Q. Please state your name, business address, and present position with PacifiCorp dba Rocky Mountain Power ("RMP" or the "Company").

A. My name is Paul H. Clements. My business address is 201 S. Main Street, Suite 2300, Salt Lake City, Utah 84111. My present position is Director, Commercial Services for Rocky Mountain Power.

Q. How long have you been in your present position?

A. I have been in my present position since June 2015. I previously held similar positions within PacifiCorp since December 2004.

Q. Please describe your education and business experience.

A. I have a B.S. in Business Management from Brigham Young University. I have been employed with PacifiCorp since 2004 in various commercial roles related to wholesale power marketing. I have been responsible for negotiating qualifying facility contracts, negotiating interruptible retail special contracts, and managing wholesale or market-based energy and capacity contracts with other utilities and power marketers. I also worked in the merchant energy sector for approximately six years in pricing and structuring, origination, and trading roles for Duke Energy and Illinova.

Purpose and Summary

Q. What is the purpose of your testimony, and what is the Company's recommendation in this docket?

A. The purpose of my testimony is to introduce and support the Company's proposed

framework to determine the costs and benefits[1] of the net metering program, as required under Utah Code Ann. §54-15-105.1. The Company recommends the Commission adopt a framework in which net energy metered ("NEM") customers are established as their own class of service in the Company's cost of service model used to allocate costs for ratemaking purposes, with a rate structure for the class to be established as part of a future rate proceeding. In addition, the Company recommends the value of any excess energy from NEM customers be based upon avoided costs as set forth in Utah Schedule 37, and further recommends this excess energy valuation framework be incorporated as appropriate in future rate design for NEM customers.

Q. Please provide an overview of how the Company's proposed framework is presented in testimony.

A. The Company's proposed framework consists of two parts. Part one evaluates the costs and benefits related to the excess energy that NEM customers push to the grid when their generation output exceeds their retail usage. Part two evaluates the costs and benefits related to scenarios in which the NEM customers' generation output is not sufficient to meet their entire retail usage and the Company must provide partial or, at times, full retail service. Both parts are necessary to complete the cost-benefit analysis, and both parts will contribute to the rate design.

I present evidence and conclusions related to part one. I compare the benefit of excess energy from a customer generation resource to the cost to the Company

[1] All references to costs and benefits in my testimony refer to costs and benefits that accrue to the *Company* and its *non-net metering customers*.

and its customers of acquiring that energy. I explain how establishing a value for the excess energy consistent with how value is established for energy from other generation resources provides an equitable framework for the cost-benefit analysis for excess energy received from NEM customers. I then explain how this value can further be used in conjunction with the Company's cost of service model framework to establish an equitable rate structure.

Company witness Joelle R. Steward presents and supports the second part of the Company's proposed framework in which the costs and benefits of the net metering program can be analyzed using the Company's existing cost of service model. This framework applies when a customer's generation output is not sufficient to meet its entire retail usage and the Company must provide partial or, at times, full service. Her testimony demonstrates how certain costs and benefits applicable to NEM customers will flow directly to those customers in the cost of service model if a separate class cost of service is created.

This two part framework can be used to: (1) fulfill the requirement under Utah Code Ann. § 54-15-105.1 to perform the cost-benefit analysis of the net metering program and (2) determine an equitable rate structure for NEM customers in a future rate proceeding.

Q. Please summarize the key points of the Company's testimony.

A. I present the first part of the Company's framework in which customer generation associated with the net metering program (for example, solar panels on a rooftop behind a customer's meter) is viewed and valued as a supply side resource. My analysis shows how the benefit of excess generation that results from the net

metering program can be determined by utilizing a valuation method that has already been thoroughly studied and established by this Commission - the avoided cost methodology for qualifying facilities ("QFs"). The Commission has, through multiple evidentiary proceedings, established a method to calculate the value or benefit of customer supplied generation from such sources as solar. This value is commonly referred to as the "avoided cost".

My testimony shows that the value or benefit of distributed solar generation using an avoided cost method such as Schedule 37 (the "benefit" in our cost-benefit analysis) is currently equal to approximately five cents per kilowatt-hour ("kWh") while the credit paid to NEM customers for the excess energy they provide (the "cost" in our cost-benefit analysis) is equal to (for residential customers) the current full retail energy rate under Schedule 1 of between eight and 14 cents per kWh. Under this framework with current assumptions, the cost of acquiring the customer generation resource (the excess energy) through the net metering program exceeds the benefit of that resource to ratepayers of the utility. This conclusion dictates that the rate structure for the net metering program be modified to better align costs and benefits for excess energy.

Company witness Ms. Steward provides the second part of the Company's proposed framework. Her analysis shows that the existing cost of service model can be used to determine costs and benefits of the net metering program when NEM customers are taking some amount of retail service from the Company, consistent with how costs and benefits are allocated for all other customers. Ms. Steward recommends establishing a separate class of service for NEM customers and using

the cost of service model in a future ratemaking proceeding to establish a cost of service for that class reflective of the costs and benefits of the net metering program (in the cost of service model, benefits are reflected as a reduction in allocated costs). Ms. Steward further describes how the results of a framework wherein NEM customers are established as a separate class of service, along with the value of the excess energy I describe, can jointly be used in a future rate proceeding to establish an equitable rate structure for NEM customers.

Part one of the Company's framework, which relates to the excess energy provided by NEM customers, shows that with current inputs and assumptions the costs of the net metering program exceed the benefits of the net metering program under the current net metering program rate structure. Part two of the Company's framework, in which a cost of service will be established for a separate NEM customer class, will be carried out in a future ratemaking proceeding and combined with the then-current result of the first part of the framework to establish a fair rate structure for NEM customers.

Utah Law and Commission Orders Relied Upon When Performing the Cost-Benefit Analysis

Q. Why is the Commission evaluating net metering at this time?

A. Utah Code Ann. § 54-15-105 (the "NEM Statute") requires a two-step process to evaluate net metering and provides that the Commission must:

> (1) determine, after appropriate notice and opportunity for public comment, whether costs that the electrical corporation or other customers will incur from a net metering program will exceed the benefits of the net metering program, or whether the benefits of the net metering program will exceed the costs; and

> (2) determine a just and reasonable charge, credit, or ratemaking structure, including new or existing tariffs, in light of the costs and benefits.

Q. What will the Company's proposed analytical framework achieve in this docket?

A. The proposed analytical framework will fulfill the cost-benefit requirement of subsection (1) of the NEM Statute. The Commission clarified the intent and desired final product from this docket in its July 1, 2015 Order in this docket:

> The Commission is to perform a cost-benefit analysis and determine whether the benefits of the net metering program will exceed the costs ("Step One"). Second, the Commission is to determine a "just and reasonable" ratemaking structure in light of the results of the analysis performed in the first step ("Step Two"). As discussed above, the purpose of this phase of the docket is to create an analytical framework to accomplish Step One.[2] (emphasis added)

In that same Order, the Commission provided guidance on what determination will be made as a result of this docket:

> Step One requires the Commission to "determine … whether costs that the electrical corporation or other customers will incur from a net metering program will exceed the benefits of the net metering program, or whether the benefits of the net metering program will exceed the costs."[3]

Q. What criteria has the Commission established as guidelines for performing the cost-benefit analysis required by the NEM Statute?

A. The Commission established two criteria in the cost-benefit analysis:

1) The cost-benefit analysis can only include costs and benefits that accrue to customers in their capacity as ratepayers of the utility:

> As a matter of law, we conclude Subsection One requires the

[2]July 1, 2015 Docket No. 14-035-114 Order re: Conclusions of Law on Statutory Interpretation and Order Denying Motion to Strike.
[3]*Id.*

> Commission to consider costs and benefits that accrue to the utility or its non-net metering customers in their capacity as ratepayers of the utility. It necessarily follows that any cost or benefit to be included in the Subsection One analysis must be a cost or benefit that has some impact on the utility's cost of service. Therefore, costs and benefits that do not impact the utility's cost of service are not relevant to the Subsection One analysis and will not constitute part of the framework the Commission ultimately adopts in this docket.[4] (emphasis added)

2) The costs and benefits considered must be quantifiable and verifiable:

> …the parties should proceed with awareness that the Commission anticipates any cost or benefit not reasonably subject to quantification and verification will be of little use in conducting the Step One analysis and, therefore, unlikely to find a place in the final framework to be established in this docket.[5]

Overview of Net Metering

Q. What type of electric service do NEM customers require from the Company?

A. NEM customers are retail customers who have a generation resource behind their meter. These customers require different types of service than customers who have no generation and require full service from the Company. With their own generation resource, NEM customers meet a portion or all of their energy usage and sometimes produce more energy than they consume, causing them to spill the excess energy to the electricity grid for the utility to manage. Because of these unique usage characteristics, NEM customers require the Company to provide a different type of service than what is provided to a customer who does not have a generation resource behind their meter. For NEM customers, the utility must provide partial service to meet the portion of the customer's load that is not covered

[4] *Id.*
[5] *Id.*

by their own generation and sometimes must provide the service of taking delivery of and managing the excess energy generated by the customer. At all times, the utility is required to have generation, transmission, and distribution assets available and standing by to respond to fluctuations or differences in the customer's load and generation resource output.

Q. What is the current net metering program rate structure?

A. The current rate structure for NEM customers allows customers to offset their entire retail energy rate during times when their generation matches or is less than their total usage and to receive a kWh credit (to be netted against future usage) when their generation exceeds their usage. In other words, for every kWh they produce, NEM customers receive a credit at their full retail rate, whether that kWh was used to offset their own usage or whether it was sent to the grid as excess energy.

Due to the requirements of the current net metering law, the Company must take delivery of and manage excess energy generated by a NEM customer and then "store" that energy and net it against or "return" it during time periods when the NEM customer relies on the Company for energy. Since, in current utility system operations, electric energy on a utility scale is not stored economically, what happens in practice is the NEM customer receives a kWh credit that converts to a financial credit (when the kWhs are "returned" and the full retail rate otherwise payable at that time is avoided) for any excess generation.

Cost-Benefit Framework

Q. What must be accomplished with the cost-benefit framework?

A. The framework must be able to determine if providing NEM customers a credit valued at the full retail energy rate for any generation that is used to offset their own usage and paying that same rate for any generation in excess of their load (the "cost" of the NEM program to non-participating customers) exceeds, is equal to, or is less than the benefit that accrues to non-participating customers and the Company when NEM customers take less energy from the utility and or provide excess energy to the grid.

Q. The Commission has required that only costs and benefits that "accrue to ratepayers of the utility" and "impact the utility's cost of service" should be included in the framework to determine the costs and benefits for the net metering program. How do <u>costs</u> typically accrue to utility customers?

A. Costs incurred by the Company are recovered through general rate cases or other regulatory mechanisms. A rate case or other regulatory proceeding establishes a revenue requirement for PacifiCorp which reflects the costs associated with providing service to customers. These costs include generation, transmission, distribution and customer related costs. The Company's revenue requirement also includes costs the Company incurs when it purchases energy from third party generation resources, including those owned by customers. The revenue requirement is calculated at a total Company level, then at a state level. From there, costs are assigned or allocated to individual classes of service based on certain usage characteristics of the customer class (primarily demand, energy or customer related). After costs are assigned to the class, the cost of service study is used as a

guide to inform the decisions on the amount of revenue to be collected from each class and the resultant rate structures.

Ms. Steward provides additional details related to the mechanics of the cost of service model and how it accrues costs and benefits to customer classes. I provide details related to costs the Company incurs when it purchases energy from other generators, such as QFs.

Q. Under the current net metering rate structure, how do the <u>costs</u> of the net metering program accrue to utility customers who do not participate in the program?

A. Residential NEM customers currently receive a credit for their generation equal to the full retail energy rate, which ranges from 8.8 cents per kWh to 14.5 cents per kWh depending on the customer's total energy usage for the month.[6] This credit applies to both generation that is used to offset their own load <u>and</u> to generation that exceeds their own load and is spilled to the grid for the Company to manage. Small non-residential NEM customers on Schedule 23 receive a similar credit at their full retail energy rate; however, larger non-residential customers have the option of receiving a credit at their average energy rate or at an avoided cost rate. This credit is a "cost" to non-participating customers because it reduces the revenue that would have otherwise been received from NEM customers to cover the Company's cost of service. Under the current net metering program, NEM

[6] RMP retail rates for residential customers taking service under Schedule 1 include three tiers or pricing blocks in the summer months of May through September. The first 400 kWh are billed at 8.8498¢, the next 600 kWh are billed at 11.5429¢, and any additional kWh are billed at 14.4508¢. For the winter months of October through April, there are two tiers or pricing blocks. The first 400 kWh are billed at 8.8498¢ and all additional kWh are billed at 10.3111¢.

customers are included in the same customer class for cost of service purposes as non-participating customers. If there is not an equal benefit flowing through the cost of service model to that particular class, non-participating customers must make up the revenue shortfall created by the mismatch of costs and benefits in the cost of service model.

Q. How do benefits typically accrue to utility customers?

A. Benefits accrue to customers primarily in three ways: 1) through reductions in the Company's overall revenue requirement, 2) through reductions to costs allocated to the customer's class in the cost of service model (a reduction of the customer class' percentage of the overall revenue requirement) and 3) through direct payments associated with bi-lateral power purchase agreements between the customer and the Company.

First, customers receive benefits at the Company level from transactions or items that reduce the overall revenue requirement, which will result in lower rates for all customers. For example, if the Company makes an energy sale to another utility at a rate that exceeds the cost to generate the energy, the margin or "profit" results in a reduction in the overall revenue requirement.

Second, from a cost allocation standpoint, an individual customer class may receive a "benefit" in the cost of service model in the form of reduced allocation of costs due to their usage. Since the cost of service model assigns costs based on usage parameters (i.e. how much that class uses or relies upon the utility for service), a customer class receives a lower allocation of costs if it uses less utility service. For example, if a customer class uses less energy during the

coincident peak demand hour because that customer class includes customers with solar generation that is producing energy during that hour, that customer class is assigned a lower amount of demand-related generation and transmission costs for that time period then they would have without the solar generation.

Individual customers within a rate class may also accrue benefits in the form of reduced energy costs based on their individual usage patterns as they relate to rate design. For example, if an industrial customer is on rate Schedule 9, they will pay a rate of $13.75 per kW in the summer months for each kW of peak demand (their highest 15 minute usage over the peak period). A Schedule 9 customer will receive a benefit in the form of lower total energy costs if they reduce their peak usage, register a lower peak demand measurement, and consequently pay a lower total demand charge. Many commercial and industrial customers actively manage their usage during peak periods to obtain the benefit of lower total peak demand and energy charges.

Third, benefits may accrue directly to some customers who own and operate on-site generation and elect to enter into a separate agreement to sell the output of the generation to the Company. These agreements include specific prices and terms under which a customer is provided a payment for energy generated and delivered to the Company. Most customers who have combined heat and power generators (cogeneration) behind their meter, and some customers who have renewable generation behind their meter, elect to enter into these agreements. Sometimes the terms of the agreement dictate that all of the generation output is sold to the Company, and sometimes the agreement dictates that the generation output is first

used to offset the customer's retail usage and only the excess that spills to the grid is sold to the Company.

Q. Under the current net metering rate structure, how do the benefits of the net metering program accrue to utility customers who do not participate in the program?

A. The benefits accrue in two ways. First, residential NEM customers at times take less energy from the utility because they serve a portion of their own load using their own generation. Since costs are assigned or allocated in the cost of service model based on usage parameters, this may result in lower allocated costs to the customer class that includes the NEM customer. The reduction of allocated costs would benefit both NEM customers and non-participating customers because the class currently includes both.

Second, NEM customers may provide a benefit when they generate more than they consume and then provide the excess energy to the grid. That excess energy is sold in the market or avoids the use of other energy resources. All customers, including non-participating customers, receive the benefit of the value of the excess energy in the form of reduced net power costs.

Q. How does this accrual of costs and benefits to non-participating customers relate to the cost-benefit analysis for the net metering program?

A. The analysis must determine whether the reduction in allocated costs in the cost of service model and the value of the excess generation attributable to the net metering program (the "benefits") are more than, equal to, or less than the reduction in revenue that occurs when an NEM customer is provided a credit at the full retail

rate for energy (the "cost").

Q. How does your part of the Company's proposed framework approach the cost-benefit determination?

A. My part of the Company's proposed framework evaluates the costs and benefits that accrue to non-participating customers as ratepayers of the utility in the context of treating distributed customer generation as a supply-side generation resource. I evaluate whether the benefit of the customer generation, when provided to the Company as excess energy, exceeds, equals, or is less than the cost of that excess energy, which is the revenue reduction that impacts non-participating customers when NEM customers are credited at the full retail rate for energy.

Value of Distributed Generation

Q. Is there a material difference between energy from a generation resource behind a customer's meter and energy from a utility generation resource?

A. No. A solar panel or other generation resource will provide the same generation benefit to the system whether it is used by a customer behind their meter in a net metering configuration or used by the Company through a power purchase agreement or as part of a Company-owned resource.[7]

Q. Has this Commission recently reviewed and made a determination related to the value of customer on-site generation?

A. Yes. The Commission performed an extensive review and held full evidentiary

[7] This notwithstanding, for a utility-owned resource, the Company has the ability to dispatch the resource; however, in the case of a customer-owned resource, the Company may not have control over when to dispatch the resource. Furthermore, the Company would likely retain the environmental attributes (or renewable energy credits) from a Company-owned resource, but it currently does not retain them from a customer-owned resource without a specific provision in a contract with the customer. The current net metering program does not include such a provision.

proceedings in multiple dockets pertaining to QFs. Most customers who have generation behind their meter but are ineligible to participate in net metering programs execute QF agreements and sell their generation at Commission-approved avoided cost rates.

The Public Utility Regulatory Policies Act of 1978 ("PURPA") requires the Commission to set rates for purchases of generation output from QFs at levels that meet the ratepayer indifference standard, meaning the cost paid by customers for the generation must equal the benefit accrued to customers as a result of the generation.

In Docket No. 03-035-14, the Commission established an avoided cost method for pricing contracts for power purchases from QFs larger than one megawatt for cogeneration facilities and three megawatts for small power production facilities. In Docket No. 12-035-100, the Commission established an avoided cost method for pricing contract for purchases from renewable QFs larger than three megawatts.

On an annual basis, the Company files a tariff (Schedule 37), which the Commission review and approves, to establish pricing for QF resources that are less than one megawatt for cogeneration facilities or less than three megawatts for small power production facilities.

Q. What cost and benefit elements are required by PURPA to be included in the determination of avoided costs?

A. The Commission's recent determination of avoided costs takes into account the primary PURPA-required elements of avoided capacity and avoided energy. The

approved method further accounts for the utility's resource needs, the ability to dispatch the resource, integration of the energy, transmission line losses, and certain contractual provisions related to terms and conditions for delivery of the energy. These components are consistent with the elements required by PURPA. 18 CFR Part 292 includes the regulations to implement section 210 of PURPA. §292.304(e) sets forth the factors that are to be taken into account when determining avoided costs for QFs:

> In determining avoided costs, the following factors shall, to the extent practicable, be taken into account:
>
> (1) The data provided pursuant to § 292.302(b), (c), or (d), including State review of any such data;[8]
>
> (2) The availability of capacity or energy from a qualifying facility during the system daily and seasonal peak periods, including:
>
> (i) The ability of the utility to dispatch the qualifying facility;
>
> (ii) The expected or demonstrated reliability of the qualifying facility;
>
> (iii) The terms of any contract or other legally enforceable obligation, including the duration of the obligation, termination notice requirement and sanctions for non-compliance;
>
> (iv) The extent to which scheduled outages of the qualifying facility can be usefully coordinated with scheduled outages of the utility's facilities;
>
> (v) The usefulness of energy and capacity supplied from a qualifying facility during system emergencies, including its ability to separate its load from its generation;
>
> (vi) The individual and aggregate value of energy and capacity from qualifying facilities on the electric utility's system; and

[8] § 292.302(b), (c), or (d) address various rate structures.

(vii) The smaller capacity increments and the shorter lead times available with additions of capacity from qualifying facilities;

(3) The relationship of the availability of energy or capacity from the qualifying facility as derived in paragraph (e)(2) of this section, to the ability of the electric utility to avoid costs, including the deferral of capacity additions and the reduction of fossil fuel use; and

(4) The costs or savings resulting from variations in line losses from those that would have existed in the absence of purchases from a qualifying facility, if the purchasing electric utility generated an equivalent amount of energy itself or purchased an equivalent amount of electric energy or capacity.

Q. Do these same cost and benefit elements apply to the evaluation of customer generation resources that are part of the net metering program?

A. Yes. There is no material difference between energy from a generation resource behind a customer's meter and energy from a QF generation resource. The same comprehensive cost and benefit elements apply, and those elements have been established in the regulations that govern the implementation of PURPA and were considered by the Commission when establishing the current avoided cost method.

Q. How are renewable energy credits "RECs" treated in both the avoided cost method and the net metering program?

A. In both the avoided cost method and the net metering program, the REC does not go to the Company but instead stays with the customer or the QF. The fact that the Company does not get the REC from QFs or from net metering customers further supports the use of the avoided cost method to determine the value of excess energy from net metering customers, as both products have the same material characteristics.

Q. What is the current value of solar generation using the avoided cost methodology that was recently approved by the Commission?

A. The current Schedule 37 rate for a 20 year levelized PPA is 5.2 cents per kWh. Recent solar power purchase agreements approved by the Commission under Schedule 38 include rates of approximately 5.0 cents per kWh.

Q. How does the ratepayer indifference standard required by PURPA compare to the cost-benefit analysis required by Utah Code Ann. § 54-15-105.1?

A. They are similar in intent in that the customers who are purchasing the energy are to receive a benefit that exactly matches the cost. PURPA requires the commission to set rates for purchases of QF generation at levels that leave utility customers indifferent. 18 C.F.R 292.304 states the following:

> *(a) Rates for purchases.*
>
> *(1) Rates for purchases shall:*
>
> *(i) Be just and reasonable to the electric consumer of the electric utility and in the public interest; and*
>
> *(ii) Not discriminate against qualifying cogeneration and small power production facilities.*
>
> *(2) Nothing in this subpart requires any electric utility to pay more than the avoided costs for purchases.*

In the avoided cost ("QF") dockets explained earlier in my testimony, the Commission performed a review and made a determination related to the "avoided costs for purchases" as required by PURPA. The Commission established QF rates, or avoided costs, at levels that would leave utility customers indifferent as to whether they purchased energy from the QF generator or if they did not. The benefit or value of the energy provided by the QF generation must match the price or cost the utility customer incurs in the form of a credit or payment to the QF. To maintain

ratepayer indifference, the benefit should not exceed the cost, and the cost should not exceed the benefit.

The net metering cost-benefit analysis required by Utah Code Ann. § 54-15-105 requires a similar "indifference" test. The statute requires the Commission to:

> (1) determine, after appropriate notice and opportunity for public comment, whether costs that the electrical corporation or other customers will incur from a net metering program will exceed the benefits of the net metering program, or whether the benefits of the net metering program will exceed the costs;

Both tests require the benefit or value of the energy to match the cost or payment incurred by the non-participating customer.

Q. Given the similarity of the net metering cost-benefit analysis to the ratepayer indifference test required by PURPA, is it reasonable to use the QF avoided cost rate to determine the benefit of generation produced by NEM customers?

A. Yes. The generation resource has the same material benefit whether it is used for net metering or in a QF power purchase agreement. In the avoided cost dockets, the Commission established a rate for generation output that provides no incremental net benefit to utility customers and provides no incremental net cost to utility customers. That same rate should apply to the net metering cost-benefit analysis.

Q. How does the credit provided to NEM customers through the current net

metering program rate structure compare to the benefit accrued to customers using the avoided cost rate, a rate that has been determined by this Commission to leave customers indifferent?

A. For illustrative purposes, residential NEM customers currently receive a credit for their generation equal to their full retail energy rate. That rate currently ranges from 8.8 cents per kWh to 14.5 cents per kWh. The avoided cost rate for solar generation, or the benefit of NEM customer generation to ratepayers of the utility, is 5.2 cents per kWh under the current Schedule 37 tariff and approximately 5.0 cents per kWh under Schedule 38 (based on recent Commission-approved Schedule 38 solar QF contracts).

Q. What accounts for the primary difference in value between the credit at the full retail rate and the benefit of the excess energy generated by NEM customers?

A. As further described by Ms. Steward, the full retail energy rate includes generation, transmission, distribution and customer service cost components. For the excess energy, NEM customers are currently paid a credit at the full retail rate. NEM customers should only be paid a credit equal to the value of the avoided generation costs. They are not providing any material benefit or avoiding costs related to transmission, distribution and customer service. In fact, when managing the excess energy pushed to the grid by net metered generation, the Company may incur additional transmission, distribution and customer service costs to move the energy.

Conclusion and Recommendation

Q. What conclusion can you draw from this comparison?

A. The excess energy related to the current net metering program results in costs to non-participating customers that exceed the benefits of the net metering program. A credit to NEM customers equal to the full retail energy rate (the "cost" of the NEM program) exceeds the current benefit provided to other utility customers for the excess energy provided by the NEM customer (the "benefit" of the NEM program).

Q. How does your conclusion fit into the Company's framework for addressing the requirements of Utah Code Ann. § 54-15-105?

A. First, my analysis and resulting conclusion demonstrate that modifications to the net metering program rate design are needed. Second, my analysis establishes that the value of excess customer generation can be accurately determined using the Commission-approved avoided cost methods. I recommend using Schedule 37 as the basis for value since it is updated annually and is more closely aligned with the size of most customer generation installations. Lastly, the framework I have presented related to excess generation from NEM customers can be used in conjunction with Ms. Steward's cost of service framework to complete the next step in the process required under Utah Code Ann. § 54-15-105, the establishment of rates for NEM customers, to ensure the future rate structure for the net metering program accurately aligns the costs of the net metering program with the benefits of the net metering program.

Q. What is your recommendation?

A. I recommend the Commission adopt the framework, as described in Ms. Steward's testimony, in which NEM customers are included as their own class of service in

the Company's cost of service model. The cost of service model will then be used to determine a cost of service for that NEM customer class for ratemaking purposes, with a rate structure for the class to be established as part of a future rate proceeding. I further recommend the framework described in my testimony, in which the value of any excess energy from NEM customers be based upon avoided costs as set forth in Utah Schedule 37, be incorporated as appropriate in future rate design for NEM customers.

Q. Does this conclude your direct testimony?

A. Yes.