BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of Rocky Mountain Power's	)	
Proposed Revisions to Electric Service	)	Docket No. 14-035-T04
Schedule No. 37, Avoided Cost Purchases	)	
from Qualifying Facilities	)	DPU EXHIBIT 1.0

Direct Testimony of

Abdinasir M. Abdulle, Ph.D.

Division of Public Utilities

August 12, 2014

1 **INTRODUCTION**

2 **Q. Please state your name, business address, and employment for the record.**

3 A. My name is Dr. Abdinasir M. Abdulle. My business address is 160 E. 300 South, Salt
4 Lake City, Utah 84114; I am employed by the Utah Division of Public Utilities (Division
5 or DPU).

6 **Q. On whose behalf are you testifying in this proceeding?**

7 A. I am testifying on behalf of the Division.

8 **Q. Would you summarize your education background for the record?**

9 A. I have a Ph.D. in Economics from Utah State University. I have been employed by the
10 Division for about 12 years.

11 **SCOPE OF TESTIMONY**

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

13 A. As is explained in the direct testimony of Mr. Greg Duvall, Rocky Mountain Power (the
14 Company) is proposing some changes to Electric Service Schedule 37. My testimony
15 will provide the Division's response to the Company's proposed changes.

16 **Q. What changes to Electric Service Schedule 37 is the Company proposing?**

17 A. In addition to some routine changes to Schedule 37 that will be described later in my
18 testimony, the Company is proposing the following changes:

19 • Including the integration and capacity costs for wind and solar qualifying
20 facilities (QF) in the avoided cost calculations for Schedule 37.

21 • Removing the capacity cost of a simple cycle combustion turbine ("SCCT") from
22 the calculation of avoided costs for Schedule 37 during the sufficiency period.

23 • Removing from the Official Forward Price Curve ("OFPC") the specific adder
24 that represents a future carbon dioxide tax.

25 • Eliminating the capacity and energy payment option related to the monthly
26 payments.

27 • Keeping the seasonally differentiated on-peak and off-peak energy prices, but
28 providing this pricing scheme for a base load facility, wind facility and a solar
29 facility separately.

30 **DPU RESPONSES TO THE COMPANY'S PROPOSED CHANGES**

31 **Q. Is there a Commission approved methodology to calculate avoided costs for**
32 **Schedule 37?**

33 A. Yes. There is a method for calculating avoided costs for Schedule 37 that was approved
34 by the Commission in its July 7, 1995 Order in Docket No. 94-035-03 and was adjusted
35 thereafter in a number of dockets. A complete list of these dockets was provided by
36 Commission staff in the June 25, 2014 Technical Conference in this Docket and is
37 attached here for ease of reference as Appendix I.

38 **Q. Are there other changes the Company has made to Schedule 37?**

39 A. Yes. In its Report and Order Modifying Reporting Requirements, dated February 12,
40 2009, in Docket No. 09-035-78, the Commission required the Company to annually
41 update the avoided cost pricing in Schedule 37 in order to establish the value or credit for
42 net excess generation of large commercial customers under Schedule 135 – Net Metering
43 Service. In compliance with this Commission Order, the Company made some other
44 changes. These include updates of the load forecast, discount rate, and the official
45 forward price curves.

46 **Q. Regarding integration cost of intermittent resources, what specific change does the**
47 **Company propose?**

48 A. The Company is proposing to publish separate prices for base, wind, tracking solar, and
49 fixed solar resources. The Company proposes that for the prices for these resources, with
50 the exception of the base resource, should be adjusted downward for the integration cost.

51 **Q. What is the Division's position regarding this proposal?**

52 A. PURPA requires qualifying utilities to purchase electricity from QF facilities at the
53 utility's avoided cost. That is, the price paid by the Company here should be the same as
54 the costs that the utility would have incurred if it had to provide the same amount of
55 electricity from its own resource. What this means is that the pricing mechanism should
56 maintain ratepayer indifference. In other words, purchases from QFs should not impact
57 the electric rates ratepayers pay.

58 The Division believes that with the exception of some simplifications that are already in
59 place, all QFs should be treated equally and their avoided costs should be calculated the

60 same way regardless of their sizes. That is, avoided costs should be calculated for all
61 QFs in a manner that ratepayer indifference is maintained.

62 In its Order in Docket No. 12-035-100, the Commission approved the incorporation of
63 the integration cost into the calculation of avoided costs for large QFs. The Division
64 believes that including this change in the method of calculating avoided costs to Schedule
65 37 is reasonable and hence supports it. Failure to incorporate this change would result in
66 ratepayers subsidizing the small QFs by paying more than ratepayers would otherwise
67 pay.

68 Consistent with the Commission Order in Docket No. 12-035-100, the Company
69 calculated the wind integration cost using the GRID model with the wind integration
70 study as an input. It also applied a solar integration charge of $2.83 per megawatt hour
71 for Fixed Solar resources and a $2.18 per megawatt hour solar integration cost for
72 Tracking Solar resources. Therefore, the Division believes that the way the Company is
73 proposing to incorporate the integration cost of wind and solar is consistent with that
74 Commission Order.

75 **Q. Regarding Capacity Contribution, what specific changes does the Company**
76 **propose?**

77 A. The Company is proposing to apply a 20.5 percent capacity contribution to the capacity
78 payment for wind QFs and 68 percent and 84 percent capacity contribution to the
79 capacity payments for Fixed and Tracking Solar QFs, respectively.

80 **Q. What is the Division's position with regard to the Company's proposal?**

81 A. In its Order in Docket No. 12-035-100, the Commission recognized the role of capacity

82 contribution of intermittent resources in the calculation of avoided costs for QFs in

83 Schedule 38. The specific values the Commission directed the Company to use on an

84 interim basis for Schedule 38 customers are the ones the Company is now proposing to

85 use for Schedule 37 also.

86 For the same reasons explained above, the Division believes that the Company's proposal

87 regarding capacity contribution is reasonable and therefore supports it.

88 **Q. Regarding the capacity payment during the sufficiency period, what does the**

89 **Company propose?**

90 A. The Company proposes the removal of the capacity payments from the avoided cost

91 calculation for Schedule 37 during the sufficiency period.

92 **Q. Does the Division have any concern about this proposal?**

93 A. No. As I said earlier in this testimony, the Division believes that the changes in the

94 methodology for calculating Schedule 38 avoided costs adopted by the Commission in its

95 Order in Docket No. 12-035-100 are also applicable in the avoided costs for Schedule 37.

96 In its Order in Docket No. 12-035-100, the Commission stated:

97 We are persuaded the Proxy/PDDRR method properly reflects avoided
98 capacity costs associated with FOT's (front office transactions) during the
99 period of resource sufficiency. The evidence proffered by PacifiCorp and
100 the Office shows a QF's displacement of FOTs, as determined within the
101 GRID model, results in what PacifiCorp would have otherwise paid for
102 capacity purchases. Thus, the inclusion of additional capacity value when
103 a FOT is displaced would over-compensate the QF and violate the
104 ratepayer neutrality objective.

105 Therefore, since the QF displaces FOT during the sufficiency period and the FOT
106 includes capacity payment, regardless of the size of the QF, the Division concurs with the
107 Company that the capacity payment during the sufficiency period should be removed.
108 This will make the calculation of avoided costs for Schedules 37 and 38 consistent with
109 each other and will maintain ratepayer neutrality.

110 **Q. What is the Division's position regarding the removal of the carbon dioxide tax**
111 **adder from the OFPC?**

112 A. The Company is proposing to remove the carbon dioxide adder from the calculation of
113 avoided costs for Schedule 37. The Company argues that this is consistent with the
114 Commission's order in Docket No. 12-035-100, the Schedule 38 avoided costs docket.
115 The Division believes the Commission's order on this point is ambiguous.

116 In its order in Docket No. 12-035-100 for Schedule 38 avoided costs, the Commission,
117 responding to a request for an incremental price adder for specific QF resources with
118 environmental benefits stated, "…Thus for the foregoing reasons, we approve no specific
119 adjustments to value fuel price hedging, fuel price volatility or environmental risk."

120 This conclusion appears to specifically address Utah Clean Energy's proposal for an
121 environmental adder based on its (UCE's) argument "that 'not only is it conceptually
122 consistent with PURPA to account for time (long-term vs. short-term costs) in avoided
123 costs, but it is also consistent with PURPA to include costs that are not specifically
124 associated with the energy or capacity of avoided resource(s).'" (Report and Order, p.
125 40)

126 In rejecting UCE's argument, the Commission stated, "Rather, to the extent potential
127 costs associated with environmental risks and hedging can be projected and factored into
128 Company decision making, they should be accounted for in PacifiCorp's IRP modeling
129 and resource portfolio evaluation process where cost, risk and uncertainty are evaluated
130 to identify a least-cost, risk-adjusted, long-term resource plan." (p. 41)

131 The Commission's order then, suggests both that a speculative adder is inappropriate and
132 that projections and forecasts of environmental risks appropriately can be considered in
133 the IRP process. What the Commission order does not specifically address is whether the
134 IRP process's price view or a more basic forward price curve should be used for QF
135 purposes. The question in the 12-035-100 docket was whether an incremental adder
136 should be applied to a specific type of resource based on its specific environmental
137 benefits to the system. The Company's removal of the carbon tax from its IRP price view
138 would accomplish something different than merely avoiding an incremental adder as
139 proposed by UCE. Indeed, it would impact all QFs, regardless of resources type by
140 removing the Company's best estimate of market prices in later years. Rather than merely
141 forbidding an adder for certain types of resources, it would change the price for all
142 proposed QFs. If the Company's best projection of its future prices is arrived at through
143 the IRP process, the Company's proposal here ignores price components that the
144 Company views as important in other contexts.

145 Nevertheless, the Company is correct that adhering to the IRP price outlook would result
146 in the inclusion of some of the speculation the Commission's order views dubiously. The
147 assumption of a carbon tax in the IRP process is speculative as no current tax exists.

148 Similar speculation has proven wrong in the past as assumed carbon taxes or other carbon
149 costs have not been imposed.

150 The Company's removal of the carbon tax may go further than the Commission's Order
151 contemplated, but perhaps is what the Commission intended. Whether the Commission's
152 order in 12-035-100 was designed to require the Company to ignore pertinent information
153 in arriving at an outlook of future prices is a question the Commission alone can answer.
154 The Commission's order can be fairly confined to the question of whether to add to
155 Company's price outlook, *post hoc*, an amount to compensate for environmental benefits,
156 which would allow the IRP assumptions. Alternatively, the Commission's order can be
157 read to preclude the IRP assumptions about future carbon taxes as too speculative given
158 that no such tax exists today and may never exist.

159 **Q. What changes does the Company propose to the monthly payment structure under**
160 **Schedule 37?**

161 A. The Company is proposing to do away with the current two option payment structure and
162 replace it with a one option payment system. It will offer only volumetric rates which are
163 differentiated seasonally and on-peak and off-peak hours and will eliminate the option of
164 separate payments for capacity and energy.

165 **Q. Would you comment on this proposal?**

166 A. Yes. Currently, Schedule 37 allows QFs to choose between two pricing options. 1) taking
167 the applicable capacity and average energy price payment or 2) taking the applicable

168 winter and summer energy payment for Peak and Off-Peak hours. Once an option is
169 selected, it remains in effect for the duration of the contract.

170 Under the current Schedule 37, if the QF chooses option 1, it will receive two different
171 payments during the sufficiency period and deficiency period. During the sufficiency
172 period it will receive the energy price calculated using the GRID model plus a fixed
173 dollars-per-month capacity payment, which is based on the QF's maximum 15 minute
174 generation during peak hours. During the deficiency period, it will receive the energy
175 cost of the proxy CCCT plus the same capacity payment as the sufficiency period.

176 The problem with option 1 is that it does not factor in the capacity factor of the renewable
177 resource. That is, the same capacity payment will be offered for high and low capacity
178 factor renewable resources. This will result in profit maximizing, low capacity factor
179 renewable resources choosing this option every time in order to receive additional
180 compensation that the Division believes is not deserved. For example, a wind project
181 which has approximately a 20 percent capacity contribution factor, and produces 1 MWh
182 of power during a 15 minute peak hour interval will receive the same capacity payment
183 as a, say, geothermal resource that also produces 1 MWh. However, the geothermal
184 resource will likely produce the 1MWh reliably throughout the month, but the wind
185 project's output will be highly variable, and consequently is worth much less on a
186 capacity contribution basis. In this way, the Division believes that option 1 that has been
187 heretofore available to all QFs overcompensates intermittent renewable resources.
188 Ratepayers would not be indifferent with option 1 pricing and is therefore contrary to
189 PURPA. Based on the Division's review of the Company's application and the Schedule

190 37 method, the Division believes that to continue offering option 1 to such resources

191 would not be in the public interest.

192 If the QF chooses option 2, the avoided energy cost, calculated in GRID and the energy

193 cost of the proxy CCCT will represent the off-peak prices during the sufficiency and

194 deficiency periods, respectively. The on-peak price is the same as the off-peak price

195 except that a capacity payment is spread to the peak hours using the capacity factor of the

196 proxy resource as defined in the IRP. This option does not ignore the capacity factor of

197 the renewable resource and will yield different capacity payments for different renewable

198 resources with varying capacity factors. Therefore, it will not overcompensate

199 intermittent resources.

200 **Q. Does that conclude your direct testimony?**

201 A. Yes.