BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

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	))))))))	**Docket No. 09-035-23** **DPU Exhibit No. 9.0R**

Rebuttal Testimony of

Jonathan Nunes

For the Division of Public Utilities

Department of Commerce

State of Utah

November 12, 2009

Q. Please state your name and occupation.

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

Q. Have you submitted Direct Testimony in this proceeding?

A. Yes. I submitted Direct Testimony on October 8, 2009.

Q. What is the purpose of your Rebuttal Testimony?

A. This testimony addresses the following:

- Provides a response to portions of the Direct Testimony of Utah Industrial Energy Consumers' (UIEC) witness, Mr. Brubaker, and Utah Association of Energy Users' (UAE) witness, Mr. Higgins, pertaining to the Company's estimated class loads used in cost of service calculations. I argue that neither witness has presented compelling evidence supporting certain of their assertions and that certain adjustments they have made to class loads for purposes of alternative cost of service calculations are not reasonable and should not be adopted.
- Provides a clarifying modification and correction to a series of charts contained in Exhibit 9.4 of my Direct Testimony. While the changes are not consequential to the conclusions provided in my testimony, they are more consistent with similar charts shown in other parts of my testimony and should help to avoid any confusion.

Rebuttal of Testimony of UIEC Witness Mr. Brubaker

Q. What arguments related to class loads does Mr. Brubaker present in his testimony?

A. The following are Mr. Brubaker's arguments relative to class loads:

- Load research samples for Schedules 1, 6, and 23 are "very old"

- The Company's load research samples have not been shown to be representative of RMP's current customers.
- The Company makes no effort to adjust class demands to reflect typical peak demand weather conditions, the implication being that Mr. Brubaker believes they should.
- Jurisdiction loads are typically higher than the sum of class loads as a result of the under-estimation of class loads for rate classes for which class loads are based on load research data. This results in an over-allocation of costs to rate classes 8 and 9, for which class loads rely on directly metered hourly loads.

Q. Do you agree with Mr. Brubaker's first conclusion above regarding the age of the samples?

A. I do generally agree with his concerns regarding the age of the Company's load research samples. The load research samples for Schedule 1 do seem outdated, given the significant changes that have occurred in the saturation of air conditioning in the Company's Utah jurisdiction. It is not clear whether the need to have more up-to-date samples for the other load research classes is as great, but that should improve the measured accuracy of class energy as well as the accuracy of estimated class demands, which is not possible to calculate.

Q. Do you agree with Mr. Brubaker's second conclusion above regarding the poor accuracy of load estimates from the samples?

A. I do agree that the load research data do not appear to be sufficiently accurate. The testimony of the Company's witness, Mr. Thornton, and my own Direct Testimony present data that corroborate Mr. Brubaker's conclusion that the load research data appear not to

represent the Company's current customers very accurately, particularly versus the Company's stated accuracy standard of 90% confidence of 10% or better accuracy. However, it is not a reasonable conclusion to suggest that this is solely or even largely the result of the age of the sample design. For the residential class, in particular, the apparent randomness of the error in sampled versus actual class energy does not appear to dovetail with the argument that the primary cause for errors in the residential class is the increased saturation of air conditioning that is not well represented in the sample.

Q. Do you agree with Mr. Brubaker's third conclusion above regarding the need to adjust the class demand estimates to reflect "peak-making" temperatures?

A. I do. Adjustments of this nature would be most consistent with the philosophy that assumptions to be used in a cost of service study should represent conditions that the utility is likely to experience during the test year. The Company's practice to adjust the estimated load profiles so that the total monthly energy equals the forecasted energy does not accomplish this.

Q. What is your opinion of Mr. Brubaker's fourth conclusion above regarding the comparison of test year jurisdiction peak demands to the sum of the class coincident peak demands?

A. I agree that the large discrepancies between jurisdiction peak demands and class coincident peaks suggest an important inconsistency or inconsistencies between the two statistics. However, the source of these differences is far from certain, and Mr. Brubaker has presented little evidence to support his assertion that the discrepancy

is a result, let alone exclusively the result, of inaccuracies in the Company's load research estimates.

Q. Please explain.

A. First, it is clear that the forecasted jurisdiction peak demands are based explicitly on the Company's estimate of expected peak day temperatures. The Company's responses to several data requests establish that the class demands used in this proceeding are not based on or adjusted for peak temperatures, as discussed in Mr. Brubaker's testimony. This is likely to be responsible for very large discrepancies between jurisdiction peaks, which are weather-normalized, and the sum of class demands, which are not. Variation in peak day temperatures and those of preceding days can cause fluctuations of several percent for the peaks of summer months and much larger percentages for other months. Second, to the extent that the load samples are inaccurate as a result of an under-representation of customers with air conditioning, for example, the Company's adjustment of load estimates to be equal, on an energy basis, to forecasted loads by class and by month might represent a sufficient adjustment, or even an over-adjustment, for class demands. Finally, there are simply many other issues at play in this comparison between jurisdiction and class peaks, including the lack of dependence between the Company's energy forecast and jurisdiction peak forecast, the influence of estimated losses for class demands, and potential inconsistencies introduced by the method by which base year hourly loads, whether from load samples or census loads, are used to develop test period loads for each class.

Q. What is your conclusion regarding this aspect of Mr. Brubaker's testimony?

A. Mr. Brubaker's assertion on page 17, line 14-15, that the differences between the jurisdiction peak and class loads can "mainly be attributed to those customer classes for which the Company must rely on load research data" is not supportable. As a result, the cost of service study Mr. Brubaker presents on page 18-19 and in UIEC__(MEB-3) should be disregarded.

Rebuttal of Testimony of UAE Witness Mr. Higgins

Q. What issues regarding class demands are presented in Mr. Higgins' testimony?

A. The following are issues discussed in his testimony:

- The number of load samples for the residential class may be too small to produce accurate class loads.
- To the extent energy estimates based on load samples are in error, similar errors may exist in coincident peak demand estimates.
- The gap between the sum of class coincident peak demands and the jurisdiction peak is detrimental to the census-measured classes, presumably because this gap can be wholly attributed to the classes for which class demands are based on samples. The Company should revisit the decision to discontinue the process of calibrating the sum of class coincident peak demands to the jurisdiction peak.

Q. Do you agree with Mr. Higgins' first conclusion above regarding the size of the residential load samples?

A. Mr. Higgins presents no compelling evidence that the number of sampled residential customers is too few. He uses data presented in the testimony of

Company witness Mr. Thornton comparing sampled energy to actual billed energy, implying that these data demonstrate a lack of accuracy for the residential class. His focus on a single observation is not particularly useful and does not clearly justify a larger sample size on its own. However, I agree that increasing the sample size is a potential strategy, among others, that the Company should consider to improve the accuracy of its load research program.

Q. What is your reaction to Mr. Higgins' second conclusion regarding the errors in energy estimates versus coincident peak demand estimates?

A. In Mr. Higgins' example, the July 2008 estimated energy is 17.6 percent below the actual value. It is impossible to know whether coincident peak demand would be similarly under-estimated. If the estimated energy for the *test* period, in July 2009, was similarly below the forecasted July 2009 class energy, the Company's methodology would cause the hourly loads in July 2009 for the residential class to be adjusted upward so that the summed hourly energy and forecasted energy were exactly equal. This upward adjustment would also affect the coincident peak, making an under-estimate of similar magnitude less likely. Accordingly, I do not agree that the errors in energy estimates are a useful indicator of the direction of potential error of coincident peak demand estimates used in the Company's cost of service.

Q. Do you agree with Mr. Higgins' third conclusion above regarding the attribution of the discrepancy between jurisdiction peak demands and the sum of class coincident peak demands to load estimation errors for sampled classes?

A. No. As discussed previously in my rebuttal of Mr. Brubaker's testimony, there are other issues impacting this discrepancy than simply load estimation errors for sampled classes, the primary issue being the weather-adjustment of the jurisdiction peak demands versus the lack of peak weather-adjustment of the class coincident demands. The methodology by which Mr. Higgins supports his conclusion that the census-measured classes are negatively impacted by this discrepancy relies on the *a priori* assumption that the discrepancy is wholly attributable to load estimation errors. This line of reasoning is circular and, as I have discussed previously, this assumption is not supportable.

Q. What is your conclusion regarding this aspect of Mr. Higgins' testimony?

A. Mr. Higgins' cost of service sensitivity analysis presented in UAE__(KCH-5) reflects allocation factors for Schedule 8 and 9 that inappropriately utilize jurisdiction peaks in the calculation of cost allocators rather than the sum of class demands. These results are based on unsupported assumptions and should be disregarded.

Corrections to Direct Testimony

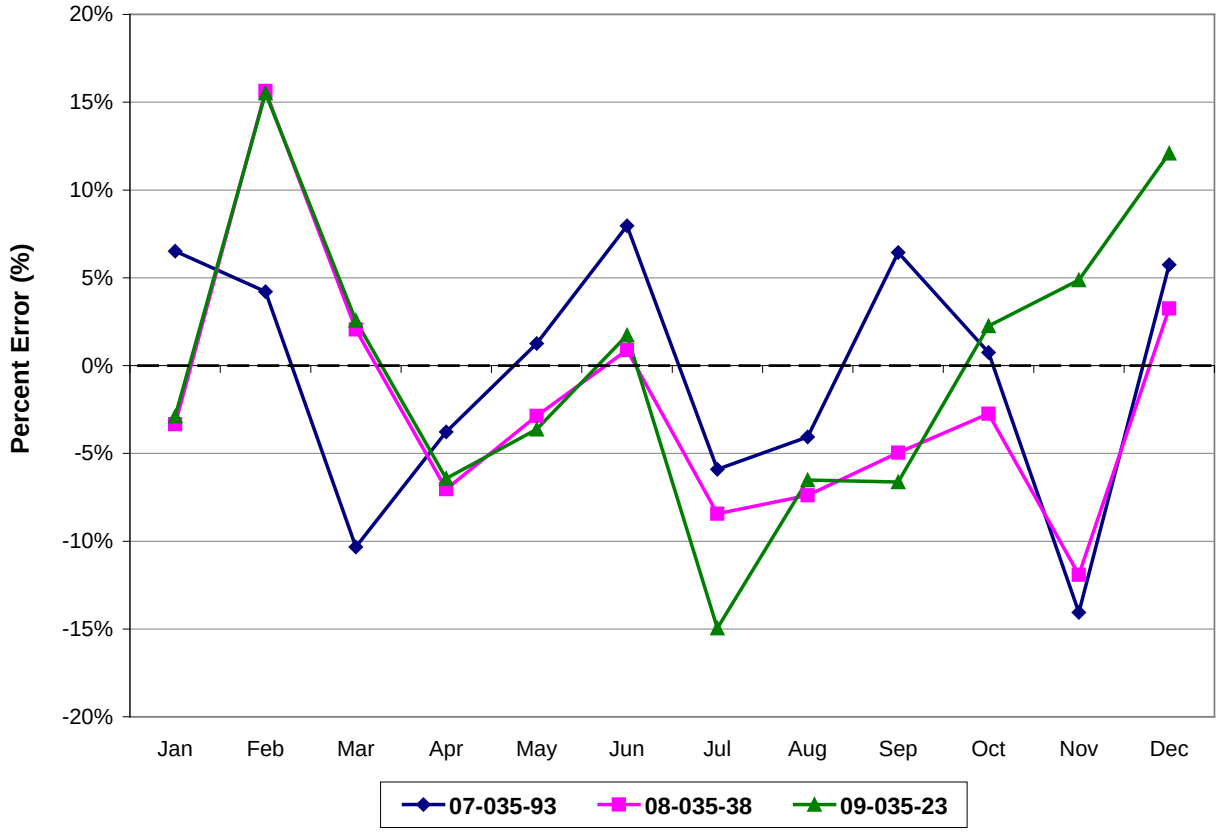
Q. Do you have any changes to make to your Direct Testimony?

A. Yes. Several charts contained in Exhibit 9.4 are inconsistent with similar figures contained in Exhibit 9.0 of my Direct Testimony, and one of them is internally inconsistent. Figures 6-9 of Exhibit 9.0 show the percent error in class energy estimates from load research data for the base year of this rate case by dividing the estimate by the actual value and subtracting the result by one. Figures 1-4 of

Exhibit 9.4 contain similar charts, showing data for the current and prior two rate cases, but with the division portion of the underlying calculation reversed. In addition, Figure 1 of that exhibit contained a single line, representing the 2007 rate case (07-035-93), that reflected the calculation method used in Exhibit 9.0 (i.e., with the actual value in the denominator of the division).

The purpose of these charts was to establish the volatility of the errors rather than their direction, so the conclusions presented in my testimony are unaffected. However, I have modified Figures 1-4 of Exhibit 9.4 to be consistent with Figures 6-9 of Exhibit 9.0 to avoid confusion and have corrected Figure 1 so that it is internally consistent. Figures 1-4 below replace the same figures from Exhibit 9.4. Positive numbers represent an over-estimate of class energy. Note that the numerical value may be significantly different than presented in Exhibit 9.4 of my Direct Testimony as the denominator may be fairly different from the numerator, and their positions in the calculation have been reversed.

168 **Figure 1: Accuracy of Energy Estimate from Load Research – Residential (Schedule 1)**



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170 **Figure 2: Accuracy of Energy Estimate from Load Research – Commercial (Schedule 6)**

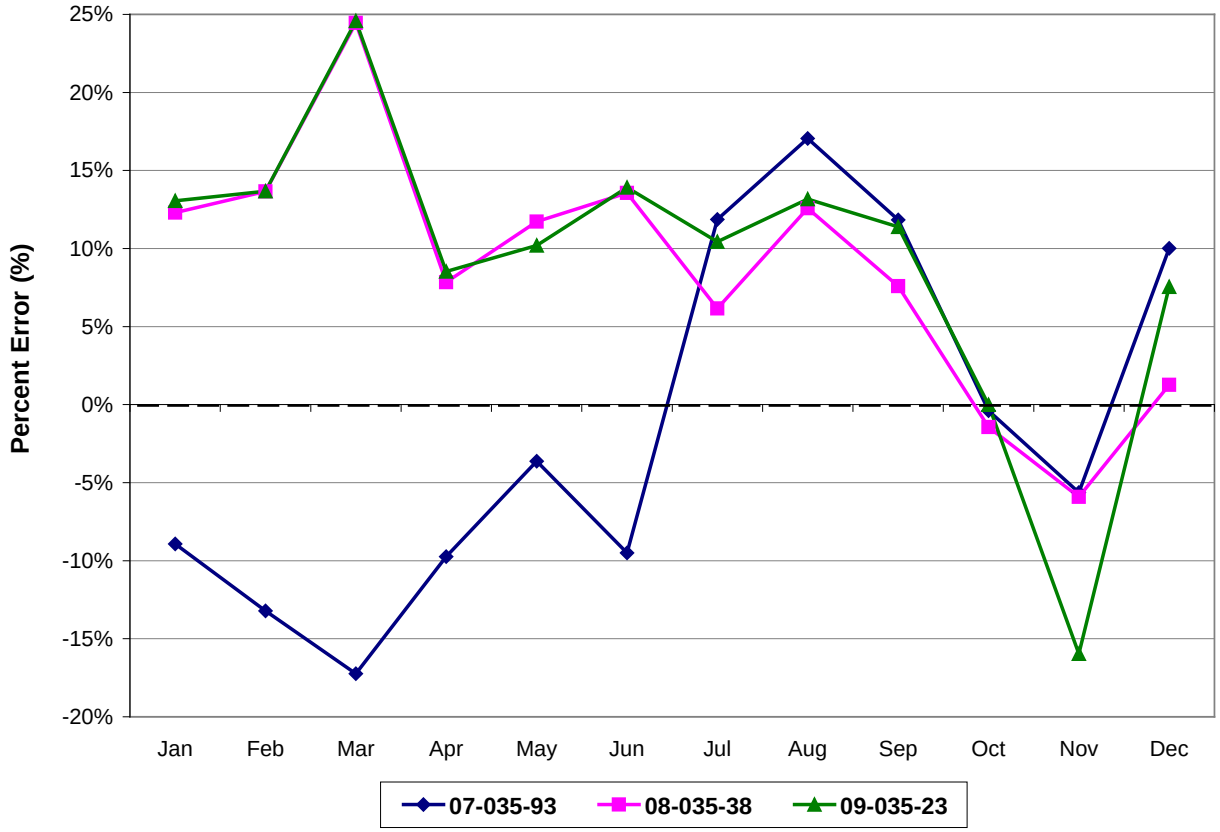

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Figure 3: Accuracy of Energy Estimate from Load Research – Small Commercial (Schedule 23)

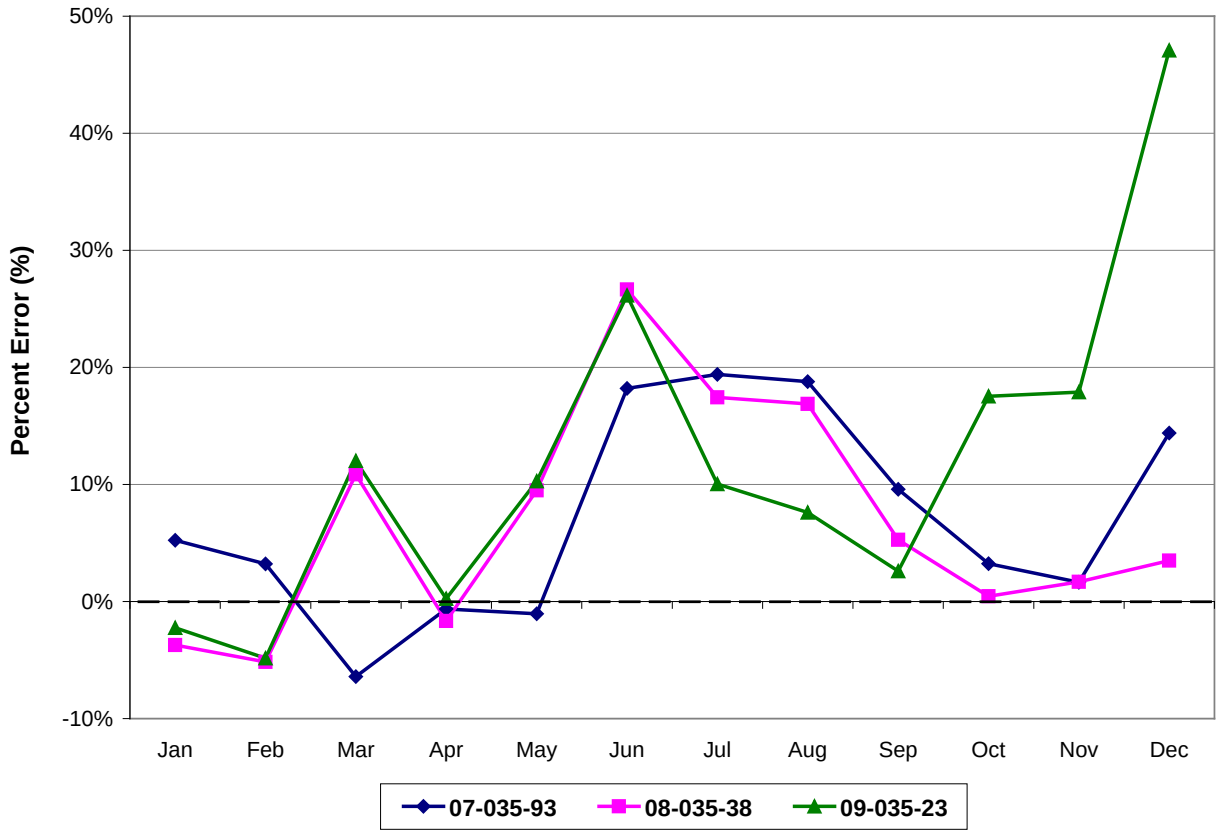
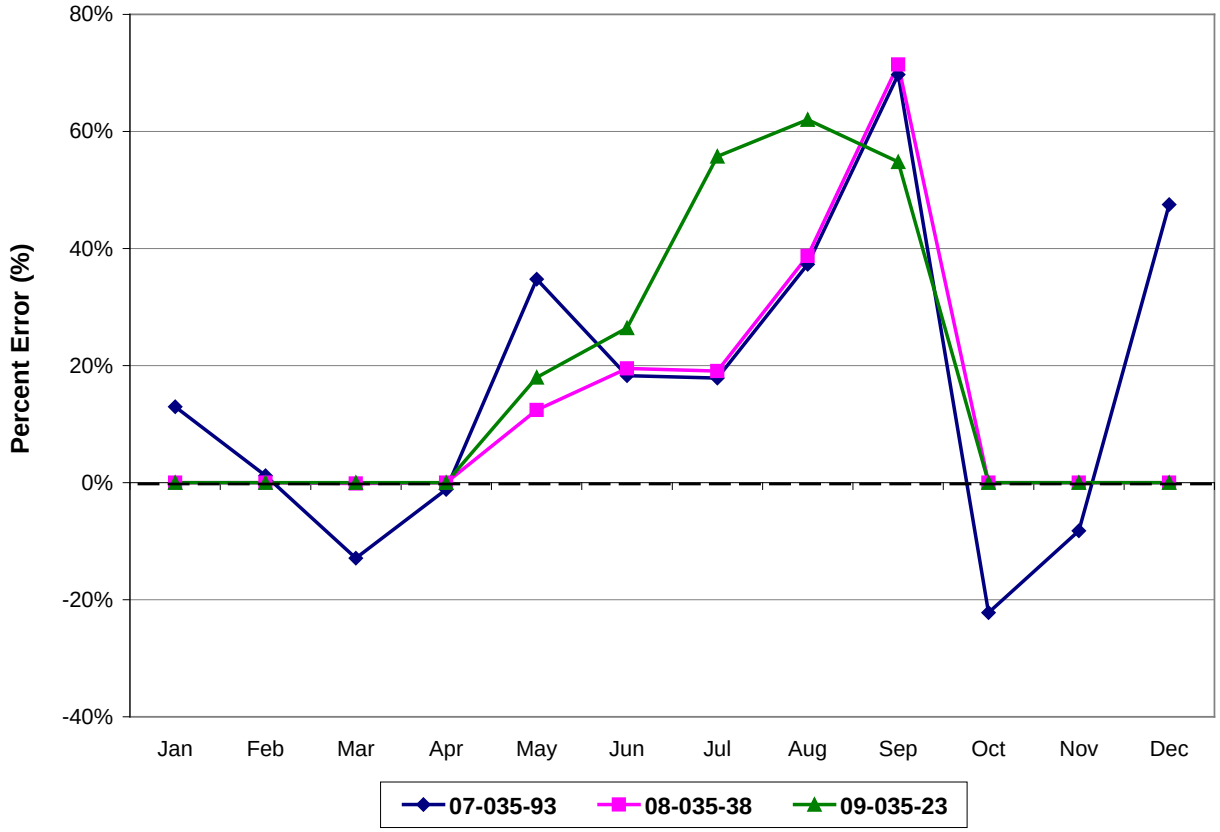


Figure 4: Accuracy of Energy Estimate from Load Research – Irrigation (Schedule 10)



Q. Are you aware of any other corrections or changes to your Direct Testimony?

A. No.

Q. Does this complete your Testimony?

A. Yes.