Rocky Mountain Power
Docket No. 14-035-114
Witness: Joelle R. Steward

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Rebuttal Testimony of Joelle R. Steward

July 2017

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

A. Yes I am.

Purpose and Summary of Rebuttal Testimony

Q. What is the purpose of your rebuttal testimony?

A. My rebuttal testimony is comprised of three sections. In Section I, I respond to the direct testimony submitted by other parties on June 8, 2017, related to the Company's proposed changes to the net metering program and new rates for net metering customers. Specifically, I respond to testimony submitted by the Division of Public Utilities ("DPU") witnesses Dr. Artie Powell and Stan Faryniarz; the Office of Consumer Services ("OCS") witnesses Michele Beck, James Daniel, and Danny Martinez; the Energy Freedom Coalition of America ("EFCA") witness Eliah Gilfenbaum; Utah Clean Energy ("UCE") witness Melissa Whited; Vote Solar witnesses Dr. David DeRamus and Rick Gilliam; Vivint Solar witnesses Thomas Plagemann and Richard Collins; and Sierra Club witness Allison Clements.

In Section II, I present the Company's revised rate design proposal. The revised rate design proposal includes optional energy-based time-of-use ("TOU") rates in addition to the demand-based time of use rates.

In Section III, I discuss a succession program to net metering.

Q. Please summarize your general observations from the other parties' direct testimony.

A. The majority of parties appear to recognize that net metering ("NEM") as we know it today is not sustainable in the long-run, or that at least some level of change is

warranted, particularly related to how exported energy is compensated. There is, however, a wide difference of opinion on the timing and scope of necessary change. The DPU and the OCS, who concur with the Company's findings from the compliance analysis that the costs of NEM exceed its benefits, recommend that the Commission lower the cap on the NEM program in this proceeding and move to a new program model. For the new program, they recommend that the Commission initiate a new proceeding to develop a formulaic rate to compensate customers for exported power from on-site generation while giving different treatment to rates for energy consumed from the grid.[1] While not going as far as the DPU and OCS in their recommendations, many of the other parties implicitly acknowledge that the current NEM program is problematic, particularly the export rate.[2] EFCA, for instance, argues that the value could be higher than the retail rate.[3] Many parties also cite the contentious debates that have been occurring around the country related to proposed changes to net metering and the ensuing uncertainty and confusion for all stakeholders.[4] In all, the parties' arguments demonstrate the need for clear direction from the Commission on changes to the current ratemaking model for customers with private generation, and the timing for the changes. While the Company supports the recommendation of the DPU and

[1] OCS witness Michele Beck Direct Testimony, ll. 323-433; DPU witness Artie Powell, Ph.D. Direct Testimony, ll. 454-582.

[2] *See e.g.*, EFCA argues that adjusting the export rate may resolve the Company's concerns requiring a separate class. EFCA witness Eliah Gilfenbaum Direct Testimony, ll. 414-20. UCE recommends that, if a change in the NEM program is necessary, compensation for excess generation should be reduced. UCE witness Melissa Whited Direct Testimony, ll. 559-63. Vivint proposes an alternative that would step down the value for exported energy. Vivint Solar witness Thomas Plagemann Direct Testimony, ll. 281-3. Vote Solar proposes a declining compensation rate for net excess energy to address the Company's concerns about cost shifting. Vote Solar witness Rick Gilliam Direct Testimony, ll. 760-3.

[3] Gilfenbaum Direct Testimony, ll. 483-9.

[4] *See e.g.*, Sierra Club witness Alison Clements Direct Testimony, ll. 690-982. Plagemann Direct Testimony, ll. 32-47. Vivint Solar witness Dan Black Direct Testimony, ll. 112-38.

OCS to lower the cap on the NEM program and begin the transition to a new program now, which I discuss in more detail in Section III, the majority of my rebuttal testimony specifically addresses the NEM program that is the subject of this proceeding, and the Company's proposed changes to that program to minimize cost shifting.

Q. Please summarize your rebuttal testimony.

A. In Section I, I continue to support the need for a separate class and rate design for residential NEM customers in order to eliminate the cost shifting that occurs and to send correct price signals. I show that other parties' attempts to argue that the data does not support a separate class are without merit. For the proposed rate design, I rebut the arguments that transformers should not be included in the customer charge, that a minimum bill provides a solution to cost shifting, that demand charges are inappropriate, and that the proposed rates will result in unacceptable bill increases for NEM customers. I also continue to support the need for elimination of the average retail rate option for large non-residential customers, showing that the average retail rate option is in excess of benefits. Regarding the Company's proposed application fees, I continue to support the proposed $60 fee for Level 1 interconnections, which no party opposed, but withdraw the request for increases in Level 2 and 3 interconnection fees at this time. Lastly, I provide additional details on the Company's proposed deferral for incremental revenue from Schedule 5.

In Section II, I present updated rates for residential NEM customers. In addition to the time of use demand-based rates I presented in my direct testimony, I propose an optional TOU energy-based rate for NEM customers. The TOU energy-based rate option includes a $28 per month customer charge in order to better track costs. For the

TOU demand-based rate, the customer charge has been updated to $13 per month, based on the updated cost of service results presented by Company witness Robert M. Meredith.

In Section III, I support the proposal by the DPU to lower the cap on the current NEM program and develop a new successor program for private generation. The new program would provide a separate compensation rate for all exported energy.

I. Rebuttal of Other Parties Direct Testimony

Q. Please explain how your rebuttal of other parties' direct testimony is organized.

A. I organized this section around the issues I addressed in my direct testimony:

- Whether residential NEM customers should be in a separate class;
- Rate design for residential NEM customers;
- Non-residential excess energy credits;
- Proposed application fees; and
- The proposed deferral for any incremental revenues from the proposed residential rate design.

NEM Customer Class

Q. Please summarize other parties' positions on whether residential NEM customers should be in a separate rate class.

A. DPU witnesses Dr. Powell and Mr. Faryniarz present analyses on differences in usage characteristics of residential NEM customers compared to non-NEM customers, and argue that these differences may not conclusively support the need to establish residential NEM customers into separate class today.[5] However, the DPU identifies

[5] Powell Direct Testimony, ll. 58-61; DPU witness Stan Faryniarz Direct Testimony, ll. 90-4.

aspects of NEM that indicate a separate class may be important.[6] The OCS agrees with the Company that NEM customers have different usage characteristics than other residential customers, but does not believe it is necessary to create a separate NEM customer class.[7] EFCA, USEA, Vote Solar, and UCE oppose the creation of a separate class for NEM customers, arguing that the behind-the-meter reduction should be treated similar to other types of energy efficiency, that analysis excluding crediting shows similar usage as non-NEM customers, and that the differences are no more significant than the differences between other intra-class subsidies that occur.[8]

Q. How do you respond to the DPU's testimony?

A. I appreciate the additional statistical analysis the DPU has contributed to the record; however, unlike the DPU, I find the DPU's analysis supports the creation of a separate residential NEM class now, particularly when considering that residential NEM customers significantly underpay the costs of serving and therefore shift costs to other customers. In addition, NEM customers fundamentally use the system differently—to back-up their own generation, akin to partial requirements customers, and to export the generation that exceeds their immediate needs. As such, changing the current structure by creating a separate class for NEM customers is in the public interest.

Q. How do the DPU's usage and cost of service characteristics analyses support the creation for a separate residential NEM class?

A. First, Dr. Powell presents analyses that confirm that:

(1) The customer profiles between residential NEM and non-NEM are distinct

[6] Powell Direct Testimony, ll. 272-80.

[7] Beck Direct Testimony, ll. 70-4.

[8] *See e.g.*, Gilfenbaum Direct Testimony, ll. 51-5, 374-420. Whited Direct Testimony, ll. 51-4, 357-62. Stanley Direct Testimony, ll. 197-210. DeRamus Direct Testimony, ll. 85-101. Gilliam Direct Testimony, ll. 661-72.

despite the similarity of their average usage;

(2) The rate of change in usage by NEM customers during the day is significantly larger than non-NEM customers;

(3) The variation in load factors for NEM customers is greater; and

(4) NEM customers have notably lower load factors.[9]

These markers indicate that residential NEM customers have different characteristics or, at the very least, that differences in rate design treatment may be warranted to better address these differences among customers.

Second, Dr. Powell notes that separating NEM customers from the residential class may better capture the benefits NEM customers bring to the system, allowing the design of their rates to reflect those benefits.[10] In this regard, Table 1 below shows the differences in the unit costs by function between non-NEM and NEM residential customers. NEM customers have an overall lower cost of service, particularly in the generation and transmission functions, once the one-time program administration costs are removed. Accordingly, these lower costs would be passed on to NEM customers through lower rates in a separate class rather than diluted as part of the larger residential class.

[9] Powell Direct Testimony, ll. 315-439.

[10] *Id*. at ll. 440-50.

Table 1.

Annual Functional Costs per Customer			
	Residential Non-Net Metering	Residential Net Metering	Percentage Difference
Generation	$580	$468	-19%
Transmission	$136	$127	-6%
Distribution	$240	$238	-1%
Retail	$40	$57	43%
Miscellaneous	$5	$4	-5%
Total	$1,000	$894	-11%

Third, Mr. Faryniarz demonstrates that NEM compensation for exported power at a retail rate that exceeds net power costs results in the significantly lower parity to cost of service than non-NEM customers, and therefore results in a net cost to other customers.[11] Correcting this cost shift under the NEM regime requires a different rate design for NEM customers that better balances cost of service for consumption from the system with compensation for exported power.

Q. EFCA witness Mr. Gilfenbaum and Vote Solar witnesses Dr. DeRamus and Mr. Gilliam argue that a separate class should not be created because once compensation for exported power is removed, NEM customers are providing approximately the same contribution to cost of service as non-NEM and that it is normal for there to be a small amount of variation within a customer class.[12] Do you agree?

A. No. First, excluding compensation for exported power is irrelevant because NEM equates compensation for exported power with retail rates. Utah Code Ann. § 54-15-

[11] Faryniarz Direct Testimony, ll. 775-855.

[12] Gilfenbaum Direct Testimony, ll. 374-420; DeRamus Direct Testimony, ll. 746-750; Gilliam Direct Testimony, ll. 417-25.

104 requires netting of exported power against consumption within a billing period except for "excess customer-generated electricity," which is defined in Utah Code Ann. § 54-15-102(6) as the customer-generated electricity in excess of the customers consumption during the monthly billing period. In other words, only the kWh output that exceeds the usage during the billing period (i.e., is banked), may be credited at a different value that is at least avoided cost. Only about 6 percent of exported power is banked; therefore, even if the Commission adjusted the compensation rate for excess energy, as allowed under the law, the vast majority of exported power would be compensated at the retail rate.[13]

Second, for the reasons discussed above, I disagree that the variations in usage characteristics between NEM and non-NEM are insignificant and should be dismissed, particularly when considering the inadequacies of the current rate design to recover costs. Also, looking at just the contribution to the class cost of service (even if compensation for exported power is excluded), or at just load factor, will not show if the rate design is actually sending an economic price signal or whether the design is capable of distinguishing between different service requirements within the class. Net metering customers have distinguished themselves through a variety of factors as I outlined above, some of which result in higher costs and others in lower costs.

Q. OCS witness Ms. Beck states that, while she agrees that NEM customers have a different usage characteristic, a separate class is not needed. How do you respond?

A. Keeping NEM in the same class but requiring different rate designs for NEM customers does not fully capture the differences and actually results in higher rates for NEM

[13] This also provides perspective on UCE's recommendation that if any change is made it be limited to excess generation. Whited Direct Testimony, ll. 599-603.

customers since the benefits of the NEM class are diluted in the larger class. In addition, keeping NEM customers in the current residential class, particularly as the number of NEM customers grows, will increase the intra-class cost shifting and mask the price signal for the value of exported power.

Q. Vote Solar witness Dr. DeRamus argues that the NEM customers, who are typically higher use customers before installing distributed generation, are responding to the rates established by the Commission to discourage high levels of usage so NEM customers should not be singled out. Further, he argues that conflating costs with monthly energy consumption rather than peak load is a problem with the overall rates, not with NEM customers per se.[14] Do you agree?

A. To some extent, I agree with Dr. DeRamus on this point. Indeed, there are problems with the current residential rate structure that cause high use customers to subsidize other customers with the tiered rate design. However, I don't believe that justifies keeping the current rate structure for the NEM program, particularly in light of the required detailed review and evaluation the Commission has sought through this proceeding. NEM customers are not merely akin to customers reducing usage through energy efficiency. High-use customers do not stop being high use consumers, but instead offset a portion of their requirements with private generation, which requires a back-up from the utility. NEM also requires compensation for exported energy at rates in excess of comparable or competitively-priced energy. Together, these differences lead to a significant under-recovery of costs through the NEM program, not just typical lost margins associated with energy efficiency programs. The uniqueness of the NEM

[14] DeRamus Direct Testimony, ll. 402-36.

program, and customers with on-site generation, has already been established and therefore it is appropriate to address changes for these customers.

Q. Dr. DeRamus argues that NEM customers' load factors are not different from those of non-NEM customers.[15] Is this true?

A. No. Mr. DeRamus applied the Kolmogorov-Smirnov ("KS") test to assert that NEM and non-NEM load factors are not significantly different from one another. The KS indeed tests whether two distributions are significantly different from one another. However, it is documented that when testing small sample sizes the power of the KS test is limited.[16] Comparing the annual load factors for NEM and non-NEM customers, as Dr. DeRamus did, provides a sample size of 52 NEM customers, which is not sufficient for the KS test. If Dr. DeRamus's claim that there is no difference in load factors between the groups is true, this should be true when comparing monthly load factors. Therefore, the Company calculated the monthly load factors for NEM and non-NEM customers from the data provided in response to a data request provided to the DPU (DPU DR 4.3). Using the monthly load factors increases the observations from 52 to 621. The Company applied the KS test to the monthly load factors from both groups—NEM and non-NEM. Applying the KS test to the two customer samples results in a p-value of 0.0024, lower than the 0.1 standard, meaning that there are significant differences between the distributions of observations of the two samples. This is consistent with the finding by the DPU using the KS test.[17] Applying the KS

[15] *Id.* at ll. 935-46.

[16] Razali, Nornadiah M. and Bee Wah Yap, January 2011, *Power Comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors and Anderson-Darling Tests*, Journal of Statistical Modeling and Analytics, Vol 2, No.1, 21-33.

[17] Powell Direct Testimony, ll. 354-6.

test to compare monthly load factors for NEM customers and non-NEM customers demonstrates that the distribution of load factors between the two groups is statistically different.

Q. What analysis did Ms. Whited prepare to support her belief that residential net metering customers should not be on a separate class?

A. Ms. Whited provided her Figure 3 to purportedly show the hourly profiles on the peak day in 2015 (June 30, 2015) for all non-NEM customers whose maximum kW during that peak day was less than 10 kilowatts with the average profiles from the four strata from the residential NEM load research study.[18] She concludes that since the lines for the residential NEM strata are within the same general range as the individual hourly profiles for all other non-residential customers that "NEM customers are well within the range of other residential customers."[19]

Q. Does Ms. Whited's Figure 3, along with her observation, provide any evidence that separate class treatment for residential net metering customers would be inappropriate?

A. No. Ms. Whited's Figure 3 is not an apples to apples comparison of non-NEM and NEM residential customers. There are numerous ways in which the information that she compares for non-NEM customers is on a different basis than for NEM customers. She removes larger non-NEM customers but does not do the same for NEM customers. She shows every single individual sample profile for non-NEM customers, but only shows average strata profiles for NEM customers. For NEM customers, the different strata are shown separately, but non-NEM profiles are just shown in one blue jumble.

[18] Whited Direct Testimony, ll. 291-301.

[19] *Id*. at ll. 297-8.

Besides the inconsistency between the information she shows between NEM and non-NEM customers, the point she tries to make with her illustration is unclear and misleading. She shows that the average NEM strata profiles generally fall within the range provided by *all* non-NEM customers. Her illustration does not demonstrate that the overall profile shape for NEM customers is the same as for non-NEM customers. Using her logic, the profiles for a streetlight or a small irrigation customer could be shown to fall within the range of residential customers. Visually comparing an average from one set of customers to all possible data points from another set of customers is not useful.

Figure 3 in my direct testimony shows that the shapes for the overall profiles, which were prepared on a consistent basis for NEM and non-NEM customers are different on the peak day on June 30, 2015. Her analysis does nothing to refute this difference.

Residential NEM Rate Design

Q. Please summarize parties' positions on the proposed rate design for residential NEM customers, which included a $15 monthly customer charge, a demand charge during on-peak periods, and an energy charge.

A. Parties generally opposed some or all of the Company's proposed rate design. The DPU opposes the proposed customer charge of $15 per month but supports the consideration of both a demand charge and an alternative TOU energy-based option.[20] The OCS supports a different customer charge and a requirement for TOU rates in the next general rate case.[21] Sierra Club, UCE, Vivint Solar, and Vote Solar oppose the

[20] Faryniarz Direct Testimony, ll. 1345-7.

[21] Beck Direct Testimony, ll. 600-4.

Company's proposed rate design, and in particular, argue that the demand charge is inappropriate for residential customers but offer some support for a TOU energy-based rate (but available to all residential customers).[22]

Q. Is the Company proposing changes to the proposed rate design in this rebuttal filing?

A. Yes. In Section II of my testimony, I explain the Company's changes to the proposed rate design. The Company is proposing to include an optional TOU energy option in addition to the TOU demand-based option for residential NEM customers.

Q. Regarding the proposed customer charge, DPU witness Mr. Faryniarz argues that the cost of service for NEM customers does not support a higher customer charge that includes the costs of transformers, as proposed by the Company.[23] Similarly, OCS witness Mr. Martinez also opposes the inclusion of transformer costs in the customer charge.[24] Do you agree with their arguments?

A. No. Both Mr. Faryniarz and Mr. Martinez rely on the Commission's 1985 method for determining customer charges, which limits the customer charge to only costs that serve individual customers, not costs for equipment that is shared by customers.[25] However, as DPU witness Dr. Powell notes: "rate-making must be sufficiently flexible to adapt to changing circumstances."[26] A strict adherence to a Commission determination 32 years ago does not serve the public interest. The changes in technology, growth in

[22] *See e.g.*, Clements Direct Testimony, ll. 436-43. Whited Direct Testimony, ll. 48-50, 541-5, 564-8. Plagemann Direct Testimony, ll. 48-167. DeRamus Direct Testimony, ll. 102-18, 128-32. Gilliam Direct Testimony, ll. 79-85, 121-31.

[23] Faryniarz Direct Testimony, ll. 123-7.

[24] Martinez Direct Testimony, ll. 195-210.

[25] Martinez Direct Testimony, ll. 62-226; Faryniarz Direct Testimony, ll. 680-733.

[26] Powell Direct Testimony, ll. 201-2.

customer generation, and in particular, the present circumstance of net metering—which over-simplistically equates the retail rate with a value for exported energy, resulting in a cost shift to other customers—warrant a re-evaluation of the past approach for a proper balance between price signals and cost recovery.[27]

As Table 1 above shows, functional cost of service differences between NEM and non-NEM exist, with NEM customers exhibiting lower costs for generation and transmission and higher costs for distribution and retail functions. The distribution costs include substations, poles, wires, transformers, service drops, and meters. Table 2 provides a breakdown of the distribution costs and comparison to non-NEM customers.

Table 2.

Residential Customer Costs			
	Residential Non-Net Metering	Residential Net Metering	Percentage Difference
Transformer	$50.66	$63.87	26%
Meter	$7.83	$14.67	87%
Service	$32.25	$38.09	18%
Retail	$39.64	$56.64	43%
Miscellaneous	$4.54	$4.32	-5%
Annual Total	$134.93	$177.59	32%
Monthly Total	$11.24	$14.80	32%

Table 2 shows that the most significant cost differences are in meters, transformers, and retail, which excludes the costs to be recovered in the Company's proposed application fee. The Company proposes to include the transformer costs in the customer charge for

[27] The Commission has recognized that changes to methodologies are warranted in light of changing conditions (*see e.g.*, Docket No. 12-035-100, Order on Phase II Issues (August 16, 2013) p. 18, where the Commission justified changing the avoided costs methodology stating "... [t]his action will ensure our method for determining indicative prices will continue to reflect changing avoided costs in light of changing conditions ...")

NEM customers with the demand-based TOU rate proposal. As I discuss later, the Company is proposing a higher customer charge that includes all distribution system elements with its new proposed TOU energy option.

Q. Please explain why NEM is a reasonable basis for the Commission to alter its past decisions for the calculation customer charges.

A. The cost of service study shows that NEM results in a significant under-recovery of costs, which is largely due to using the retail rate to value exported energy. With the costs of infrastructure necessary to support customers' access to the grid included in volumetric rates, customers can offset charges for infrastructure they relied on for their own consumption through the NEM kWh netting and banking process. The majority of costs in rates reflect the embedded costs of the facilities in place and serving customers today, therefore, these are costs that do not go away, regardless of consumption levels. In fact, as Company witness Mr. Douglas L. Marx shows, rooftop solar does not necessarily lead to a reduction in the size of local distribution infrastructure because these customers use the distribution system for both consumption and export. Therefore, to ensure cost recovery from the individuals who rely on and benefit from this infrastructure, the costs must be removed from the volumetric charges.

Q. The OCS recognizes a difference in meter costs between residential NEM and non-NEM customers and proposes a customer charge of $8.50.[28] Please respond.

A. The current minimum bill for residential customers is $8.00 per month. So while I appreciate the OCS's recognition of cost differences for NEM customers, the proposal still leaves a significant portion of fixed costs subject to volumetric rates and

[28] Martinez Direct Testimony, ll. 220-6.

netting/banking.

Q. Vivint Solar argues that transformers should not be in the customer charge for NEM customers because Mr. Marx's arguments that NEM customers put a greater burden on the grid are "a red herring and only applied in limited cases."[29] Does the Company's proposed customer charge reflect any additional costs for prospectively putting a greater burden on the grid, as Mr. Marx showed?

A. No. While Mr. Marx shows that NEM can actually lead to the need for additional costs to support the excess energy placed on the grid, the Company's proposed customer charge does not reflect any additional costs beyond those in the test period (scaled back to the final rates approved in the last general rate case). Therefore, Mr. Collins argument is misleading.

Q. Vivint Solar argues that "a reasonable and small minimum bill" would be a better solution than a higher customer charge because it promotes conservation.[30] Do you agree?

A. No. A minimum bill is often proposed as a solution in NEM proceedings, but is essentially a red herring because it makes it appear that the utility would get better fixed cost recovery. In reality however, unless the charge is set high enough, it produces insufficient revenue. For example, the Company's current minimum bill is $8.00 per month. A 50 percent increase in the minimum to $12.00 per month for NEM customers would apply to only 3 percent more bills, based on the 2015 test period. In addition, it only "promotes conservation" in that it leaves recovery of fixed costs in the volumetric rate, regardless if that is actually an economic price signal.

[29] Collins Direct Testimony, ll. 725-50.

[30] Plagemann Direct Testimony, ll. 84-93.

Q. Do you agree with parties' arguments that demand charges for residential customers are inappropriate?[31]

A. No. As several parties note, there is a growing interest by utilities across the country in incorporating demand changes into residential rate design due to changes in technology.[32] But arguments like the Sierra Club's that residential customers are "not in a position to respond to demand price signals" or that demand charges are simply too inconvenient are unfounded.[33] The Arizona Public Service Company has had voluntary TOU demand and energy options for residential customers for decades. A study published in 2016 looked at customers that switched from a TOU energy rate to a TOU demand-based rate and found that about 60 percent of customers were able to reduce their summer peak demand an average of 12.5 percent.[34] Responding to a demand signal would be a change for residential customers, but it does not mean demand charges are not appropriate or useful in this context. In fact, demand charges are a more appropriate, economic price signal than tiered energy rates, for the reasons I discussed in my direct testimony. Gaining an understanding to stagger appliance use during peak periods provides a more cost-causation-based price signal than just reducing overall usage.

Sierra Club claims that residential customers "have almost no perceptible impact on the grid based on their own individual usage" so therefore, "the grid would

[31] Clements Direct Testimony, ll. 309-57; Whited Direct Testimony, ll. 363-512; Plagemann Direct Testimony, ll.102-4.

[32] Clements Direct Testimony, ll. 339-46. Whited Direct Testimony, ll. 484-512. Plagemann Direct Testimony, ll. 32-6, 100-2.

[33] Clements Direct Testimony, ll. 329-57.

[34] Leland R. Snook and Meghan H. Grabel, *Dispelling the myths of residential rate reform: Why an evolving grid requires a modern approach to electricity pricing*, THE ENERGY LAW J. 29:3 (Apr. 2016) at 72-76.

barely notice unless hundreds or thousands of other customers did the same thing at the same time,"[35] and compares this to an industrial customer. This ignores the fact the all non-residential classes, other than lighting, are subject to demand charges, not just large industrial customers and that applying the on-peak demand price signal to hundreds or thousands of customers is precisely how to discourage more costly on-peak usage. An individual customer reducing usage to the peak period demand price signal is of more value to the grid than if the same customer merely reduces his or her usage by the corresponding amount in non-peak periods during a billing month in response to tiered energy rates.

I similarly disagree with UCE witness Ms. Whited's arguments that demand charges reduce incentives for energy efficiency, that a reduction in energy charges will lead to an increase in usage, and that the demand charges violate the Bonbright principle of simplicity.[36] While demand charges are a different signal for residential customers, they are still a price signal for efficiency—a more targeted and valuable signal for efficiency than tiered rates. The Company's proposed rate design is also more simplistic than the current tiered rates and customers do not necessarily respond to individual billing components, but to average prices or overall bills.[37]

[35] Clements Direct Testimony, ll. 322-26.

[36] Whited Direct Testimony, ll. 457-66.

[37] Koichiro Ito, *Do Consumers Respond to Marginal or Average Price? Evidence from Nonlinear Electricity Pricing*, Energy Institute at Haas (October 2012).

Q. Several witnesses argue that if there were a new rate design adopted for customer generators, a residential TOU energy-based rate rather than a demand-based rate would be more appropriate.[38] How do you respond?

A. In this rebuttal filing, the Company is proposing to offer an optional energy-based TOU rate in addition to the demand-based TOU rate initially proposed. The proposed rates are described in Section II of my testimony. These two options will help customers adjust to new time-based price signals and ultimately choose the rate that most advantageously reflects his or her desired consumption.

Q. Several parties argue that the proposed new rates will result in an unacceptable bill increase for NEM customers.[39] Do you agree?

A. No. The increase is only in comparison to what would otherwise occur. Put otherwise, just because a bill increases to an amount that is actually reflective of the costs imposed by a customer does not mean that the increase is unacceptable. In this context, as the Company's cost of service analysis shows, NEM customers have been receiving a windfall under the current program and have been paying substantially less than their cost of service. In addition, it's not an actual increase to customers because the Company proposes to apply Schedule 5 rate to only *new* NEM customers (submitting applications after December 9, 2016). When a customer opts for NEM after this proceeding, the overall average bill result would still be a decrease, as shown on pages 2 and 3 in Exhibit RMP___(JRS-1R).

[38] Beck Direct Testimony, ll. 600-4; Daniel Direct Testimony, ll. 292-9; Whited Direct Testimony, ll. 564-8.

[39] Whited Direct Testimony, ll. 160-70. Clements Direct Testimony, ll. 358-414. Plagemann Direct Testimony, ll. 145-67.

Large Non-Residential Excess Energy Credits

Q. Please summarize other parties' testimony in response to the Company's proposal to eliminate the option for the average retail rate credit for excess energy for large non-residential customers.

A. Only the DPU and the OCS briefly addressed the Company's proposal in testimony. Mr. Faryniarz for the DPU doesn't make a specific recommendation but notes the importance of correctly valuing exports for all NEM customers, including non-residential.[40] For the OCS, Ms. Beck notes that it would be important to evaluate whether all NEM customers should receive the same compensation rate and whether additional changes are necessary in a post-NEM environment.[41]

Q. Based on testimony, are you altering your proposal to eliminate the average retail rate option for large non-residential customers?

A. No. As both the DPU and OCS note, there should be consideration of consistency in the value of exported energy across the classes, and the current large non-residential option for compensation of excess energy at the average retail rate is in excess of the benefits, and therefore should be eliminated. For example, Table 3 below compares the benefit of the net metering program at the system, state, and customer class level for Schedules 6, 8, and 10 from the updated analysis presented in Company witness Mr. Meredith's rebuttal testimony. This shows that the benefits provided by large non-residential net metering customers are all less than the average retail price option those customers can receive for their excess energy.

[40] Faryniarz Direct Testimony, ll. 1197-1204.

[41] Beck Direct Testimony, ll. 466-73.

Table 3

Benefit of the Net Metering Program ($/MWh)				
		At the Customer Class Level		
At the System Level	At the State Level	Schedule 6	Schedule 8	Schedule 10
27.18	57.21	54.12	69.88	45.80

Average Retail Rate on Schedule 135 Special Condition 2.B.(iii) Effective July 1, 2016 ($/MWh)				
Schedule 6	Schedule 6A	Schedule 6B	Schedule 8	Schedule 10
84.50	117.87	108.91	75.51	75.62

Q. If the average retail rates are more than the benefit of the net metering program, why isn't there a larger net cost for large non-residential customer classes?

A. Schedule 6, Schedule 8, and Schedule 10 customers primarily receive value for their private generation through their onsite generation or the generation that is netted within the month at energy charges instead of at the full average retail rate. The full average retail rate is only available for excess credits that are banked from a prior month. Table 4 below shows the average cost of bill credits for the large non-residential customer classes.

Table 4

Net Metering Cost of Bill Credits ($/MWh)		
Schedule 6	Schedule 8	Schedule 10
46.82	38.55	46.52

Since large non-residential customers are subject to demand charges, the average cost of bill credits for these customer classes is well below the average retail rates shown in Table 3. The costs and benefits of the NEM program analysis shows a smaller net cost for large non-residential classes as compared to the residential class because of lower bill credit levels for large non-residential classes. This is a direct result of the more cost-based rate structures for large non-residential customers. The

Company recommends that the current rate structure for customers on Schedule 6, 6A, 6B, 8, and 10 who choose to participate in the NEM program remain in place, since those structures do not cause these customers to pay amounts that are far off from what cost of service analysis indicates they should pay. Compensating these customers for a prior month's over-generation at a higher rate, however, has no basis in cost and should be eliminated as an option for future large non-residential NEM customers.

Application Fees

Q. Did any party oppose the Company's proposed waiver of R746-312-13 and the implementation of new application fees for Level 1 interconnection requests and changes to the fees for Levels 2 and 3?

A. No party opposed the waiver and implementation of the $60 application fee for Level 1 interconnection requests. The OCS, however, recommended that the proposed increases in the Level 2 and 3 fees should stay the same until the next general rate case. The OCS also recommends that the Commission consider a formal rulemaking to review R746-312-13 on a longer-term basis.[42]

Q. Do you agree with the recommendations by the OCS?

A. In part. The Company can agree to withdraw the proposed increases for Level 2 and 3 interconnection applications at this time. The Company also supports the OCS's recommendation for the Commission to consider a formal rulemaking to review R746-312-13 on a longer-term basis. In fact, an update to the rule section may be appropriate to address the availability of battery storage at customer locations, in addition to interconnection of generation facilities. However, the Company believes that the

[42] Martinez Direct Testimony, ll. 295-321.

rulemaking may consider changes in costs for Level 2 and 3, not just limit a change in fees to a general rate case as these are set in rules.

Proposed Deferral for Incremental Revenue from Schedule 5

Q. Did any party comment on the Company's proposed deferral for incremental revenue from Schedule 5?

A. Only one. The OCS opposes the Company's proposal to establish deferred accounting for any incremental amount associated with new rates until the next general rate case. The OCS witness Mr. Daniel argues that the proposal does not include enough information or specifics on the deferral account for the Commission to make a decision. The OCS's questions include: how will the increased revenues be calculated; when, and over what period would the increased revenues be returned to customers; how will the increased revenues be assigned or allocated to customer classes; and will there be a true-up provision and, if so, how will it work?[43]

Q. How would the Company calculate the revenue difference?

A. Each month, the billing components would be extracted for Schedule 5 customers from the billing system. From those billing components, actual base revenue under Schedule 5 and what base revenue would have been under Schedule 1 would be calculated and compared. The incremental difference between Schedule 5 revenue and Schedule 1 revenue for all bills during the month would be applied to the balancing account, plus any carrying charge on the balance. The Company would use the carrying charge rate approved by the Commission in Docket No. 15-035-69. Exhibit RMP___(JRS-2R) provides an example of the calculation.

[43] Daniel Direct Testimony, ll. 317-68.

The Company would begin the deferral once customers begin taking service on Schedule 5, following the first monthly billing. The deferral would continue with all customer billings until the effective date of the Company's next general rate case.

Q. When and over what period does the Company propose to return the deferral to customers?

A. The Company proposes to begin amortizing the deferral at the time of the next general rate case. The Company would make a specific proposal in the general rate case filing, including, the proposed period over which to amortize the balance. Other parties would be able to propose an alternative at that time as well.

Q. How does the Company propose to allocate the deferral balance to customer classes?

A. The deferral revenue balance would be allocated back to the residential Schedule 1 class.

Q. Does the Company propose a true-up provision?

A. The Company would make a specific proposal in the next general rate case filing. If amortization is embedded in base rates, there would not be a true-up. If the amortization is done through a separate adjustment, a true-up provision would likely be included. The size of a deferral balance is a factor that the Company would consider at the time of the next general rate case as it makes its proposal for amortization.

II. Revised Schedule 5 Rate Design

Q. Is the Company proposing any changes to the originally proposed Schedule 5 rates?

A. Yes. The Company has two changes to the Schedule 5 rates I proposed in direct

testimony. First, the Company updated the Schedule 5 TOU demand-based rates in the initial filing based upon the updated NEM Breakout COS analysis presented by Company witness Mr. Meredith in his rebuttal testimony. The rates are calculated using the same logic as discussed in my direct testimony, but they also reflect a correction to the billing units for the on-peak demand charge.[44] Table 5 below shows the updated prices compared to the proposed prices presented in direct testimony. The updates and the correction to the demand charge billing units result in reductions to the customer, demand, and energy charges as compared to Company's direct filing.

Table 5 – Proposed Prices Compared to Prices Proposed in Direct Filing

Schedule 5 - Residential Service for Customer Generators		
	Proposed Price	
	Direct Filing	Revised Rebuttal Filing
Customer Charge		
1 Phase	$15.00	$13.00
3 Phase	$30.00	$26.00
Demand Charge		
On-peak ($/kW)*	$9.02	$8.25
Energy Charges		
All kWh (¢/kWh)*	3.8143	3.6374
*On-peak periods: Monday-Friday (except holidays) October - April: 8:00 a.m. to 10:00 a.m. and 3:00 p.m. to 8:00 p.m. May - September: 3:00 p.m. to 8:00 p.m.		

Q. What is the second proposed change to Schedule 5?

A. In response to the testimonies of other parties, the Company proposes to include an optional TOU energy-based rate in addition to the TOU demand-based rate. Providing both a demand-focused TOU option and an energy-focused TOU option gives

[44] *See* Joelle R. Steward Direct Testimony, ll. 289-304 and 399-422.

customers more flexibility to choose an option that works for their household.

Q. How were the rates designed for the energy focused TOU option?

A. The off-peak energy charge was set to the same 3.6374 cents per kilowatt hour energy charge as in the demand focused TOU option, and the customer charge was set at $28 per month instead of $13 per month. The on-peak energy charge was then set to recover the remaining revenue requirement. The on- and off-peak TOU periods are identical between both options. Table 6 shows the proposed prices for both of the Company's proposed options.

Table 6

Schedule 5 - Residential Service for Customer Generators		
	Proposed Price	
	Option 1 - Demand Focused Time-of-Use	Option 2 - Energy Focused Time-of-Use
Customer Charge		
1 Phase	$13.00	$28.00
3 Phase	$26.00	$56.00
Demand Charge		
On-peak ($/kW)*	$8.25	N/A
Energy Charges		
On-peak kWh (¢/kWh)*	3.6374	28.5533
Off-peak kWh (¢/kWh)*	3.6374	3.6374

*On-peak periods: Monday-Friday (except holidays)
October - April: 8:00 a.m. to 10:00 a.m. and 3:00 p.m. to 8:00 p.m.
May - September: 3:00 p.m. to 8:00 p.m.

Q. Why is the Company proposing a higher customer charge for the energy focused TOU option?

A. Without a higher customer charge, an energy focused TOU rate that still includes netting and banking does not provide a sufficient level of fixed cost recovery. Customers on such a rate can offset all of their bill except for the customer charge by

simply installing enough rooftop solar panels. The proposed $28 customer charge for the energy-focused TOU option is designed to recover all customer services and distribution costs.

Q. What evidence shows that an energy focused TOU rate without a higher customer charge provides an insufficient level of fixed cost recovery?

A. To understand how well different rate options track the recovery of costs incurred to serve a customer, the Company prepared an analysis that examines how the cost of service would change for a customer who installs different sized rooftop solar systems relative to the bill savings that customer would achieve from different rate options. Specifically, the Company examined a typical NEM customer with 1,000 kWh of monthly energy consumption against different levels of generation that would offset 10 percent, 25 percent, 50 percent, 75 percent, and 100 percent of full requirements usage. To estimate cost of service at these levels of solar adoption, the change in the customer's overall share of cost-causing customer characteristics was measured after applying the estimated solar profile at different magnitudes. See Figure 1 below for a comparison of bill savings and change in cost of service at different levels of rooftop solar penetration for both the Company's proposed demand focused TOU option and an energy focused TOU option that has the same $13 customer charge, as well as the current Schedule 1 rates.

Figure 1. Cost of Service Compared to Bill Savings on Demand Focused TOU and Energy Focused TOU

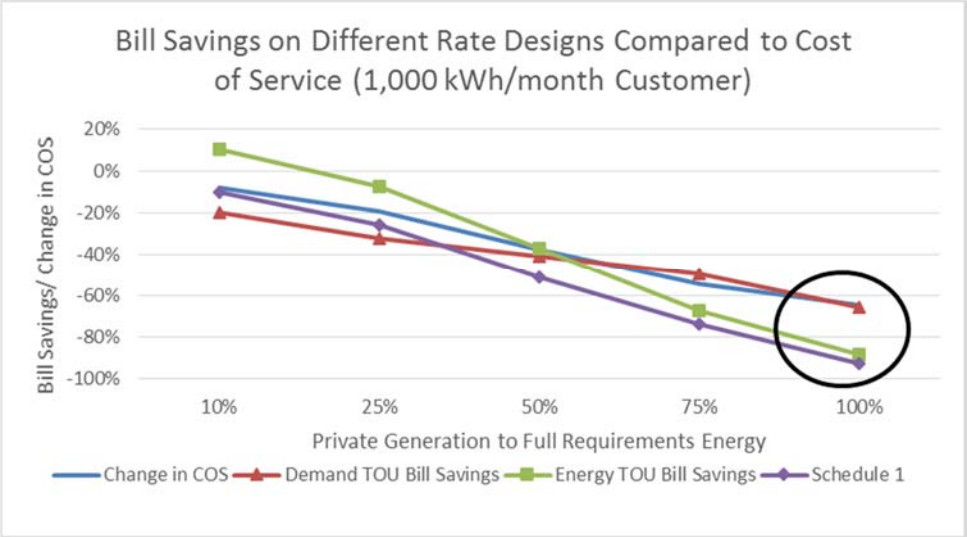
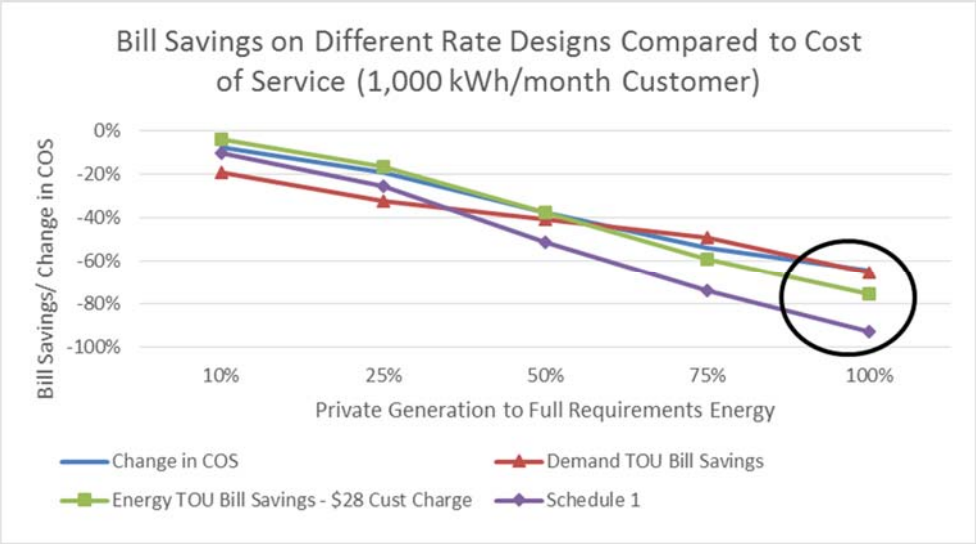


Figure 1 shows that the demand-based TOU option tracks more closely to cost of service than an energy-based option or the Schedule 1 rates, particularly when a customer installs larger private generation systems.

To achieve better fixed cost recovery, the Company recommends that a $28 customer charge be used for an energy focused TOU option. Figure 2 below shows how an energy focused TOU with a higher $28 customer charge better tracks cost of service.

Figure 2. Cost of Service Compared to Bill Savings on Demand Focused TOU and Energy Focused TOU with a $28 Customer Charge



Q. Have you prepared an exhibit that shows examples of the potential bill impacts for net metering customers on Schedule 5 compared to current Schedule 1 residential rates?

A. Yes. Exhibit RMP___(JRS-1R) shows the proposed rate and a monthly bill comparison at different usage for the proposed Schedule 5 rates in the same format as in Exhibit RMP___(JRS-7), which was provided with my direct testimony. Page 2 of Exhibit RMP___(JRS-1R) shows the potential bill impacts for the Company's proposed demand-based TOU option. Page 3 shows the potential bill impacts for the Company's proposed energy-based TOU option.

Q. How does the Company propose to implement these rate options?

A. The Company will add a provision to the application for interconnection for the customer to elect which rate option they would like to choose. If the customer does not indicate a selection at that time, the default will be to place the customer on the demand-based option. The customer will be allowed to change his or her selection at any point

during the first year. After the first year, a customer may change rate options once in a 12-month period. The Company will work with stakeholders to develop educational materials to be available to customers to assist their understanding of the new rates.

Q. Several parties argue that the Commission should not or cannot approve new rates outside of a general rate case.[45] Do you agree?

A. No. This argument runs counter to the Commission's decision on the intervenors' motions for summary judgment and motions to dismiss, in which the intervenors made the same assertion. In its February 23, 2017, Consolidated Order Denying Dispositive Motions, the Commission specifically ruled that the Legislature did not intend for the Commission "to refrain from fulfilling its obligations under the Statute until and unless a general rate case is initiated."[46] Rather, the Commission explained:

> As they are now, the issues of the cost to serve net metering customers and the appropriate pricing for their services were matters of substantial controversy. In our view, the Statute constitutes the instructions and authority the legislature elected to give the PSC for the purpose of addressing these issues. As numerous parties have pointed out, as long as these issues remain unresolved, the rooftop solar market is operating under uncertainty and consumers are without accurate price signaling in deciding whether to invest in rooftop solar. These issues are better resolved sooner rather than later. If the legislature had intended for us to act only in the context of the then pending or a later filed general rate case, it could have made its intentions plain. Instead, we believe the legislature was responding to the specific circumstances and controversy surrounding net metering and empowered the PSC to act to resolve it.[47]

Given this, intervenor arguments to the contrary are further attempts to re-litigate issues and are irrelevant to this proceeding. The Company agrees with the

[45] Whited Direct Testimony, ll. 599-603; Daniel Direct Testimony, ll. 377-85.

[46] Docket No. 14-035-114, Consolidated Order Denying Dispositive Motions, at 7 (Utah P.S.C. February 23, 2017).

[47] *Id.* at ll. 8.

Commission that the rooftop solar market is in need of certainty and stability and that the Commission should not wait for a general rate case to make a decision on the NEM rate structure.

III. Net Metering Successor Program

Q. Please summarize the proposals by the DPU and OCS for a successor program to NEM for customer generators.

A. Both the DPU and the OCS recommend that the Commission lower the cap on the NEM program and initiate the development of a new program for customer generators with a separate compensation rate for exported energy. They propose that the Commission initiate a new proceeding to develop a methodology or formula for calculating the compensation rate.[48]

The DPU recommends that the Commission immediately lower the program cap on the NEM program to reflect the approximate size the program will be on January 1, 2018, and close that program to new customers, and request that the legislature eliminate the NEM program altogether January 1, 2025. DPU proposes a transition plan for new customers with distributed generation after the NEM program closes until January 1, 2025, after which all residential distributed generation customers would be subject to whatever new rate structure(s) the Commission determines for consumption in this proceeding or a general rate case and separate compensation rates for exported power. During the transition period and until the proceeding has been completed to establish the compensation methodology and export rate, DPU recommends a compensation rate for exported power that is the mid-point between the average retail

[48] Powell Direct Testimony, ll. 454-582; Beck Direct Testimony, ll. 337-653.

rate for energy and the avoided cost rate. The DPU also recommends that the Commission adopt at least two rate structures for the post-NEM program, one with rates similar to the Company's proposed three-part rates and one TOU with on- and off-peak energy prices.

The OCS recommends that the Commission lower the NEM program cap to approximately 10 percent. The OCS also proposes a transition plan pending a future proceeding, but advocates extending the transition period for 12 years, until January 1, 2030. The compensation rate would start at 9 cents/kWh for new post-NEM distributed generation customers, and decrease every year or two, transitioning into the new rate that would be determined in the new proceeding to establish a compensation method and rate. For rate design, the OCS recommends the Commission approve TOU rates for residential and small commercial customers, to be calculated and implemented in the next general rate case. OCS also recommends that a new facilities charge be calculated in the next general rate case to apply to NEM program customers beginning January 1, 2030.

Q. Do you agree with their recommendations to lower the cap on the NEM program?

A. Yes. The Company agrees that the most appropriate path forward is to lower the NEM program cap and put in place a new program that separately considers the costs for consumption from the grid and a rate for exported power. In light of the costs of the NEM program, the Company recommends that the Commission initiate the transition to a new program paradigm and adopt the DPU's recommendation to lower the NEM program cap as of the estimated program size on January 1, 2018.

Q. Please elaborate on why the Company supports the DPU's recommendation to lower the cap to the program size expected January 1, 2018.

A. The Company estimates that, by the end of 2017, the NEM program will have interconnected or have pending applications for installations that equate to nearly 5 percent of NEM program cap, which is 231 MW. At 231 MW, assuming residential comprises 75 percent of installed capacity, the annual residential cost shift would be $12.5 million. At a 10 percent threshold, as proposed by the OCS, the annual cost shift would double to $25.0 million. The Company estimates that the program will reach the 10 percent threshold, or 462 MW, during 2020 or early 2021. Waiting to take action would not be in the public interest and would continue the incorrect market signals, over-value the power exported to the grid, and perpetuate the customer confusion that currently exists. In addition to the DPU and OCS explicitly recognizing that the current NEM program regime results in cost shifting, other parties—notably EFCA, UCE, Vivint Solar, and Vote Solar—implicitly acknowledge that equating the export credit to the retail rate is problematic and recommend that, if modification to the current program is necessary, changes should be made to the export compensation.[49] Transitioning away from the current NEM program sooner would help provide a more certain pathway for both customers and solar developers, while minimizing negative impacts on other customers.

[49] *See e.g.*, EFCA argues that adjusting the export rate may resolve the Company's concerns requiring a separate class. Gilfenbaum Direct Testimony, ll. 414-20. UCE recommends that, if a change in the NEM program is necessary, compensation for excess generation should be reduced. Whited Direct Testimony, ll. 559-63. Vivint proposes an alternative that would step down the value for exported energy. Plagemann Direct Testimony, ll. 281-3. Vote Solar proposes a declining compensation rate for net excess energy to address the Company's concerns about cost shifting. Gilliam Direct Testimony, ll. 760-3.

Q. Does the Company support establishing a new program with a separate compensation rate for exported power and a new proceeding to set the methodology for that compensation rate?

A. Yes. The Company supports the framework adopted by the Commission in Phase 1 of this proceeding that uses the cost of service study to evaluate the NEM program because NEM equates the value of customer generation to the retail rate. In other words, the Company believes that, so long as retail rates are applied to NEM, the same model used in setting retail rates is appropriate to assess the costs and benefits of NEM and formulate an appropriate rate structure. However, if the export rate is separated out from consumption, i.e., netting and banking are eliminated, the Company would support a renewed look at how to set the rate to compensate exported power from customer generators.

Q. If the Commission opened a new proceeding, what should the proceeding consider?

A. The proceeding should consider how or if the value of exported power is different than the value already determined by the Commission for calculating avoided costs for small power producers under Schedule 37. The Commission has already determined that the customer generation equipment is not a system resource as the Company has little if any control over the systems and the customer is under no obligation to maintain the system or supply the utility with electricity.[50] Moreover, customer generation exported to the grid is incidental to the purpose of the installation, which is to support or self-supply the customer's own needs. Nevertheless, exported power is essentially a must-

[50] Docket No. 14-035-114, Order, at Section 2.7 (Utah P.S.C November 10, 2015).

take obligation by the Company. Thus, the proceeding should consider the value of exported power against this backdrop and the Commission's previous determinations for the avoided cost rates for other power the Company is obligated to purchase. It should also consider the frequency of updates to the compensation rate to stay current with changes in the market or other changes in quantifiable costs and benefits.

Q. Do you agree with the DPU's proposal to establish a transitional compensation rate that is the mid-point between the average retail rate and avoided costs?

A. No. This proposed transitional rate would be approximately 6.7 cents/kWh. This is far in excess of the rates the Commission has already determined for the Company's purchases of electricity from third-party suppliers through avoided costs or through the competitive wholesale market. The Commission is required to set just and reasonable rates. Without evidence or data that there is additional value of this must-take generation, the Commission should not arbitrarily set a new rate for energy or merely split the difference. Accordingly, the Company proposes that the Commission use approved Schedule 37 rates for a fixed solar facility, adjusted for losses at the primary or secondary voltage levels, until a new proceeding is completed.

Q. How would the export compensation be treated on the customer's bill and through ratemaking?

A. The Company's current meters separately register the electricity a customer takes from the grid and the electricity the customer's generation exports to the grid. The Company would multiply the measured exported power by the compensation rate set by the Commission to calculate a monthly bill credit for the customer. The credit would be applied against the customer's monthly energy and power charges on the bill. The bill

credit would not be applied against any monthly fixed charges or minimum bills in order to ensure recovery of non-by passable costs. In order to provide an economic signal for the customer to properly size his or her facility (i.e., a system sized to serve on-site needs), any dollar credits would carry over to the next monthly bill during an annual program period, such as the end of March. At the end of the 12-month program period, any excess bill credits would expire with the remaining balance donated to the low income program, similar to the current treatment under the NEM program. Customer generation that is used to serve the customer's on-site usage (i.e., stays behind the meter) would result in a reduction in usage from the utility and would effectively receive the value of retail rates.

As noted by Dr. Powell, recovery of the exported power compensation would flow through the Energy Balancing Account, or other mechanism, as a purchased power expense on a situs Utah basis.[51]

Q. What is the Company's recommendation for rates for consumption under the new program?

A. Even under a new program that eliminates netting and banking of exported power, a new customer rate structure would be appropriate in order to capture the change in the customer profile. Rate structures such as those proposed for Schedule 5 in this rebuttal filing—a demand-based TOU and an energy-based TOU rate design—would be appropriate for the reasons already addressed above.

[51] Powell Direct Testimony, ll. 546-8.

Q. Please summarize why the Commission should move to adopting a new program for customer generation that does not rely on kWh netting and banking of exported power.

A. One of the most significant causes of cost shifting due to the NEM program is that it conflates the retail rate with a value for exported energy. The retail rate, however, recovers significantly more costs that are necessary for the provision of safe and reliable energy from the utility than just the value of purchased energy. In order to create more sustainable, economic price signals, the Company, along with the DPU and OCS, proposes establishing a new program for private generation customers that eliminates netting and banking and provides a compensation rate for exported energy from private generation systems. The compensation rate should consider the value of this must-take energy to the utility based on treatment consistent with how other power purchases are valued. Separating the compensation rate for exported power from the retail rate will also allow it to change as the market or other quantifiable values change.

Q. Does this conclude your rebuttal testimony?

A. Yes.