

**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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<b>In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of Its Proposed Electric Service Schedules and Electric Service Regulations</b>	)	
	)	
	)	<b><u>Docket No. 09-035-23</u></b>
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	)	<b><u>DPU Exhibit No. 9.0SR</u></b>
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**Surrebuttal Testimony of  
Jonathan Nunes**

**For the Division of Public Utilities  
Department of Commerce  
State of Utah**

**November 30, 2009**

1 **Q. Please state your name and occupation.**

2 A. My name is Jonathan Nunes. I am employed by R. W. Beck as a Senior Economist.

3 **Q. Have you previously submitted testimony in this proceeding?**

4 A. Yes. I submitted Direct Testimony on October 8, 2009 and Rebuttal Testimony on  
5 November 12, 2009.

6 **Q. What is the purpose of your Surrebuttal Testimony?**

7 A. This testimony includes the following:

- 8 • A response to the Rebuttal Testimony of Mr. Eelkema on behalf of the Company and  
9 in defense of the Company's forecast of industrial class sales for the test year.
- 10 • A response to the Rebuttal Testimony of Mr. Thornton on behalf of the Company and  
11 in defense of the Company's class load data and load research program.
- 12 • Comments regarding the Rebuttal Testimony of Mr. Brubaker on behalf of the Utah  
13 Industrial Energy Consumers' (UIEC).

14 **Rebuttal of Testimony of Company Witness Mr. Eelkema**

15 **Q. What additional information is presented in the rebuttal testimony of Mr. Eelkema?**

16 A. Updated sales data for the industrial class through October 2009 appear to show that the  
17 Company's industrial load has rebounded, suggesting that the Company's forecast for the  
18 test year may be realized. In fact, whereas prior data for the January through July period  
19 reflected that industrial sales were less than forecasted by about 2.4 percent, the data that  
20 Mr. Eelkema has provided in rebuttal for the period January through October imply that,  
21 over August through October, the Company's industrial class sales has exceeded the  
22 forecast that is consistent with the test year forecast by nearly six (6) percent.

23 **Q. How does this information compare to the alternative forecast you presented in your**  
24 **testimony?**

25 A. Mr. Eelkema's updated data imply greater activity for the Company's industrial class than  
26 implied by the forecast presented in my testimony. It is possible that the industrial forecast  
27 presented in my testimony relied on certain underlying projections that may prove to be  
28 overly pessimistic once the actual data are known. However, the future state of the  
29 economy and activity of the Company's industrial customers is not certain. As discussed in  
30 my direct testimony, recent forecasts for the national and regional economies have been  
31 quite volatile over the last twelve months and have, until recently, generally been adjusted  
32 lower. It is possible that the economic outlook has improved in certain regards.

33 **Q. How does this information affect your conclusions regarding the Company's**  
34 **industrial class forecast as presented in your direct testimony?**

35 A. For purposes of my direct testimony, I developed an independent forecast of the industrial  
36 class sales that was lower than the Company's forecast by 2.8%. This was closely  
37 corroborated by lower *actual* sales than the Company's forecast over January – July 2009  
38 of 2.4%. As the apparent recovery over the last few months of 2009 is counter to the  
39 results I independently generated, I do not have sufficient evidence to strongly support an  
40 alternative to the Company's forecast.

41 **Q. Does this information affect your conclusions regarding the Company's forecasting**  
42 **methodology for the industrial class?**

43 A. No. The fact is that all forecasts will result in some error. It is incumbent on utilities to not  
44 only minimize that error but also be as objective as possible, particularly in a regulatory

45 forum. The Company's current forecast process for the industrial class is far from  
46 objective, as the forecast relies primarily on what the customers themselves say their future  
47 load will be. It is my opinion that the Company should, at the very least, establish an  
48 independent forecast for the industrial class based on some objective approach (e.g.,  
49 econometric or end-use) to use as a supplement or benchmark to the results generated from  
50 the current approach. This will allow for transparency in forecasting industrial demand,  
51 which the current process does not, thereby allowing all parties to future rate cases to  
52 analyze and comment upon such forecasts. As an added benefit, underlying independent  
53 projections of the economy or output of certain industries should be obtained from IHS  
54 Global Insight, the Company's economic data provider for other aspects of its forecast,  
55 thereby improving the internal consistency of the Company's overall forecast.

56 **Rebuttal of Testimony of Company Witness Mr. Thornton**

57 **Q. What are the primary points of Mr. Thornton's rebuttal testimony?**

58 A. Mr. Thornton presents arguments to rebut Mr. Brubaker's claims regarding the age  
59 of the Company's load research sample design for the residential class and to  
60 demonstrate that the load sample data are both representative and sufficiently  
61 accurate. He also argues that the ideas presented by Mr. Brubaker and Mr. Higgins  
62 regarding jurisdiction peaks versus class demands are inappropriate. However, Mr.  
63 Thornton describes a possible cause of a portion of the differences between  
64 jurisdiction peaks and class demands and outlines a revised process by which the  
65 Company has developed alternative class demands for the test period that appear to  
66 have been utilized throughout the rebuttal testimony of the Company's witnesses.

67 He defends the Company's sample size for the residential class as appropriate and  
68 cost-effective. He presents arguments to rebut evidence presented in Mr. Higgins'  
69 and my testimony that the load research samples are not sufficiently accurate. He  
70 also argues that Mr. Chernick's assessment of the load samples related to the  
71 irrigation class is incorrect. Finally, he provides comments regarding the usefulness  
72 of several suggested improvements to the Company's load research sample design  
73 presented in my testimony.

74 **Q. What is your opinion concerning Mr. Thornton's arguments about the age of**  
75 **the Company's sample design?**

76 A. Mr. Thornton makes several valid points in defense of the age of the residential  
77 sample design (i.e., the customers selected for load research meters) that is the basis  
78 of the majority of the base year (i.e., January through September). It is certainly  
79 true that households switch out major appliances periodically, add new ones, and  
80 may upgrade the homes in other ways. However, it is unlikely that the changes in  
81 home size, appliances, and building shell characteristics that affect electric usage  
82 for homes built before 1991 are as great, on average, as differences in these  
83 characteristics between older homes and homes constructed over the last few years.  
84 Given that, it seems unlikely that the load samples are sufficiently representative of  
85 the current base of residential customers, particularly in light of the housing boom  
86 that occurred in the State of Utah during most of this decade.

87 **Q. What evidence or arguments does Mr. Thornton's present to support the**  
88 **accuracy of the load research samples?**

89 A. In his rebuttal of Mr. Brubaker's testimony, on lines 44-57, Mr. Thornton presents  
90 comparisons of actual versus estimated *annual* energy as a basis for suggesting that  
91 the samples are sufficiently accurate. Mr. Thornton uses this same line of reasoning  
92 in his rebuttals of Mr. Higgins and my testimony on lines 265-294 and lines 378-  
93 394, respectively, by arguing that actual and estimated monthly sales data are  
94 essentially not comparable. Mr. Thornton's argument is that the load sample data  
95 are based on calendar-correct data, while the "actual" data are based on an  
96 estimation process that allocates actual billed energy, which lags calendar usage, to  
97 calendar months. Mr. Thornton claims that this estimation process is the primary  
98 source of these errors, implying that the resulting estimated actual data are in error.

99 **Q. What is your opinion of Mr. Thornton's line of reasoning?**

100 A. First, his analysis ignores the fact that monthly differences are generally much  
101 larger than the average annual difference. Monthly errors are simply volatile and  
102 tend to cancel each other out on an annual basis. The problem is that it is monthly  
103 load data derived from the load samples that are used in the cost allocations. While  
104 the cost allocation methodology takes into account all months of the year, each  
105 month carries a different weight and may affect certain cost allocations differently.  
106 Therefore, monthly differences are important to examine. Second, while a portion  
107 of the monthly differences between the "actual" historical sales and load sample  
108 estimates may be driven from errors in the former rather than the latter, Mr.  
109 Thornton has presented no evidence that this is the case.

110 **Q. What other conclusions do you have regarding Mr. Thornton’s suggestion that**  
111 **the “actual” billed energy data are subject to errors?**

112 A. First, it appears inconsistent to utilize this estimated actual class energy data to  
113 calculate adjustment factors to the sample-based estimates of hourly loads and then  
114 claim that these estimated actual data are inaccurate. It is my understanding that the  
115 resulting base year hourly load data are only used to report historical class loads,  
116 and do not directly affect the test year class loads to my knowledge. However, this  
117 is not absolutely clear. To the extent these base year loads are used directly in this  
118 rate case or may be used in some future rate case, the errors to which Mr. Thornton  
119 refers may be a problem. Second, I believe it is incumbent on the Company to  
120 create a mechanism by which its load estimates from sample data can be tested for  
121 accuracy at the monthly level. Given the generally high correlation between energy  
122 and peak demand values, energy data can be used for this purpose. To the extent  
123 the Company’s estimation methodology for historical calendar-correct sales is not  
124 sufficiently accurate for this purpose, the Company should implement  
125 improvements to this methodology. Based on my understanding on the  
126 methodology outlined by Mr. Thornton, it should be a fairly simple matter of  
127 introducing weather variables, perhaps tied to the billing cycles themselves, and  
128 their estimated impact on billed sales to improve the allocation methodology. For  
129 example, the Company’s sales forecast consists of a process to estimate calendar-  
130 correct sales by customer class that utilize billing cycle-weighted versus calendar-

131 correct weather determinants and estimates of weather's influence on sales. This  
132 process could be easily adapted to the rate class sales data.

133 **Q. What is your opinion regarding the differences between jurisdiction peak**  
134 **demands and class coincident peak demands?**

135 A. I agree with Mr. Thornton that the calibration of class demands to the jurisdiction  
136 peaks argued for in Mr. Brubaker's testimony is not appropriate. Similarly, I agree  
137 with Mr. Thornton that the alternative cost of service methodology for rate  
138 schedules 8 and 9 presented in Mr. Higgins' testimony, which essentially implies  
139 that the differences between jurisdiction peaks and class demands are entirely the  
140 result of inaccuracies in the load research data, is inappropriate. Other factors are  
141 responsible for these differences between class coincident peak demands and  
142 jurisdiction peak demands.

143 **Q. Can you elaborate further on differences between jurisdiction and class loads**  
144 **that are presented by Mr. Thornton?**

145 A. Mr. Thornton's discussion regarding the differences between jurisdiction and class  
146 coincident peak demands (pages 6 through 9) clearly implies that the class demands  
147 are not based on weather conditions that can be expected during the test year.  
148 Beginning on line 144, Mr. Thornton outlines a modification to the determination of  
149 class demands that utilizes class load data from the actual historical peak hour  
150 rather than the hourly load value at the time of the jurisdiction peak during the test  
151 year. It is not clear from Mr. Thornton's testimony that this modification represents  
152 the methodology that the Company proposed to use in this rate case, but significant



153 changes to class coincident peak demands appear to permeate the rebuttal testimony  
154 of other Company witnesses. These characteristics of these changes to class  
155 demands appear to conform to the modifications discussed in Mr. Thornton's  
156 rebuttal testimony.

157 **Q. What is your opinion of the solution Mr. Thornton outlines?**

158 A. While this would represent a conceptual improvement, as the class demands would  
159 be based on the weather conditions that caused a historical peak load, this change  
160 does not address other problems with the Company's methodology. For example,  
161 differences in the weather conditions on the historical peak period may be different  
162 than normal monthly peak weather conditions. This may still have a large impact  
163 on the class demands.

164 **Q. Do these class demands represent a numerical improvement over the estimates  
165 utilized in the direct testimony of the Company's witnesses?**

166 A. That is far from certain. First, I have not reviewed the development of these class  
167 loads in any detail, which requires significant additional discovery. More  
168 importantly, however, through this methodological change, the Company makes no  
169 effort to introduce normal peak weather conditions into the estimate of class  
170 demands. Finally, doubts remain about the accuracy of the load research data for  
171 certain classes.

172 **Q. What further suggestions can you offer regarding the development of class  
173 demands from load research data?**

174 A. It is my opinion that monthly class coincident peak demands should be weather-  
175 normalized to the same weather conditions that are utilized in the determination of  
176 the jurisdiction peak demands. I would like to also reiterate my suggestion that a  
177 working group be convened to analyze this issue further and come to a consensus  
178 on the most appropriate and tractable methodology for the determination of class  
179 demands.

180 **Rebuttal of Testimony of UIEC Witness Mr. Brubaker**

181 **Q. Mr. Brubaker makes reference to your testimony in his rebuttal. What is the**  
182 **primary thrust of his argument?**

183 A. Mr. Brubaker refers to my analysis of the monthly differences between actual sales  
184 and estimated sales derived from the Company's load research data as supporting  
185 his claims that the Company's load research samples are based on an outdated  
186 sample design and not sufficiently accurate for cost of service calculations.

187 **Q. Do you agree with this conclusion?**

188 A. I agree that there is significant evidence that the estimated class loads that are based  
189 on load research data are less accurate than is desirable for purposes of cost of  
190 service calculations. However, as discussed above in my review of Mr. Thornton's  
191 rebuttal testimony, it appears possible that a portion of the monthly differences  
192 between actual sales data and estimates derived from load research samples may be  
193 driven from more than inaccuracies in the former. Furthermore, as discussed in my  
194 Rebuttal Testimony, the issue of the lack of weather-normalization of class

195 demands affects the class demands of all of the classes. It is unclear how much of  
196 an impact these issues would have on cost of service calculations.

197 **Q. Does this complete your testimony?**

198 A. Yes.