

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

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| <p>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</p> | <p>DOCKET NO. 12-035-100</p> |
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DIRECT TESTIMONY OF PAUL H. CLEMENTS

November 16, 2012

1 **Q. Please state your name, business address and position with PacifiCorp dba**
2 **Rocky Mountain Power (the Company).**

3 A. My name is Paul H. Clements. My business address is 201 S. Main, Suite 2300,
4 Salt Lake City, Utah 84111. My present position is Senior Originator/Power
5 Marketer for PacifiCorp Energy. PacifiCorp Energy and Rocky Mountain Power
6 are divisions of PacifiCorp.

7 **QUALIFICATIONS**

8 **Q. Please briefly describe your education and business experience.**

9 A. I have a B.S. in Business Management from Brigham Young University. I
10 worked in the merchant energy sector for approximately seven years in pricing
11 and structuring, origination, and trading roles for Illinova and Duke Energy. I
12 have been employed by the Company since 2004 as an originator/power marketer
13 responsible for negotiating interruptible retail special contracts, negotiating
14 qualifying facility contracts, and managing wholesale or market-based energy and
15 capacity contracts with other utilities and power marketers. I am the Company
16 representative who negotiates large qualifying facility contracts in Utah.

17 **TESTIMONY**

18 **Q. What is the purpose of your testimony?**

19 A. My testimony will demonstrate that the Commission should approve the
20 Company's October 9, 2012 Request for Agency Action Motion to Stay given
21 current circumstances. My testimony is limited to evidence supporting the
22 Company's request that "the Commission immediately stay the application of the
23 2005 Order, as defined below, for indicative pricing based on the Market Proxy

24 method to any wind qualifying facilities (QF) in excess of three (3) megawatts,
25 with the exception of Blue Mountain¹, on or after the filing date of this Request,
26 pending conclusion of this docket.”²

27 **Q. Please summarize the Company’s request for a Motion to Stay.**

28 A. The Company is requesting that the Commission stay the application of the
29 October 31, 2005 Order in Docket No. 03-035-14 (2005 Order) for indicative
30 pricing based on the Market Proxy method to any wind QF in excess of three (3)
31 megawatts pending final resolution of this docket. Wind QFs that request
32 indicative pricing (either new requests or updates to previous requests), after
33 October 9, 2012, the date the Company filed its Request for Motion to Stay
34 Agency Action, but prior to the resolution of this docket, will receive indicative
35 pricing based on the Proxy/Partial Displacement Differential Revenue
36 Requirement (PDDRR) Method.³

37 **Q. What is the difference between the Market Proxy method and the PDDRR**
38 **method?**

39 A. The Market Proxy method requires pricing for a wind QF resource based on the
40 winning bid in the most recently executed renewable request for proposal (RFP).
41 To derive avoided cost prices using the Market Proxy method, the Commission
42 required the use of the Company’s “most recently executed RFP contract ...
43 against which project specific adjustments are made to produce an indicative price

¹ 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, Order on Request for Agency Action, September 20, 2012.

² Rocky Mountain Power October 9, 2012 Request for Agency Action Motion to Stay, page 10.

³ In the 2005 Order, the Commission established two separate methodologies for calculating avoided cost prices for large wind QF resources between three (3) and 100 megawatts. The first, the Market Proxy method, is applicable to wind QF resources up to an “IRP target” level of megawatts. The second, the PDDRR method, is applicable to wind QF resources in excess of the IRP target.

44 for wind QFs in Utah.”⁴ The last RFP issued by the Company was the 2009R
45 RFP on July 8, 2009. The 2009R RFP resulted in the selection of the Company’s
46 utility benchmark, the Dunlap wind facility. The Dunlap wind facility is the
47 resource currently used to set the Market Proxy avoided cost price method.

48 For wind resources exceeding the 2011 IRP and 2011 IRP update target,
49 the PDDRR method is used. Under the PDDRR method, the Company performs
50 two energy simulations to determine the system energy value of adding a QF
51 resource, taking into account its specific operating characteristics and point of
52 delivery on the Company’s system. The PDDRR method also provides a capacity
53 payment based on the IRP cost of the “next deferrable resource.” In applying the
54 capacity payment, the method accounts for the difference between the capacity
55 contribution value provided by QF resources and the next deferrable resource.

56 **Q. Why is the Company requesting the Market Proxy method no longer be used**
57 **to provide indicative pricing to wind QFs?**

58 A. The Market Proxy method results in paying a QF an outdated price that is based
59 on costs that no longer reflect the current market price for wind resources.
60 Furthermore, the Market Proxy method does not account for the Company’s need
61 or timing for future wind resources. The result is that retail customers will pay
62 the QF avoided cost prices that are too high. Since the PURPA standard for
63 avoided cost pricing is that customers remain indifferent as to whether the energy
64 is purchased from the QF or from other resources, customers should not be
65 required to pay inflated prices that do not reflect the Company’s current avoided

⁴ 2005 Order, p. 21.

66 costs. Therefore, a stay is required since the Market Proxy method does not result
67 in prices reflective of current avoided costs.

68 **Q. Please summarize why the Market Proxy method no longer reflects the**
69 **Company's avoided costs.**

70 A. The Market Proxy method no longer reflects the Company's current avoided costs
71 for two primary reasons:

72 1. The Market Proxy method is based on a price that is at least three
73 years old and is no longer reflective of current wind resource
74 pricing.

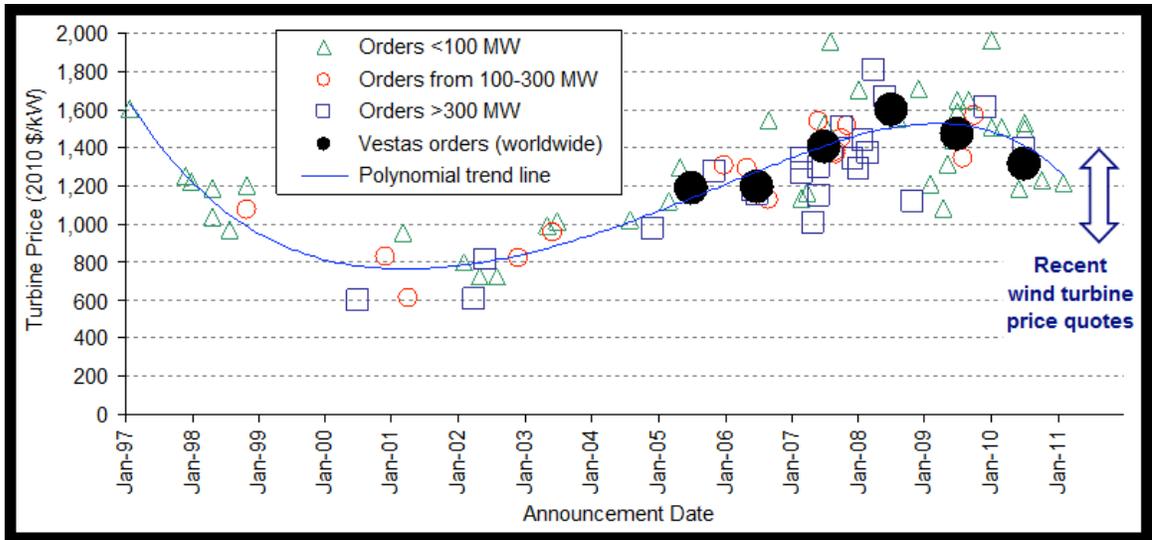
75 2. The Market Proxy method does not take into account the
76 Company's timing and need of future wind resources.

77 Under the Market Proxy method, the Commission required the Company to apply
78 the most recently executed contract from a renewable RFP. Currently, that is the
79 2009R RFP which resulted in the development of the Dunlap wind facility. While
80 the Company routinely issued renewable RFPs between 2005 and 2009, a system-
81 wide RFP has not been issued since 2009 for renewable resources nor does the
82 Company expect to issue a system-wide renewable RFP in the near future because
83 the renewable resources in the IRP are solely to meet renewable compliance
84 requirements in Oregon, Washington and California. As a result, the most recent
85 renewable RFP used in the Market Proxy method is approximately three years out
86 of date and will not be updated because there is no renewable resource need in
87 Utah identified in the 2011 IRP or 2011 IRP update.

88 **Q. What factors have affected the avoided cost of wind since the Company's**
89 **2009 renewable RFP?**

90 A. First, the price of wind turbines has declined significantly. In a February 2012
91 joint report by the Lawrence Berkley National Laboratory and the National
92 Renewable Energy Laboratory titled "Recent Developments in the Levelized Cost
93 of Energy from U.S. Wind Power Projects"⁵, the authors determined wind turbine
94 prices have softened since their highs in 2008. Berkeley Lab gathered price data
95 on 81 U.S. wind turbine transactions totaling 23,850 MW announced from 1997
96 through early 2011. The chart below depicts these reported wind turbine
97 transaction prices (along with the associated trend line), broken out by the size of
98 the transaction in MW. The chart also includes the average (global) turbine prices
99 reported by a wind turbine manufacturer, Vestas, for the years 2005 through 2010,
100 as well as a range of reported pricing (among various turbine manufacturers) for
101 transactions signed in 2010 and in early 2011, the most recent data available at the
102 time.

⁵ A copy of the report can be accessed at <http://emp.lbl.gov/publications/recent-developments-levelized-cost-energy-us-wind-power-projects>.



103

104 The chart demonstrates that turbine prices have declined since the Dunlap wind
105 project was selected through a market solicitation in 2009. Continued use of the
106 Market Proxy method, which relies entirely on this outdated Dunlap price, does
107 not reflect the current market conditions and construction costs for wind projects.

108 Second, the Company has no near-term system resource need for wind or
109 other renewables. In the 2011 IRP Update, the Company's most recently
110 completed plan, there are no wind additions for the state of Utah. The only wind
111 additions in the preferred resource expansion portfolio, scheduled to first come
112 online in November 2018, are included to meet renewable portfolio standards
113 (RPS) in Oregon, Washington and California. Not only does the Company's 2011
114 IRP Update action plan not contemplate issuance of another renewable RFP for
115 several years, but the next renewable RFP the Company plans to issue will be to
116 acquire renewable resources that are mandated by other states' requirements.
117 Therefore, the Market Proxy method does not take into account the Company's
118 current need, or lack thereof, for wind resources in Utah. Setting prices for a Utah
119 wind QF based on the assumption that it will be used to satisfy another state's

120 RPS requirement presents issues that were not contemplated when the Market
121 Proxy method was adopted including inter-jurisdictional cost allocation,
122 environmental attribute ownership, and uncertainty regarding future RPS
123 compliance obligations, among others.

124 **Q. What is the result of using the Dunlap wind project as the Market Proxy to**
125 **set avoided costs for Utah wind QFs?**

126 A. The result is that retail customers must pay wind QF prices that exceed current
127 avoided costs and thus do not leave customers indifferent.

128 **Q. Please explain the impact to customers of using the Market Proxy method**
129 **instead of the PDDRR method.**

130 A. The Company has prepared a comparison of the price under the PDDRR method
131 and the price under the Market Proxy method for a typical Utah wind QF project.
132 Using a recent pricing request as an example, for a wind project with a 33.9
133 percent capacity factor, the avoided cost price levelized over 20 years would be
134 \$59.68 per MWh using the Market Proxy method but only \$52.25 per MWh using
135 the PDDRR method. This difference results in additional costs to the Company's
136 customers of \$35.3⁶ million nominal over the 20 years, assuming an 80 MW
137 nameplate wind project. Furthermore, the additional costs to customers of
138 continuing to use the Market Proxy method will increase once the PDDRR
139 method reflects the "Resource Needs Assessment Update for the All-Source
140 Request for Proposals for a 2016 Resource" which was filed with the Commission
141 on September 28, 2012.

⁶ (\$59.68 - \$52.25) x 80 megawatts x 33.9% capacity factor x 8760 hours x 20 years.

142 **Q. Will the stay prohibit developers from moving forward with wind QFs in**
143 **Utah?**

144 A. No. The Company has a PURPA obligation to purchase the net output from QF
145 projects. Potential wind QFs will receive pricing based on the PDDRR method
146 until Docket No. 12-035-100 is completed and the Commission has issued an
147 order addressing a permanent methodology for determining avoided costs for
148 wind projects. Wind QFs are able to obtain power purchase agreements pursuant
149 to Utah Schedule 38, and the Company will continue to negotiate power purchase
150 agreements during this time.

151 **Q. Please summarize the Utah wind QF indicative pricing requests the**
152 **Company has received in 2012 prior to requesting the stay.**

153 A. The Company received five formal requests for indicative pricing for Utah wind
154 QFs in 2012 prior to requesting the stay on October 9, 2012. The requests are
155 summarized in the table below:

| Project | Location | Proposed Online Date | Proposed Size | Indicative Pricing Delivered |
|----------------|-----------------|---------------------------------|----------------------|---|
| Project 1 | Monticello, UT | 01/01/15 | 80.0 | 5/21/2012 |
| Project 2 | Beaver, UT | 12/31/15 | 70.4 | 6/20/2012 |
| Project 3 | Monticello, UT | 12/31/13 | 59.2 | 6/20/2012 |
| Project 4 | Delta, UT | 12/01/14 | 80.0 | 8/31/2012 |
| Project 5 | Delta, UT | 12/01/14 | 80.0 | 8/31/2012 |

156
157 All five projects received indicative pricing based on the PDDRR method on the
158 dates listed in the table. On October 9, 2012, Project 1 was provided revised
159 indicative pricing based on the Market Proxy method in response to the
160 Commission's September 20, 2012 Order in Docket No. 12-2557-01.

161 **Q. Please summarize the impact to customers if the Market Proxy method is**
162 **used instead of the PDDRR method for each of the five wind projects.**

163 A. The chart below illustrates the impact to customers of using the Market Proxy
164 method instead of the PDDRR method for each of the five proposed projects. The
165 total impact to customers is (\$186.2) million nominal. As previously noted, the
166 impact to customers will increase once the Company reflects its most current
167 resource need in the PDDRR calculation.

| Project | Proposed Size | MWhs Over 20 Years | Price Difference Between PDDRR and Market Proxy | Total \$ Impact to Customers Over 20 Year Contract Term |
|----------------|----------------------|---------------------------|--|--|
| Project 1 | 80.0 | 4,754,028 | (\$7.43) | (\$35,322,424) |
| Project 2 | 70.4 | 4,442,702 | (\$6.39) | (\$28,384,507) |
| Project 3 | 59.2 | 3,302,707 | (\$10.62) | (\$35,080,096) |
| Project 4 | 80.0 | 4,908,288 | (\$8.67) | (\$42,564,357) |
| Project 5 | 80.0 | 4,908,288 | (\$9.13) | (\$44,803,177) |

Total for All Five Projects (\$186,154,563)

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169 **Q. Please summarize the Utah wind QF indicative pricing requests the**
170 **Company has received in 2012 after requesting the stay.**

171 A. The Company has received one formal request for indicative pricing since filing
172 its Request for Agency Action Motion to Stay on October 9, 2012. The request
173 was not complete and did not include all of the required information under Utah
174 Schedule 38. The Company requested the developer provide the missing required
175 information prior to calculating indicative pricing. As of the date of this filing,
176 the missing information has not yet been provided.

177 **Q. Based on the information received in the pricing requests, how would you**
178 **describe the status of these projects in terms of where they are in the**
179 **development process?**

180 A. I would describe these projects as being in the early stages of project
181 development. Only one of the projects has an executed Large Generator
182 Interconnection Agreement, and that agreement is currently in suspended mode.
183 The other projects are either in the early stages of the interconnection process or
184 have not yet begun the interconnection process.

185 **Q. Will the stay prohibit or delay the QF project development process?**

186 A. No. Typically the QF's interconnection process is significantly longer than the
187 power purchase agreement negotiation process.

188 **Q. What are the stages of the interconnection process, and how long does each**
189 **stage take to complete?**

190 A. Based on information from PacifiCorp Transmission's website⁷, the stages of the
191 generation interconnection process can be described as follows:

- 192 1. Application/validation
- 193 2. Scoping meeting
- 194 3. Feasibility Study (optional)
- 195 4. System Impact Study
- 196 5. Facilities Study
- 197 6. Interconnection agreement
- 198 7. Engineering, procurement and construction

199 As noted on PacifiCorp Transmission's website, stages 1-6 identify the upgrades
200 and investments required to reliably interconnect the projects. These steps also
201 determine the cost of the interconnection upgrades and the timeline to complete
202 the work. The study steps can require up to one year or more. Stage 7 is initiated

⁷ <http://www.pacificorp.com/tran/ts/gip.html>

203 after an agreement is signed and can require 6 to 18 months with the timing
204 dependent upon the actual upgrades required.

205 **Q. In what stage are most of the QFs who have requested indicative pricing?**

206 A. All but one of the QFs are in stages 1-5. One QF has an executed Large
207 Generator Interconnection Agreement that is stage 6, but is in suspended mode.
208 All of the QFs will require at least 6 to 18 months to complete step 7
209 (engineering, procurement and construction) prior to coming online. And all but
210 one QF will require completion of studies and an executed Large Generator
211 Interconnection Agreement, which could take up to one year, prior to executing a
212 QF power purchase agreement.

213 **Q. Based on the foregoing, what do you recommend?**

214 A. I recommend that the Commission immediately stay the application of the 2005
215 Order for indicative pricing based on the Market Proxy method to any wind QF in
216 excess of three (3) megawatts, with the exception of Blue Mountain⁸, pending
217 conclusion of this docket. I further recommend that the Commission order that
218 Wind QFs that request indicative pricing (either new requests or updates to
219 previous requests), after October 9, 2012, the date the Company filed its Request
220 for Motion to Stay Agency Action, but prior to the resolution of this docket,
221 receive indicative pricing based on the PDDRR Method. Lastly, consistent with
222 Utah Schedule No. 38, prices are only final and binding to the extent contained in
223 a power purchase agreement executed by both parties and approved by the

⁸ 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, Order on Request for Agency Action, September 20, 2012.

224 Commission⁹, and the Company will update pricing at appropriate intervals to
225 accommodate any changes to the Company's avoided costs calculations¹⁰.

226 **Q. Does this conclude your testimony?**

227 **A. Yes.**

⁹ Rocky Mountain Power Electric Service Schedule No. 38, State of Utah, Sheet No. 38.3.

¹⁰ Rocky Mountain Power Electric Service Schedule No. 38, State of Utah, Sheet No. 38.5.