BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Investigation of the Costs and Benefits of PacifiCorp's Net Metering Program	**)** **)** **)** **)** **)** **)**	**Docket No. 14-035-114** **DPU Exhibit 1.0 REB**

REBUTTAL TESTIMONY

OF

ROBERT A. DAVIS

ON BEHALF OF THE

UTAH DIVISION OF PUBLIC UTILITIES

September 8, 2015

Q: WOULD YOU STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS FOR THE RECORD, AND EXPLAIN FOR WHOM YOU ARE TESTIFYING?

A: My name is Robert A. Davis. I am employed by the Division of Public Utilities (Division) of the Utah Department of Commerce as a Utility Analyst in the Energy Section. My business address is 160 East 300 South, Salt Lake City, Utah. My testimony is on behalf of the Division.

Q: DID YOU PREVIOUSLY FILE TESTIMONY IN THIS CASE?

A: Yes. I filed direct testimony addressing several issues on July 30, 2015.

Q: WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A: The Division generally supports other frameworks proposed by the parties to the extent they are based primarily on the concept of determining costs and benefits using a cost of service study. However, there is significant divergence in the proposals concerning the length and nature of the studies to be undertaken.

The Division understands that there are many possible frameworks that would fall within the breadth of this docket. However, the final framework must ultimately lead to or support reasonable rates, fees, or charges. Additionally, the framework of choice should be the one that: is the simplest to apply during a general rate case proceeding; requires a relatively light burden on the Company for data collection and implementation; identifies for mitigation cross subsidizations between classes or customers within a class; addresses the required costs and benefits analysis; and reveals

the appropriate value of excess generation for customers.

The framework proposals generally address the cost and benefit analysis required by the Commission in this docket.[1] Each contains elements appropriate to analysis and future valuation. Whichever elements are chosen, they should require minimal and incremental modifications as DG penetration increases, providing additional detail and information.

Q: DO YOU AGREE WITH THE FRAMEWORK PROPOSED BY THE OCS'S WITNESS, MR. HAYET?

A: The Division generally agrees that Mr. Hayet's method, given more realistic non-hypothetical inputs, would result in a reasonable way to evaluate costs and benefits. The framework proposed by the OCS looks at costs and benefits over a study period similar to Schedules 37 and 38, which could be used to determine compensation to net metering customers for their excess generation. At the same time, the proposal uses short-term costs and benefits in the normal context for determining rates for the class.

Q: DO YOU AGREE WITH THE FRAMEWORK PROPOSED BY THE COMPANY'S WITNESSES, MR. CLEMENTS OR MS. STEWARD?

A: Although the Division has some concern that the Company's proposed framework may not explicitly identify some benefits, the Division generally supports the Company's proposal. For example, it is not clear how the Company's framework would

1 See Commission's, July 1, 2015, "Order RE: Conclusions of Law on Statutory Interpretation and Order Denying Motion to Strike" at p. 17.

demonstrate the benefits to Utah through the inter-jurisdictional allocations without running alternative scenarios. However, the Company will have the data, assuming the completion of the load study required in phase one of this docket,[2] to develop the cost of service model to include a new class for residential net metering, and already has avoided cost values from Schedules 37 and 38 for excess generation compensation. The Division does not object to having a separate class for residential net metering customers as this would likely solve the cost causation and mitigate cross subsidization issues within the current single residential class.

Q: DO YOU HAVE CONCERNS WITH THE FRAMEWORK PROPOSED BY THE JOINT PARTIES' WITNESSES, MS. MORGAN, MR. NORRIS, OR MR. WOOLF?

A: Yes. First, I'll address a few points made by Ms. Morgan. Second, I'll address the Division's concerns with Mr. Norris's cost impacts analysis. Finally, I will address Mr. Woolf's rate impact analysis.

Q: WHAT ARE YOUR CONCERNS WITH MS. MORGAN'S STATEMENTS IN HER DIRECT TESTIMONY?

A: In lines 138 through 141 of Ms. Morgan's testimony, she states *"The Commission's July 1 Order, appropriately, does not in any way limit the Commission's discretion to give appropriate weight to evidence relevant to these principles and objectives in ratemaking decisions, regardless of whether the evidence is included within*

2 See Commission's, November 21, 2014, "Notices of Comment Period and Scheduling Conference" at p. 2.

this limited analytical framework." (Emphasis added.) The Division is unclear what is meant by this statement or the evidence relevant to the principles and objectives in ratemaking decisions.

The Division disagrees with Ms. Morgan that any meaningful consensus-building occurred during the workgroup sessions. There was a sense of collaboration among the participating parties. However, there was no consensus on the specific costs and benefits to be analyzed nor how they should be valued. The identification of the impact to rate design was theoretical only.

The Division now addresses Ms. Morgan's five recommendations to the Commission. The first recommendation to evaluate solar installations at the detailed level suggested by Mr. Norris in his direct testimony would be needlessly cumbersome to the Company and complex for other stakeholders to interpret. The fundamental flaw in this recommendation is the reliance on hypothetical inputs and discount rates to determine avoided costs. Avoided energy costs by DG or QFs depend on actual inputs, not hypothetical ranges. The Division believes that this level of data is obtainable and likely useful to a degree but not necessary to achieve an ultimate rate design. It would likely hinder the process.

Ms. Morgan's second recommendation is that parties preparing an application of the framework do so keeping in mind technology and behavior changes to the framework's inputs. Her third recommendation is for the Commission to set an expectation of the Company to keep up-to-date pertinent data. The Division does not

disagree entirely with Ms. Morgan's second or third recommendation. However, these "technology" inputs are ill-defined, elusive, and very difficult to model. The first framework approved by the Commission will likely need to be changed or supplemented as DG penetration and understanding increases. Inputs and outputs will have to be updated as DG technology and penetration changes. Additional data or clarification of current data may be needed going forward. The Commission should adopt a framework that will only need minor adjustments going forward.

As to the third recommendation, the Division suggests that consistent with the Commission's July 1, 2015 order, those data be limited to "typical" cost of service data that lead to establishing reasonable rates.[3] For example, while avoided or incurred distribution costs would fall under the umbrella of a cost of service study, avoided compliance costs or other long range projections would not. The underlying problem with this particular recommendation is the implicit comingling of the separate (but related) issues of cost allocation, recovery, and rate design with compensation. While the Division did not address compensation directly in its direct testimony, the Division has consistently argued that these two issues should be addressed separately in the Commission's framework. The Division believes that the Company's (or the Office's) proposal would accomplish this end.

The Division is not clear on what is being asked for in Ms. Morgan's fourth

3 See Commission's July 1, 2015 Order at p. 16.

recommendation and how forecasted values of some inputs would relate to the framework. Depending on the framework that is ultimately approved, there is a risk of double counting inputs and outputs based on hypothetical ranges. Similar arguments have been advanced in past avoided cost dockets where some parties supported (but the Commission rejected) environmental adders.[4] In establishing a preferred portfolio, the Company's Integrated Resource Plan (IRP) analysis takes into account the uncertainty (i.e., the risk) of inputs such as future environmental compliance, gas volatility, etc. Thus, the value of avoiding or mitigating those risks are already implicitly captured through avoidance of resources under the Company's resource acquisition plans. Under the current IRP, avoidance of those risks is represented by displacement of front office transactions (FOTs) and DSM or the delay or postponement of the need for additional capacity.

Regarding Ms. Morgan's fifth recommendation, the Division would seek further details of what minimum filing requirements required by the Commission might be. It is unclear from testimony.

Q: WHAT ARE YOUR CONCERNS WITH MR. NORRIS'S STATEMENTS IN HIS DIRECT TESTIMONY?

A: The Commission should not follow Mr. Norris's approach to avoided costs. The process Mr. Norris is suggesting would be overly burdensome to the Company and other

4 See Commission's August 16, 2013 "Order on Phase II Issues," Docket No. 12-035-100, at p. 37-42.

stakeholders as it requires a more granular level of analysis than necessary. Avoided costs are already determined for Schedules 37 and 38. The assumptions and inputs to Mr. Norris's levelized avoided cost modeling would be highly speculative. Avoided cost calculations should rely on reasonably known inputs to reflect reality. Determining the optimal avoided cost and ensuing benefit to the grid for every installation as proposed by Mr. Norris would be cumbersome for the Company. Except for residential rooftop solar customers, these costs are already applied in the analysis for Schedules 37 and 38 avoided cost factors.

To the agnostic electric system, DG is an intermittent offset to load. The Company has to design its system around peak load which the available data indicates occurs at a different daily time than DG peak generation as in the case with solar, even if some overlap may occur.

The Company has little if any control over the design of systems on the customer side of the meter. The Division assumes that installations are designed to meet the criteria of the client. The Company is obligated to make sure the grid remains safe and reliable for all customers. Therefore its interest in the DG system is that it is safe for integration to the grid. It does not mandate the type of system or its orientation on the customer-side of the meter. The change in load requirement or excess generation being put to the grid and its impacts are the Company's main concern from a system viewpoint.

Mr. Norris's proposal is repetitive, speculative, and largely unneeded at this

time. It may be likely that certain avoided cost aspects at the DG level, such as distribution line losses, may need to be addressed. These can be accomplished through other means (i.e., cost of service study) than directing a whole new and separate avoided cost analysis.

Q: DO YOU HAVE ANY CONCERNS WITH MR. WOOLF'S ANALYSIS OR STATEMENTS IN HIS DIRECT TESTIMONY?

A: Yes. Mr. Woolf's analysis can have no real application to the setting of rates. Although the Division agrees that rate impacts matter, it fails to see the value of Mr. Woolf's analysis in actually setting rates. Lines 63-65 of Mr. Woolf's testimony state "*My rate impact analysis uses a fairly simple methodology and relatively high-level assumptions, in order to illustrate the approximate magnitude or rate impacts of NEM under several different conditions."* (Emphasis added.) While perhaps helpful in some contexts, such high-level assumptions may lead to completely different results from actual inputs used under more realistic conditions.

Mr. Woolf's analysis suggests that under hypothetical assumptions (for example at ten percent penetration and high avoided cost), rates would be adjusted downwards by -1.5% over a ten year cumulative period. At five percent penetration and lower avoided costs over the same ten year period there would be a cumulative positive adjustment of 1.6%.[5] Mr. Woolf is silent about what actual rate would be adjusted.

5 See Table 1. "Summary Results of Illustrative Rate Impact Analysis" at p. 5 of Mr. Woolf's direct testimony.

It makes perfect sense that the higher the avoided costs the more likely there would be a reduction in rates. But does this allow the Company to recover its costs to serve peak load and system reliability? Whose rates are to be lowered and which of those rates? Mr. Woolf's analysis may be useful for some purposes but does not, and cannot, aid in the actual setting of rates that charge customers who cause costs for those costs.

Lines 88-91 of Mr. Woolf's testimony state "*It is not surprising that the rate impacts of NEM are likely to be very small, because the cost of the PV systems are paid for by the host customers. The PV generation is essentially a free resource to the utility system, and it is provided at a time when power costs are typically at their highest.*" (Emphasis added.) The Division disagrees with this statement in its entirety. First, the cost of the customer's system is irrelevant to the utility. The utility is only interested in what the system sees as a load and if its generation is reliable or not. Secondly, there is no adequate evidence on record as of yet whether and to what extent solar DG generation peaks correspond to system peak loads. Therefore, concluding that DG solar offsets system peak load when it is at its highest cost is a supposition.[6] Further, because of timing issues, the utility may have to curtail other generation to provide room on its system for generation that is not needed. This could lead to unexpected costs to the utility. It is not a free resource, particularly when the customer is compensated for it.

6 See 14-035-114, Steward direct testimony, "Figure 4. DSM, Solar Distributed Generation, and Residential Load Profiles in July" at p. 15.

Q: DO YOU AGREE WITH MR. WOOLF'S RECOMMENDATIONS?

A: No. Mr. Woolf's first recommendation for the two sets of metrics (costs and benefits impacts and rate impacts) may be useful in other matters but not for this docket. His recommendation would lead to metrics based on speculative inputs not well suited to a system designed to evaluate costs and revenues. Requiring rate impact analysis based on long-term future changes from hypothetical assumptions and inputs is unwise and will lead to speculative results not suited to ratemaking.

Parts of Mr. Woolf's proposal correlate to the Company's IRP process as a method of cost impact analysis. Present value revenue requirement (PVRR) is typically used as a basis for this IRP analysis. It compares the overall system with and without a certain resource or other component included or excluded. Coincidentally, the Company's current IRP does not call for any additional renewable resources added through the study period.[7] Moreover, the IRP assumes a resource that is owned or under contract and may be relied upon to deliver energy for the term of the contract or life of the resource. DG is significantly dissimilar from those assumptions. There is no obligation of the DG owner to provide that energy to the grid, to maintain its system at any output level, or to retain the DG as a system resource for any period of time.

Including avoided costs of environmental compliance, such as compliance with the U.S. Environmental Protection Agency's proposed Clean Power Plan under section

7 See the Company's IRP plan, Volume I at p. 2.

111(d) of the Clean Air Act, would be one of the double counts previously explained. The Company considers this and many of the other benefits suggested by Mr. Woolf during its IRP process and in determining Schedule 37 and 38 rates.

Q: DO YOU HAVE ANY FINAL THOUGHTS IN YOUR REBUTTAL?

A: Yes. Current rate structures are not well-suited to residential net metering customers because they do not adequately collect revenue for fixed costs related to services received by such customers. The rates may also overcompensate such customers for excess generation. And even if current retail rates are not overcompensating customers for their excess generation under the current compensation scheme, higher rates of penetration may lead to higher retail rates and, thus, windfalls to net metering customers. Therefore, the Commission should choose an analytical framework that will accurately identify these costs and benefits and be applicable to rate setting. The framework will utilize data that is obtainable and coupled to identifiable and readily quantifiable costs and benefits. The Division's, Company's, and OCS's proposals from direct testimony accomplish this.

Q: DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A: Yes it does.