Q. Are you the same Joelle R. Steward who presented direct and rebuttal testimony in this proceeding?

A. Yes. I am.

Q. What is the purpose of your surrebuttal testimony?

A. I respond to the rebuttal testimony of Tim Woolf, Pamela Morgan and Benjamin Norris for the Joint Parties. I also respond to the rebuttal testimony of Philip Hayet and Michele Beck for the Office of Consumer Services ("OCS") and Bob Davis for the Division of Public Utilities ("DPU").

Response to the rebuttal testimony of the Joint Parties

Q. Before responding to the specific comments of the Joint Parties' witnesses, do you have general comments in response to their rebuttal?

A. Yes. There are two general themes in the Joint Parties' rebuttal: (1) that the Company's proposal conflates rate design with cost-effectiveness of distributed generation, and (2) that the Company's framework does not rely on a "conventional" type of cost-benefit analysis. First, net metering itself conflates rate design with cost-effectiveness. Utah Code Ann §54-15-105.1 ("NEM statute") requires the Commission to consider the costs and benefits *of net metering*, not distributed generation. Net metering is a billing scheme and financial settlement process that creates incentives for distributed generation entirely dependent on the rate design approved for providing electricity service to customers. In contrast to the assertions by the Joint Parties, the Company's proposed framework does not conflict with the NEM statute; instead, it explicitly provides a way to evaluate the costs and benefits in consideration of the net metering customers' dual role of being

a customer of the utility and being an energy producer. The Joint Parties proposal ignores consideration about the cost of serving these customers.

Second, the Joint Parties are correct that the Company's proposed framework does not entirely rely on a "conventional" or long-term type of cost-benefit analysis, as is used for evaluating resource acquisitions through integrated resource planning, the demand-side management ("DSM") tests used for energy efficiency or even the Utah Solar Incentive Program. As Mr. Paul Clements explains, a long-term cost benefit analysis on its own will not inform the decisions the Commission ultimately needs to make under the NEM Statute. The Company's proposal utilizes avoided costs for the value of the excess energy purchases under NEM, but complements it with an analysis from the cost of service study to better isolate where there may be differences in how NEM customers use the system.

Response to Mr. Tim Woolf for the Joint Parties

Q. Mr. Woolf claims that the Company's proposal would cause the following: "(a) customers would have much less financial incentive to install PV; (b) there would be little, if any, new PV systems installed on customers' premises; (c) millions of dollars of electricity cost savings (in terms of present value revenue requirements) would be forgone; (d) the nascent PV industry would leave Utah for better opportunities in other states; and the objectives of the NEM statute would not be met."[1] Do you agree?

A. No. Mr. Woolf presents no evidence that the Company's proposal would create this "doom and gloom" scenario for the Utah solar industry. First, the Company's

[1] Rebuttal Testimony of Tim Woolf, lines 101-105.

analysis using the cost of service study has not been completed. The Company will not be able to prepare this study until after the load research study for this group of customers has been substantially completed.

Second, I disagree that the Company's rate design concept to make rates more reflective of costs would kill residential solar installations. The conceptual rate design outline I presented in my direct testimony would include demand charges for residential NEM. This is a similar construct to the rate design for non-residential customers. If demand charges were a significant impediment to DG development, we might expect NEM penetration to be substantially less for non-residential customers. This, however, is not the case as seen on Table 1 below.

Table 1

Utah NEM Customers as of August 31, 2015		
Type	**Customers**	**Installed kW**
Residential	4,773	23,560
Non-Residential	454	18,057
Utah NEM Customers as a Percentage of Total		
Type	**Customers**	**Installed kW as % of Demand**
Residential	0.64%	0.43%
Non-Residential	0.40%	0.40%

Table 1 shows that the installed capacity of DG as a percentage of non-coincident peak demand is very close for residential and non-residential (0.43 percent for residential versus 0.40 percent for non-residential). Also the total installed capacity of non-residential is significant and is nearly is high as it is for residential (23,560 kW for residential versus 18,057 kW for non-residential). There is no reason to believe that if the Company's proposed framework for calculating costs and benefits and its conceptual rate design for residential NEM were

implemented that residential DG development would come to a screeching halt as Mr. Woolf's alarmist assertions indicate.

Finally, the scope of this proceeding, consistent with the NEM statute, is consideration of the costs and benefits to the utility and customers due to net metering. The threat that the "nascent PV industry" will leave Utah, which was also made by Vivant Solar witness Mr. Dan Black[2] has no foundation for consideration by the Commission in this proceeding.

Q. Mr. Woolf argues that the Company has conflated rate design with cost-effectiveness and that combining the two in the cost of service study will not achieve the statutory goal.[3] Do you agree?

A. No. As I previously explained, net metering itself conflates rate design with cost-effectiveness. Since NEM is the law, the Commission is not deciding whether or not net metering should be offered; the Commission's consideration of costs and benefits under the NEM statute is to help determine "a just and reasonable charge, credit, or ratemaking structure." Moreover, the Company's approach will calculate the cost effectiveness of NEM in that it will determine if the costs of providing service to NEM customers, net of the benefits, will exceed the revenues they contribute for the service they are receiving.

The Company's proposed framework varies from that of the Joint Parties in that it examines costs and benefits from NEM within a test period timeframe instead of many years into the future, which would be difficult to estimate given the long-term assumptions that must be made. The timeframe that the Company proposes

[2] Rebuttal Testimony of Dan Black, lines 136-138.
[3] Rebuttal Testimony of Tim Woolf, lines 107-128.

will be more readily applicable to the NEM statute's second requirement to determine rates. Rates are not set based upon costs and benefits that are projected for many years into the future. It is disingenuous to characterize the Company approach as not being a measure of cost-effectiveness. Cost effectiveness can be measured prospectively, retrospectively or from the current period depending on the purpose of the analysis.

Q. How do you respond to Mr. Woolf when he argues that the Company's proposal is misleading since it would not express its results in present value of revenue requirements ("PVRR")[4]?

A. Mr. Woolf is unclear as to how this is misleading. As I mentioned earlier, the Company's proposal would examine the costs and benefits within a test period. The present value of several years of revenue requirements is not appropriate for setting rates. Revenue requirement, not PVRR, would be a key output of the Company's proposed approach.

[4] *Id*. at 129-142.

Q. Mr. Woolf states that "(t)he NEM statute requires that any excess generation from a distributed PV system in one monthly billing period be automatically rolled over to the next billing period. This means that, for the purposes of costs imposed on the electricity system, there will be no excess generation in any one hour or any one month. In other words, the Company will not incur any additional costs in terms of revenue requirements from NEM in any one hour or any one month."[5] Please comment.

A. Mr. Woolf's reasoning is illogical. Excess credits get redeemed either in the same month or in a future month, until they expire at the end of the program year. These excess credits are used to offset energy that the customer receives from the Company at the full retail rate. In essence, NEM customers get to use the utility system like a virtual battery and get financial compensation at the full retail rate for excess generation. While overall revenue requirement with NEM may be the same for all customers, the revenue needed from other non-participating customers increases. To say that additional costs are not incurred due to NEM is misleading and ignores the question of whether or not NEM customers are fairly contributing to the revenue requirement for the costs of the service they are receiving.

Q. Mr. Woolf asserts that a "cost of service study reveals little to nothing about the costs and benefits of a resource, in terms of revenue requirements."[6] How do you respond?

A. The "resource" in question here is the net metering program, not distributed generation resources. NEM is fundamentally different than a resource option. As

[5] *Id*. at 148-151.
[6] *Id*. at lines 180-181.

previously discussed, NEM is a financial construct where customers consume some of the energy produced from their own generation and are able get credit at the full retail rate of energy for their excess generation. NEM has two distinct features: partial requirements service, which brings with it unique service characteristics, and delivery of excess power to the utility system. Since NEM is paid for through retail rates, analyzing its costs and benefits should be accomplished in a different way than it would be for making a resource acquisition such as building a new gas plant. The benefit and necessity of using the cost of service study is to determine the costs required to actually provide service to these customers. The costs of providing service should be determined before one can accurately and fairly determine if benefits exceed the costs.

Q. Do you agree with Mr. Woolf that "the Company's proposal will, by design, result in a NEM rate design that ensures that there are no negative impacts on non-participants"[7]?

A. No. This is a strange assertion because the Company's proposal is to determine whether the costs of NEM exceed the benefits or vice versa, in order to inform a decision on rates. The purpose of this exercise is to eliminate inequities and not to look the other way in order to encourage the development of distributed generation. The evaluation itself does not change anything, it only informs future potential changes in order to eliminate or minimize impacts on non-participants. I think that addressing any inequities that may exist between NEM customers and non-

[7] *Id*. at lines 220-221.

participants should be viewed as a benefit of a proposal and as following both the letter and intent of the NEM statute.

Q. Mr. Woolf alleges that a fundamental flaw is that "the Company's proposal to use a cost of service study does not account for the benefits that distributed PV generation provides to the electricity system in terms of avoided costs (energy, generation capacity, transmission, or distribution) for the distributed PV generation that is subject to part two."[8] Do you agree that the Company's approach would not account for these benefits?

A. No. Inasmuch as the distributed generation from residential NEM customers reduces their cost allocations, the Company's proposed framework would provide benefits related to energy, generation capacity, transmission and distribution.

Q. Mr. Woolf expresses that "(i)t is not entirely clear how the Company proposes to combine the results of parts one and two of its proposal to determine the costs and benefits of NEM."[9] Please respond.

A. Please refer to Exhibit RMP___(PHC-2SR) for a diagram that shows how the two parts of the Company's proposed framework would be combined. NEM revenue and the value of excess generation as determined from avoided costs would be credited against the cost of service to NEM customers as determined in the cost of service study. This value would demonstrate what change in revenue requirement would be needed from NEM customers for their costs to be equal to their benefits. A positive value would indicate that the costs exceed the benefits and other

[8] *Id*. at lines 232-235.
[9] *Id*. at lines 242-243.

customers are bearing the costs of NEM. A negative value would indicate that benefits exceed costs and NEM is bearing the costs of other customers.

Q. Mr. Woolf asserts that the Company's proposal does not assess the costs and benefits of NEM for non-participants.[10] Do you agree?

A. No. The primary result of the Company's proposed analysis will be the change in revenue requirement needed to bring NEM customers to full cost of service. If an increase in revenue requirement were needed, it would indicate a net cost to non-participants. Conversely if a decrease in revenue requirement were needed, it would indicate a net benefit to non-participants.

Q. On pages 17 through 19 of his rebuttal testimony, Mr. Woolf criticizes the arguments you make in your direct testimony that NEM should be evaluated differently than DSM. Please summarize these criticisms and respond to each.

A. The following are Mr. Woolf's criticisms of my direct testimony that NEM should be evaluated differently than DSM along with my responses to those criticisms:

1. **Traditional DSM tests are used to determine whether to acquire cost-effective resources; they are not used to set rates -** He argues that the Commission's order is clear that this docket's purpose is to address cost-effectiveness and this should not be confused with the second part of the NEM statute in which "a just and reasonable charge, credit, or ratemaking structure, including new or existing tariffs" would be determined. I disagree. First, I consider that the Company's approach is a measure of cost effectiveness. It is

[10] *Id*. at lines 256-273.

different from a DSM type test in that it examines only actual test period costs that are the basis for the rates being established for service. Also as I mentioned earlier in this testimony, the two requirements of the NEM statute should not be viewed apart from one another. It is important that the costs and benefits analysis that will be performed to fulfill the first requirement of the NEM statute be useful for fulfilling the second requirement of the NEM statute.

2. **DSM participants receive one-time financial incentives along with bill savings which differs from NEM whose primary incentive is bill reduction -** Mr. Woolf argues that customers primarily undertake DSM measures for the bill savings, not for the incentives, and this is the same reason that customers install DG. My point in drawing the distinction between DSM and NEM, is not necessarily that incentives are more important to customers than potential bill savings, but rather that DSM evaluation tests generally evaluate the program itself and whether an incentive is appropriate. Generally the incentive is a one-time cost in which a lump sum payment is made to the participant for the conservation measure(s) taken. DSM type costs/benefits tests may be appropriate for evaluating whether a one-time incentive will be a cost effective way to acquire a resource, but they should not be used to evaluate NEM which is a rate-based construct that is ongoing.

3. **DSM and DG are different, because DG may not align with the peak -** Mr. Woolf argues that "it is not accurate to make the blanket distinction that DSM and PV are fundamentally different in terms of whether their reduced usage aligns with peak." He then provides no justification to dispute my claim, but seems rather to agree by saying that "(m)any efficiency measures save energy during peak hours" and "there may be times when PV systems generate power outside of the system peak." Demand is the largest driver of costs and the timing of when a resource is available is very important in determining any benefits to the system.

In his criticisms, he argues that even if my points were valid, PVRR is the conventional way to measure costs and benefits for evaluating a resource. As I previously discussed, the framework that the Commission approves for evaluating NEM should not be the same as the cost effectiveness tests that might be employed when evaluating whether a resource like a gas plant should be acquired where PVRR is the primary metric.

Q. Mr. Woolf agrees with Mr. Davis of the DPU that inter-jurisdictional allocation differences should be included in NEM benefit-cost analysis because they could "have a significant impact on the revenue requirements allocated to Utah."[11] How do you respond?

A. First, as I explain later in my response to Mr. Davis, changes in allocation factors due to NEM should capture NEM in all states, not just the impact on Utah. Second,

[11] *Id*. at lines 578-579.

Mr. Woolf appears to contradict himself on this point in that on pages 24 and 25 he argues that lost revenues (or cost shifting) should not be factored into the analysis because they don't result in lower costs. He states: "the purpose of the long-term revenue requirements analysis (i.e., the cost impact analysis) is to indicate the impacts of NEM across all customers; not to indicate the impacts on any one subset of customers."[12] However, changes in inter-jurisdictional allocation factors for Utah under the DPU's proposal would just reflect the cost shift to other states, not an overall reduction in costs, which he argues is the purpose of the analysis.

Q. Mr. Woolf presents a summary of results for his analyses, beginning on page 35. Have you reviewed his analysis?

A. Yes. And while I don't agree with Mr. Woolf's analysis in principle for the reasons I discuss, it does appear that Mr. Woolf's analysis includes a formula error that results in a slight change in his rate impact analysis. Mr. Woolf's formula for calculating the average residential rate fails to include the summer third tier energy block rate. Correcting his formula slightly increases the rate impacts under the lower avoided cost scenarios and reduces the negative rate impacts under the higher avoided cost scenarios.

Q. Do you agree that a rate impact analysis should be done using the average residential rate?

A. No. Using the average residential rate is misleading since NEM customers are not avoiding the average residential rate, but avoiding tiered rates, which provide a higher incentive for large-use customers. If the Commission were to adopt a

[12] *Id*. at lines 461-463.

framework that includes with and without NEM scenarios, then a more detailed bill impact study should be conducted to determine what average rate current NEM customers are actually credited, since that will influence potential cost shifting.

Response to the rebuttal testimony of Pamela Morgan for the Joint Parties

Q. Do you propose collapsing the two requirements of the NEM statute into a single investigation as Ms. Morgan claims or that "it would serve the Commission poorly to have step two ratemaking consideration dictate the inputs or methodologies in the cost/benefit analysis?"[13]

A. No. I do not propose merging these two requirements into a single investigation. But in contrast to Ms. Morgan, I think ignoring the considerations of the step two ratemaking would be problematic if the framework cannot inform step two. After the Commission approves a framework for determining costs and benefits of the NEM program, it will still be necessary for the second requirement of the NEM statute to be fulfilled. I do not believe that the two requirements of the NEM statute should be viewed in isolation or that the framework adopted in this proceeding needs to be adaptable for other uses besides NEM ratemaking, as asserted by Ms. Morgan.[14] Part two of the NEM Statute calls for the governing authority (the Commission) to "determine a just and reasonable charge, credit, or ratemaking structure, including new or existing tariffs, *in light of the costs and benefits*."[15] Since the costs and benefits determined in the first requirement of the NEM statute will inform the second requirement, and are only developed to inform the second

[13] Rebuttal Testimony of Pamela Morgan at lines 92-94.
[14] *Id*. at lines 88-94.
[15] Italics added for emphasis.

requirement, the framework that the Commission approves should be one that will be readily applicable to developing rates. Inasmuch as both requirements of the NEM statute are inextricably linked, I offered in my direct testimony a rough outline of the Company's preferred rate design for residential NEM customers to demonstrate how the Company's proposed framework for determining the costs and benefits of NEM could be applied to rate design.

Q. Ms. Morgan claims that "RMP's proposed framework addresses only solar PV and only for residential accounts."[16] Does the Company's proposal only address solar PV?

A. No. The Company's proposed framework would apply to all generation technologies that NEM customers employ. Mr. Clements and my testimonies focus on solar technology, because 99 percent of DG installations for NEM customers are solar. Similarly, the testimonies from the Joint Parties' witnesses also focus on solar technology.

Q. Does the Company propose that its framework only be applied to residential NEM customers?

A. For excess generation, the Company proposes that the avoided cost value be applied consistently for all NEM customers, both residential and non-residential.[17] For the service that the Company provides NEM customers for their energy requirements, the Company proposes only evaluating residential NEM customers (for all generation types) in the cost of service study at this time since that is where the rate

[16] *Id*. at lines 124-128.
[17] Direct Testimony of Joelle Steward, lines 143-149.

design does not adequately capture the partial requirements service being provided to these customers.

As I discuss on page 7 of my direct testimony, the framework for capturing costs and benefits in NEM for non-residential customers is generally already in place, since their rate designs are better aligned with costs for different aspects of service. The difference in this alignment is illustrated on page 10 on figures 2 and 3 in my direct testimony.

Q. Ms. Morgan argues that "(r)atepayers come and go, and change their electrical equipment and use of it all the time. The costs of RMP's system do not relate to specific ratepayers on a specific tariff."[18] Do you agree with her?

A. Yes and no. I agree that the Company has in place infrastructure to provide reliable service at all times, including when customers come and go and change their electrical equipment. However, while it may be difficult to directly ascribe a specific cost to an individual customer through average cost ratemaking, there are characteristics of service for customers under the same tariff such as energy and demand usage that in aggregate across the Company's system relate to the cost of that system. If her statement were narrowly true that the costs of the Company's system do not relate to customers on a tariff, there would be no need for a cost of service study or for different rate schedules.

Q. Do you agree with Ms. Morgan's statements that rate design is concerned with sending price signals and "is not about trying to make sure no ratepayer on

[18] Pamela Morgan Rebuttal, lines 160-161.

the schedule ever shifts costs to any other ratepayer on that schedule because all do, at some point or another?"[19]

A. Yes. Parties place a lot of emphasis on price signals when developing rate designs, which is why it is imperative to consider whether or not NEM customers are getting the proper price signal with the current residential rate design or if the rate design is properly balancing the costs and benefits for net metering. I would also agree that rates are not designed to ensure that under all circumstances there is never a situation where fixed costs are shifted from one customer to another. The Company's proposed framework never envisions this. Fixed costs are primarily allocated on customer- and demand-related allocators, which change as the number of customers and peak demands change. The Company's proposed framework would determine the fixed costs that NEM customers rely on for reliable service. The recovery of fixed costs is an important consideration of rate design, particularly where the vast majority of the fixed costs are embedded within and recovered through volumetric rates. Ms. Morgan attempts to minimize this consideration's significance in her rebuttal testimony when she discusses how the purpose of rate design should not be to prevent costs from ever being shifted under all circumstances.

Q. Similar to Mr. Woolf, Ms. Morgan argues that the cost of service study is not a decision-making tool and is diametrically different from a cost and benefit analysis.[20] Do you agree?

[19] *Id*. at 171-177.
[20] *Id*. at lines 178-193.

A. No. I do not think that a cost of service study and what she calls a cost impact analysis or what could also be a called a DSM type cost/benefits analysis are totally different from each other as she purports. Both examine the same types of costs and both generally examine the same types of drivers for those costs. The major difference between the two is timeframe and perspective. A DSM type cost/benefits analysis looks only to future costs and has more of a resource planning perspective – typically used to consider a new program or to purchase a new resource, which is not what is being decided here. In contrast, the cost of service study examines actual costs and benefits and is from a ratemaking perspective.

Q. Why is the Company's approach better suited to fulfill the requirements of the NEM statute?

A. The purpose of the NEM statute is not to determine if the Company should offer net metering, since it is already required by law, but to look at the costs and benefits of the NEM program and create rates that reflect those costs and benefits. A cost of service study is designed to do precisely that.

Q. Ms. Morgan implies that a cost of service based approach may ignore line losses and avoided distribution costs.[21] Do you agree?

A. No. The Company's cost of service study evaluates the impact of line losses on the cost to serve customers. It also assigns distribution costs based upon customers' distribution coincident peak demand usage and non-coincident demand usage. The Company's cost of service study would enable NEM customers to avoid these costs inasmuch as their DG reduces their allocators to those costs.

[21] *Id*. at lines 207-218.

Q. Ms. Morgan claims that there is no difference between how customers who invest in DSM and customers with DG use the system.[22] What is her rationale?

A. Her argument is that both types of customers use less energy on average during the billing period and receive lower bills. She claims that the only difference may be the degree to which these customers may reduce their usage. She then argues that "(d)ifferences in when these various ratepayers take power are not relevant to their billing interaction with the utility."

Q. Do you agree with Ms. Morgan?

A. No. As I explain on lines 272 through 287 of my direct testimony, there are many key differences between energy efficiency and DG. Energy efficiency always reduces a customer's usage (load) when that customer would otherwise use power, but DG does not always generate power at the time the customer requires energy – so it often doesn't help the Company reduce or avoid planning for peak load. In addition, DG not only reduces energy delivered from the utility, it also exports energy to other customers. This is not a feature of any DSM program. Further, a NEM customer may completely offset all of its energy charges while still substantially relying on the utility system to meet its energy requirements. This same situation does not exist with customers who adopt conservation measures.

Q. Do you agree with her that "(d)ifferences in when these various ratepayers take power are not relevant to their billing interaction with the utility?"[23]

A. I agree that with the present rate design for residential customers, differences in when power is delivered do not impact the overall bill. This is in large part why the

[22] *Id*. at lines 256-272.
[23] *Id*. at lines 275-276.

present construct of NEM is so problematic. The timing of when power is delivered to a customer is extremely important for how much it costs to serve that customer. In the class cost of service study, most costs are driven by peak demand either at the time of system peak or distribution system peak. As can be seen on Exhibit RMP___(JRS-1) included with my direct testimony and Table 1 in Mr. Clements' rebuttal testimony, solar DG often does not generate or generates very little at the time of these peaks. Ms. Morgan is confusing the issue when she describes DG and DSM as both reducing *average* usage. The timing of energy usage is very important for utility costs. Interestingly, Ms. Morgan and the Joint Parties support incorporating greater granularity in determining the potential benefits of net metering, but completely dismiss or minimize evaluating with more granularity the different characteristics NEM customers may have that would influence differences in the cost of serving these customers.

Q. Ms. Morgan asserts that it is not good policy to resist DG and argues that decisions which slow or stop DG investments would not be good for the Company or other ratepayers.[24] Is the Company's proposed framework designed to slow, stop or otherwise resist DG?

A. No. The Company' framework is intended to provide an analysis that will enable the Commission to develop rates for NEM customers that more accurately reflect

[24] *Id*. at lines 308-327.

the costs and benefits of this program so proper price signals can be developed that will allow NEM to be sustainable without subsidies. The current residential rate structure does not take into account either the costs or the potential benefits from NEM. In fact, because of rate design the current residential rates send a significantly different price signal to residential customers compared to non-residential customers for a solar rooftop facility. A residential customer may receive a benefit of up to 14.4 cents/kWh under NEM; however, a commercial customer with the same facility next door may receive a benefit up to only 11.7 cents/kWh. The current construct for NEM ignores these differences in the price signals and may result in much more costly acquisition of energy.

Q. Ms. Morgan argues that the Company has not presented sufficient justification for including residential NEM on its own customer class.[25] Do you agree?

A. No. Unlike other customers, NEM customers not only receive energy from the Company, they also export it onto the system. Fundamentally, NEM customers take on two distinct roles: partial requirements customer and power producer. Other customers do not interact with the utility in the same way, or where they do, such as for large partial requirements customers on Schedule 31, different rate structures are in place to ensure that the rates better reflect the cost of the service being taken. Moreover, residential NEM customers in particular have rate designs that are not conducive to adequately capturing their cost of service. The vast majority of costs for residential customers are recovered through energy rates. With NEM, a

[25] *Id*. at lines 355-367.

residential customer may eliminate paying all of these costs from her bill while still having substantial peak demand resulting in considerable use of the Company's facilities. While approving a specific ratemaking structure is not directly actionable by the Commission for this phase of this proceeding, separating residential NEM into its own class will provide the necessary information to determine if a separate rate class and rate structure is appropriate.

Q. Do you agree with Ms. Morgan's claim that "(t)he demand charge construct that RMP has put forth would reduce a residential ratepayer's ability to respond to price signals for the largest component of their bill?"[26]

A. No. It would certainly be possible for customers, including residential customers, to reduce their demand charges and thus reduce their overall bill. The average residential customer has a 15 percent load factor. In other words, their average energy usage is only 15 percent of their highest peak demand. This indicates that there may be substantial opportunity for residential customers to improve their load factor particularly if they were subject to demand charges. Higher load factors represent more efficient use of the system in that fewer resources are needed to serve peak demand.

Moreover, I do not agree that residential customers who install DG and participate in NEM should be construed as unsophisticated and lacking in the tools to respond to demand charges. These customers have made a decision to invest in their own energy supply, often at a significant cost to themselves, and should therefore be capable of responding to better price signals.

[26] *Id*. at lines 460-462.

Response to Mr. Benjamin Norris for the Joint Parties

Q. On lines 267 through 275 of his rebuttal testimony, Mr. Norris argues that there is a mismatch in the Company's proposed framework, since costs are presented for both the energy that the Company provides to NEM customers and the excess energy that NEM customers export to the grid, but Mr. Clements testimony only addresses the benefits of the excess generation. Would the Company proposal provide benefits for a NEM customer's generation that is used to offset its own load?

A. Yes. Mr. Clements' direct testimony focused more on the evaluation of excess energy, while my direct testimony was more focused on the service that the Company provides NEM customer's for their own energy requirements. As I discuss on lines 125 through 134 of my direct testimony, the Company's proposed framework would provide benefits for the energy that NEM customers produce for their own requirements by way of reduced allocations. I believe that Mr. Norris may have perceived a mismatch in costs and benefits, because he misunderstood the Company's proposal. No such mismatch exists.

Response to Robert Davis for the DPU

Q. DPU witness Mr. Davis indicates that he is unsure how the "Company's framework would demonstrate the benefits to Utah through the inter-

jurisdictional allocations without running alternative scenarios."[27] How do you respond?

A. The Company does not agree that it is necessary to demonstrate or calculate benefits to Utah through inter-jurisdictional allocations. The revenue requirement and cost of service study already capture such benefits, if any. The Company is not aware of any program that incorporates savings (or costs) to Utah due to changes in jurisdictional allocation factors in the cost-effectiveness evaluation of the program. The net metering program exists due to Utah state law, and it exists, by law, in all of PacifiCorp's other state jurisdictions as well. The evaluation, as proposed by the DPU, would need to factor in how those state programs also impact allocation factors in order to capture the system impact. For example, if proxy load without net metering customers is created in order to develop proxy allocation factors for Utah, then proxy load for all states assuming no net metering customers would need to be created in order to more accurately assess changes in allocation factors due to net metering. Since Oregon also has significant participation in net metering, and in fact as a percent of load exceeds participation in Utah, this would likely offset any changes in allocation factors in Utah under the DPU's proposal. Furthermore, as I explained in my rebuttal testimony, estimating proxy data that assumes full requirements for net metering customers could be problematic as it requires metering on the customers' facilities as well. The challenge of getting approval from customers for the installation of these meters on customer facilities exists in most of the other states as well as in Utah.

[27] Rebuttal Testimony of Robert Davis, lines 39 through 41.

It is also important to note that Utah-allocated costs flow from the JAM model into the cost of service model and these costs are allocated amongst the customer classes in a very similar manner to how they are allocated amongst the states in inter-jurisdictional allocations. Since customer class allocations generally reflect state allocations, inter-jurisdictional allocation impacts would be indirectly reflected in the Company's approach.

Response to Michele Beck and Philip Hayet for the OCS

Q. OCS witness Mr. Hayet expresses concern that the Company's proposal does not clearly show how it would "ensure that it will eliminate the possibility that fixed costs will not be shifted to non-net metering customers."[28] Will the Company's proposed framework ensure that fixed costs are not shifted from NEM to non-participating customers?

A. The adoption of any framework by the Commission in this proceeding will not, on its own, ensure that fixed costs are not shifted from net metering customers to non-participating customers. The framework can only inform the extent to which such cost is shifting occurring. Rate design is the key to ensuring that cost shifting is minimized. The Company's proposal to reflect residential net metering as a separate class in the cost of service study will enable the Commission and stakeholders to determine the cost to provide service to net metering customers and whether it differs from the cost to provide service to non-net metering customers. These answers are necessary in order to determine whether cost shifting is occurring. Other parties' proposed frameworks do not directly determine if there is

[28] Rebuttal Testimony of Philip Hayet, lines 107-108.

a different cost to serve net metering customers. Furthermore, by separately factoring in the avoided cost for excess generation as proposed by the Company, the Commission will be able to design rates that reflect the value of the benefits to the grid of NEM.

Q. OCS witness Ms. Beck responds to the Joint Parties' recommendation to establish minimum filing requirements to say that it's premature to make such requests at this time.[29] Do you agree with Ms. Beck?

A. Yes. The Company is already under the obligation, as are all other parties, to provide workpapers for any filing. Until the framework is established and there is an understanding of what additional data would be necessary to supplement the Company's workpapers, it would be premature to establish minimum filing requirements. The discovery process should suffice for parties to obtain additional data to support their responses.

Q. Ms. Beck recommends that the framework adopted by the Commission also be applied to NEM customers on Schedule 23.[30] Do you agree with her?

A. The Company is generally supportive of applying the same framework that would be used for residential NEM to NEM customers on Schedule 23. She is correct that most Schedule 23 customers are not subject to demand charges. However, the rate design for Schedule 23 includes a declining block energy rate, which helps mitigate concerns regarding cost shifting due to net metering since fixed cost recovery is less impacted by a reduction in usage or through the crediting process, in contrast to the rate design for residential customers. If the Commission were to order the

[29] See Rebuttal Testimony of Michele Beck, lines 40-42.
[30] *Id*. at lines 222-224.

inclusion of Schedule 23 NEM in a cost of service based approach, it would be necessary to institute a load research study for them. It would take over a year for this data to be available. I recommend that evaluation of residential NEM not be held up while data are being developed for Schedule 23 NEM.

CONCLUSION

Q. Why should the Commission approve the Company's proposed framework instead of the other proposals in this proceeding?

A. The Company's framework comprehensively accounts for all of the relevant costs and benefits the net metering ("NEM") customers provide to the Company and other customers. It uses two tools, the class cost of service study and avoided costs, which are well known to the Commission. These tools have been refined over numerous years and are depended upon to make decisions that have major financial implications relating to rate spread/rate design and QF pricing. Both tools are regularly updated with the latest information. The Company's proposal is thoughtful, efficient, and dynamic and the Commission should approve it for the purpose of fulfilling the first requirement in the NEM statute, Utah Code Ann §54-15-105.1.

Q. Does this conclude your surrebuttal testimony?

A. Yes.