

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

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<b>In the Matter of the Application of</b>	)	<b>Docket No. 10-035-89</b>
<b>Rocky Mountain Power for Authority for</b>	)	
<b>Alternative Cost Recovery for Major</b>	)	<b>Direct Testimony of</b>
<b>Plant Additions of the Populus to Ben</b>	)	<b>Randall J. Falkenberg</b>
<b>Lomond Transmission Line and the</b>	)	<b>On Behalf of the</b>
<b>Dunlap 1 Wind Project</b>	)	<b>Utah Office of</b>
	)	<b>Consumer Services</b>

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October 26, 2010

1 **Direct Testimony of Randall J. Falkenberg**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 **A.** Randall J. Falkenberg, PMB 362, 8351 Roswell Road, Atlanta, Georgia 30350.

4 **Q. PLEASE STATE YOUR OCCUPATION, EMPLOYMENT, AND ON**  
5 **WHOSE BEHALF YOU ARE TESTIFYING.**

6 **A.** I am a utility regulatory consultant and President of RFI Consulting, Inc. (“RFI”).

7 I am appearing on behalf of the Office of Consumer Services (“the OCS”).

8 **Q. WHAT CONSULTING SERVICES ARE PROVIDED BY RFI?**

9 **A.** RFI provides consulting services related to electric utility system planning, energy

10 cost recovery issues, revenue requirements, cost of service, and rate design.

11 **Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS.**

12 **A.** My qualifications and appearances are provided in Exhibit OCS 2.1.

13 **Introduction and Summary**

14 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

15 **A.** My testimony addresses PacifiCorp’s (“the Company”) Generation and

16 Regulation Initiatives Decision (“GRID”) model study of the Net Power Costs

17 (“NPC”) impact of the Populus to Ben Lomond transmission line and the Dunlap

18 1 wind project.

19 **Q. PLEASE OUTLINE PACIFICORP’S NPC REQUEST IN THIS CASE.**

20 **A.** PacifiCorp requests to reduce Total Company NPC by \$9.42 million resulting in a

21 Utah NPC decrease of approximately \$3.87 million. These amounts would then

22 be reflected in the alternative cost recovery for these two projects.

23 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

24 **A.** I have identified two issues related to the Company’s filing. Table 1 shows the

25 impact of each issue and they are summarized below. The Utah jurisdictional

26 impact is estimated, and should be determined exactly by running the adjusted

27 NPC results through the Company’s Jurisdictional Allocation Model (“JAM”).

**Table 1 - Company Requested NPC and OCS Adjustments**

<b>Description</b>	<b>NPC</b>	<b>Change</b>
Commission Ordered NPC in Docket No. 09-035-23	1,002,942,591	
Dave Johnston Unit 3 Scrubber	1,003,626,782	684,191
Populus to Ben Lomond Transmission Line	1,002,252,647	(1,374,134)
Dunlap I Wind Project - Company Request per HS-1	994,206,903	(8,045,744)
<b>Adjustments</b>		
Adjustment 1 - Loss Savings	993,747,414	(459,489)
Adjustment 2 - Transmission Wheeling Cost (OCS NPC)	992,795,768	(951,646)
<b>Total Adjustments</b>		<b>(1,411,135)</b>
Change to Utah Allocated NPC (estimated)		(579,483)

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**My conclusions are as follows:**

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1. **The Company proposes to reduce the Commission approved Total Company NPC in Docket No. 10-035-13 (\$1,003.6 million) by \$9.42 million. OCS recommends an additional reduction of \$1.41 million Total Company or approximately \$579 thousand Utah.**
2. **The Company proposes to quantify the NPC impact of the Populus to Ben Lomond line and the Dunlap 1 wind project with a compliance GRID study that implements all of the Commission's approved adjustments from Docket Nos. 09-035-23 and 10-035-13. I recommended this approach in Docket 10-035-13 and continue to do so.**
3. **I recommend an adjustment related to the Populus to Ben Lomond Transmission Line to reflect savings in losses the line will produce as a credit to Net Power Costs. The impact of this adjustment (\$459,489 Total Company) is shown on Table 1.**
4. **The Company has removed short-term firm transmission links from GRID, which will no longer be needed. However, the Company failed to remove the fixed cost associated with these links. The Company also continues to include an expiring transmission contract that will no longer be needed after completion of the Populus to Ben Lomond line. Removal of these links and the associated cost reduces NPC by \$951,649 Total Company as shown on Table 1.**

**Q. HAVE YOU PREPARED ANY EXHIBITS IN THIS CASE?**

**A.** Yes. Exhibit OCS 2.2 provides a copy of all data requests referenced herein.

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**NPC Impact Analysis**

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**Q. HOW DID THE COMPANY QUANTIFY THE NPC RESULT IN THIS CASE?**

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**A.** Dr. Shu testified on pages 2-3 of her direct testimony that the steps she used to quantify the NPC impact of the new transmission line and wind project were as follows:

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1. *Establish the Commission ordered net power costs from Docket No. 09-035-23 at \$1.003 billion on a total Company basis.*

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2. *Reduce the capacity of the Dave Johnston unit 3 by 4.2 megawatts for a 12-month period, which was reflected in the Company's last major plant addition case in Docket No. 10-035-13 for the impact of scrubber.*

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3. *Increase the transfer capability from southeast Idaho to northern Utah by 650 megawatts for a 12-month period.*

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4. *Add the Dunlap I wind project for a 12-month period.*

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**Q. DO YOU AGREE WITH THIS APPROACH?**

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**A.** Yes. It follows the method I recommended in Docket 09-035-23.

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**Q. DO YOU AGREE WITH DR. SHU'S IMPLEMENTATION OF STEP 1?**

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**A.** Not entirely. Dr. Shu did follow the Commission's order from Docket No. 09-035-23 accurately, except for the screening adjustment. While Dr. Shu used a daily screening method as approved in the order from that case, she did not employ the screening method employed in the adjustment adopted by the Commission.<sup>1</sup> She also did not provide a screening adjustment for duct firing resources such as that built into the OCS adjustment in the 2009 case. I believe the screening method employed by Dr. Shu is less effective than the OCS methodology, which was used in the Commission approved screening adjustment in the 2009 case. However, I do not believe the intent of this kind of case is to decide issues such as the selection of the optimal screening method. Further,

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<sup>1</sup> See the Response to Data Request OCS 2.4

88 from my own analysis, I am satisfied that merely changing the screens would not  
89 materially impact the determination of the incremental NPC benefits of the  
90 Populus to Ben Lomond line or the Dunlap 1 wind project. Consequently, I  
91 accept the Company's baseline study and recommend the Commission address  
92 issues such as the optimal screening method in future general rate cases.

### 93 **Loss Adjustment**

94 **Q. WILL THE POPULUS TO BEN LOMOND LINE REDUCE LOSSES?**

95 **A.** Yes. The Company agreed in Data Request OCS 2.5 that the line would produce  
96 a reduction in losses. One of the advantages of using higher voltages is that losses  
97 are reduced. This follows from the equation  $P_{Loss} = P^2R/V^2$ . As the Company  
98 pointed out in the response to Data Request OCS 6.7, the above equation is  
99 appropriate for a single line viewed in isolation, but is not directly applicable in  
100 the case of a complex transmission network. In the response to Data Request  
101 OCS 6.5 the Company did provide an estimate indicating that at a 700 MW  
102 loading, savings in losses with the Ben Lomond line in place would amount to  
103 10.8 MW based on a load flow study.

104 **Q. HOW DID YOU QUANTIFY THE LOSS REDUCTIONS?**

105 **A.** Lacking the complete quantification requested in Data Request OCS 2.5, I  
106 assumed that most of the savings were the result of higher voltages on the  
107 segment covered by the Populus to Ben Lomond line. I therefore computed the  
108 reduction in losses based on the squared ratio of loadings on the line. For  
109 example, when the line was loaded to 700 MW, the loss reduction was 10.8 MW.  
110 If the loading was 600 MW, the loss reduction was  $(600/700)^2 * 10.8$ .<sup>2</sup> I computed  
111 these savings on an hourly basis and modeled this as a source of energy in GRID.

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<sup>2</sup> This method turns out to be slightly more conservative than simply using the ratio of the loadings.

112 The results are (\$459,489) on a Utah basis as shown on Table 1. I believe this is a  
113 reasonable, if not conservative, approach.

114 **Transmission Contract Adjustment**

115 **Q. DOES THE COMPLETION OF THE POPULUS TO BEN LOMOND LINE**  
116 **REDUCE THE NEED FOR PURCHASED TRANSMISSION CAPACITY?**

117 **A.** Yes. The Company has removed some Short Term Firm (STF) transmission  
118 capacity from GRID. In the response to Data Request OCS 2.1, the Company  
119 stated that due to completion of the line, the STF link capacity was no longer  
120 needed. However, the Company did not remove any of the costs (\$951,646)  
121 included in its wheeling expense workpapers for the STF link between Idaho and  
122 Utah North. In the response to Data Request OCS 2.2, the Company stated that of  
123 the amount associated with the STF link in GRID some \$887,556 was actually  
124 associated with a 61 MW point to point transmission contract from Idaho to Path  
125 C and that at most \$64,090 was related to the STF contracts. This 61MW contract  
126 expires shortly after completion of the new transmission line.<sup>3</sup>

127 **Q. IS THE 61 MW CONTRACT NEEDED AFTER COMPLETION OF THE**  
128 **POPULUS TO BEN LOMOND LINE?**

129 **A.** No, for two reasons. First, it produces no economic benefits in the GRID study.  
130 Second, if capacity were actually needed for reliability purposes, it would be far  
131 more cost effective to purchase 61 MW of STF capacity. The response to Data  
132 Request OCS 2.2, discussed above, shows that the STF capacity costs only a  
133 fraction of the amount of the point to point contract.

134 **Q. DID YOU EXPLORE THIS ISSUE IN DISCOVERY?**

135 **A.** Yes. While the Company did not agree that the new line eliminates the need for  
136 the 61 MW contract, it didn't indicate the contract would be extended. Instead the

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<sup>3</sup> This can be seen in Confidential Attachment Data Request OCS 6.1 which is not included with this testimony due to the volume and confidential nature of the contract.

137 Company merely indicated it would study whether the additional capacity was  
138 needed in the future.<sup>4</sup> In the response to Data Request OCS 6.3, the Company  
139 clearly indicated it would require additional capacity if the Populus to Ben  
140 Lomond line was delayed. Consequently, whether the contract is needed or not,  
141 seems inextricably tied to the presence or absence of the Populus to Ben Lomond  
142 line. I believe that this demonstrates the avoidance of this high cost transmission  
143 contract is one of the benefits of the line that should be included as a part of the  
144 pro-forma adjustment to reflect all of the costs and system benefits of the project.  
145 The impact of this adjustment is (\$951,646) on a Utah basis as shown on Table 1.

146 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

147 **A.** Yes.

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<sup>4</sup> See the response to Data Request OCS 6.2