental Attributes and Benefits as Avoided Costs is Inconsistent with PURPA

Some parties advocated including what they classify as environmental attributes and benefits to the avoided cost calculation. UCE, Scatec Solara North America, Inc., and Energy of Utah advocated including value for such things as eliminating the carbon tax risk, reducing pollutants, adding diversity, and providing a hedge. However, at this

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<sup>16</sup> The OCS accepts the Division's proposal, with the qualification that it should have no precedential value. See Rebuttal Testimony of OCS witness Mr. Randall J. Falkenberg, lines 112-117.

time, these are unknown risks and benefits, not known costs. Thus, they do not meet the criteria established by PURPA and cannot be considered avoided costs. It is more appropriate to consider what arguably could be considered the risk mitigating factors of renewals in the IRP process.

### C. Renewable Energy Credits

Because PURPA predates the notion of RECs, some parties have argued that RECs should remain with the generator when the energy is purchased, while others have argued that RECs are part and parcel of the energy purchased and, accordingly, transfer for no additional cost with the energy purchased. The Federal Energy Regulatory Commission has ruled that because PURPA was silent regarding RECs, each state determines how its associated RECs will be treated.

The Division believes that RECs are severable from the energy purchased and should remain with the developer absent an express contract provision transferring ownership. The Division's position is consistent with the treatment of RECs by the Commission in its 2005 order and its 2010 decision in Cottonwood Hydro, LLC v. Rocky Mountain Power (Cottonwood Hydro)<sup>17</sup>. In Cottonwood Hydro, the Commission determined that that RECs are severable from the energy produced by a QF. Additionally, the Commission determined that RECs should remain with the generator, absent an express contractual provision

The Company's and OCS' positions that REC ownership passes to the energy purchaser, and that the Commission should mandate such a contractual provision in QF

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<sup>17</sup> Docket No. 10-035-15 (May 27, 2010).

contracts, is unsupportable. Besides raising due process issues, the Company's and OCS' positions ignore innovation and development in the post-PURPA energy market. The REC market has evolved separately from the energy market. Further, if what is required by PURPA is payment of an avoided cost for energy purchased, the existence, or not, of a REC for that energy is of no import.. The Company and ratepayers have not paid for a REC and the generator should not be compelled to give one without additional compensation.

Because the RECs and energy are separate products, the generator should be able to sell the RECs to the highest bidder under the PDDRR methodology, absent a contractual provision transferring ownership to the energy purchaser. Going forward under the PDDRR methodology, the Company should not be compelled to sell any RECs and there should be no Commission imposed REC price; instead the REC price should be determined by a willing seller negotiating with a willing buyer.

### III. CONCLUSION

The Division urges the Commission to take this opportunity to resolve issues concerning the appropriate avoided cost methodology for renewable QFs greater than three megawatts and to adopt the Division's positions for the reasons set forth above. The PDDRR method should be adopted and the Market Proxy method should not be used now or in the future. The ELCC method, or the CF method if the data are not available, is superior to the Company's 100 hour method for calculating the capacity contribution of wind. Wind integration costs should be set at the methods used in the IRP and the last general rate case. For solar resources, an interim capacity contribution should be established using the NREL method and integration charges should be

established by using a percentage of wind integration charges until solar integration cost data become available. Including environmental attributes and benefits when calculating avoided costs is inconsistent with the avoided cost theory set forth in PURPA. No party should be compelled under the PDDRR method to buy or sell RECs and there should be no Commission-mandated REC price. Ratepayer indifference is the standard established in PURPA, and that is the standard that the Commission should apply when resolving issues in this docket.

Dated this \_\_\_\_\_ day of June 2013.

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I hereby certify that on this 27<sup>TH</sup> day of June, 2013, a true copy of the foregoing document was sent via email to the following in Docket 12-035-100, In the Matter of the Application of Rocky Mountain Power for Approval of Changes to Renewable Avoided Cost Methodology for Qualifying Facilities Projects Larger than Three Megawatts:

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