Calpine Solutions Exhibit 100
Witness: Kevin C. Higgins

BEFORE THE PUBLIC UTILITY COMMISSION OF THE STATE OF OREGON

UM 1953

In the Matter of	)
	)
PORTLAND GENERAL ELECTRIC COMPANY,	)
	)
	)
Investigation into Proposed Green Tariff	)
	)

Reply and Cross-Answer Testimony and Exhibit of Kevin C. Higgins

on behalf of

Calpine Energy Solutions, LLC

October 22, 2018

REPLY AND CROSS-ANSWER TESTIMONY OF KEVIN C. HIGGINS

Introduction

Q. Please state your name and business address.

A. My name is Kevin C. Higgins. My business address is 215 South State Street, Suite 200, Salt Lake City, Utah, 84111.

Q. By whom are you employed and in what capacity?

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. On whose behalf are you testifying in this phase of the proceeding?

A. My testimony is being sponsored by Calpine Energy Solutions, LLC ("Calpine Solutions"). Calpine Solutions is a retail energy supplier that serves commercial and industrial end-use customers in 18 states, the District of Columbia, and Baja California, Mexico. Calpine Solutions serves more than 15,000 retail customer sites nationwide, with an aggregate load in excess of 4,500 MW. Calpine Solutions' retail customers are located in the service territories of more than 55 utilities. In Oregon, Calpine Solutions is currently serving customers in the service territories of Portland General Electric ("PGE" or the "Company") and PacifiCorp.

Q. Please describe your professional experience and qualifications.

A. My academic background is in economics, and I have completed all coursework and field examinations toward a Ph.D. in Economics at the University of Utah. In addition, I have served on the adjunct faculties of both the University of Utah and Westminster College, where I taught undergraduate and graduate courses in economics. I joined Energy Strategies in 1995, where I assist private and public sector clients in the areas of energy-related economic and policy analysis, including evaluation of electric and gas utility rate matters.

Prior to joining Energy Strategies, I held policy positions in state and local government. From 1983 to 1990, I was economist, then assistant director, for the Utah Energy Office, where I helped develop and implement state energy policy. From 1991 to 1994, I was chief of staff to the chairman of the Salt Lake County Commission, where I was responsible for development and implementation of a broad spectrum of public policy at the local government level.

Q. Have you ever testified before this Commission?

A. Yes. I have testified in twenty-eight prior proceedings in Oregon, including six PGE general rate cases: UE 335 (2018), UE 283 (2014), UE 262 (2013), UE 215 (2010), UE 197 (2008), and UE 180 (2006). In addition, I testified in the PGE Opt-Out case, UE 236 (2012) and the PGE restructuring proceeding, UE 115 (2001).

Further, I have testified in ten PacifiCorp Transition Adjustment Mechanism ("TAM") proceedings, UE 339 (2019 TAM), UE 323 (2018 TAM), UE 307 (2017 TAM), UE 296 (2016 TAM), UE 264 (2014 TAM), UE 245 (2013 TAM), UE 227 (2012 TAM), UE 216 (2011 TAM), UE 207 (2010 TAM), and UE 199 (2009 TAM). I have also participated in six PacifiCorp general rate cases, UE 263 (2013), UE 246 (2012), UE 210 (2009), UE 179 (2006), UE 170 (2005), and UE 147 (2003), as well as the PacifiCorp Five-Year Opt-Out case, UE 267 (2013).

I also testified in the Investigation into PacifiCorp's Non-Standard Avoided Cost Pricing, UM 1802 (2017), the 2017 Inter-Jurisdictional Allocation proceeding, UM 1050 (2016) and Phase II of the Investigation into Qualifying Facility Contracting and Pricing, UM 1610 (2015).

Q. Have you testified before utility regulatory commissions in other states?

A. Yes. I have testified in approximately 200 proceedings on the subjects of utility rates and regulatory policy before state utility regulators in Alaska, Arizona, Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Michigan, Minnesota, Missouri, Montana, Nevada, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Texas, Utah, Virginia, Washington, West Virginia, and Wyoming. I have also prepared affidavits that have been filed with the Federal Energy Regulatory Commission ("FERC").

<u>Overview and Conclusions</u>

Q. What is the purpose of your Reply and Cross-Answer Testimony in this proceeding?

A. My testimony responds to: (a) the Supplemental Testimony of PGE witnesses Brett Sims and Jay Tinker regarding the recognition of a capacity benefit in PGE's proposed voluntary renewable energy tariff ("VRET" or "green tariff') in contrast to the Company's direct access program, and (b) the Response

Testimony of Staff witness Lance Kaufman regarding the relationship between the total rate under PGE's proposed VRET and the total rate under cost-of-service pricing.

Q. Please summarize your conclusions and recommendations.

A. I disagree with PGE's contention that it is appropriate to recognize a capacity credit for VRET participants while not recognizing a comparable capacity credit for direct access customers. PGE's position is fundamentally at odds with the Commission's guideline number 6 issued in Order No. 15-405, which requires that VRET terms and conditions, as well as transition costs, must mirror those for direct access.

Nevertheless, if the current five-year transition adjustment period for opt-out service is maintained, as proposed in the Partial Stipulation Regarding Direct Access Issues filed in PGE's rate case, Docket No. UE 335, then I believe it is reasonable at this time to maintain the current transition adjustment calculation for direct access service, which does not include a capacity credit offset, consistent with that stipulation. But further consideration of a capacity credit for opt-out customers is warranted in PGE's next general rate case, particularly if a capacity credit is approved for PGE's green tariff. Therefore, I recommend that any approval of a capacity credit for VRET customers be considered precedential for direct access service in a future PGE general rate case. Further, if the five-year transition adjustment period for opt-out service is *not* maintained in UE 335, but is extended to a longer period, then a capacity credit for direct access should be incorporated at this time in that docket.

In addition, in the context of this proceeding, I support Staff's recommendation that the total rate under the VRET should not be priced below the total rate under cost of service. If the green tariff capacity and energy credits produce VRET rates that are less than cost-of-service rates, and if similar credits are not available to new direct access customers, it would be a strong indication that the utility-sponsored VRET program were being offered on significantly more favorable terms than direct access service, in violation of the Commission's VRET guidelines.

Response to PGE Supplemental Testimony

Q. How do Mr. Sims and Mr. Tinker address the capacity benefit PGE proposes for its green tariff relative to its direct access program?

A. Mr. Sims and Mr. Tinker seek to differentiate between the "generation addition" capacity benefit in the proposed green tariff and the "loss of load" benefit of direct access. They aver that the incremental renewable resources contemplated in the green tariff proposal will decrease the capacity and energy need for other customers, and defer and/or lessen the need during a deficiency period. They argue that, in contrast, the Electricity Service Suppliers ("ESSs") serving direct access customers do not have resource adequacy requirements, do not file Integrated Resource Plans, and may not own any physical infrastructure. They further argue that <u>if</u> there is not sufficient capacity provided by an ESS to meet the direct access customer's metered load, PGE's Balancing Authority must do so. PGE maintains that providing a capacity credit to customers served by an ESS would potentially shift capacity costs to non-participating customers.

Mr. Sims and Mr. Tinker go on to state, however, that if the Commission were persuaded by the arguments of other parties suggesting equivalence between incremental generation resources and loss of load, then PGE would recommend that the capacity credit be removed from the green tariff product.[1]

Q. Do you agree with PGE that it is appropriate to recognize a capacity benefit for VRET participants while not recognizing a capacity benefit for direct access customers?

A. No. I disagree with PGE's entire line of argument on this subject. For the purpose of pricing the transition adjustment, it is entirely appropriate to take into account the "loss of load" benefit of direct access. In its IRP Update, PGE reported a capacity need of 225.7 MW in 2024, growing to 824.7 MW in 2028 [2] (corresponding to years six and ten for a new opt-out customer entering the five-year direct-access program in 2019). Thus, PGE has significant resource needs in years six through ten of its forthcoming opt-out period that can be partially displaced or deferred by new opt-out load. This is the case because, by Commission order, PGE does not plan for, or acquire, new capacity to meet the generation service needs of five-year opt-out customers;[3] therefore, the departure of these customers allows the Company's net capacity additions to be lower than they would otherwise be. Given that direct access customers are charged for

[1] Supplemental Testimony of Brett Sims and Jay Tinker (PGE/300), pp. 4-6.
[2] Based on PGE's 2016 IRP Update- March 2018, Figure 3 on page 18. Numerical values provided in PGE's response to Calpine Solutions Data Request No. 020(a.) in Docket No. UE 335.
[3] OPUC Order No. 07-002, at 19 (Jan. 8, 2007).

PGE's fixed generation costs (which they no longer use) during the transition period, it is fair and equitable for the transition adjustment to also reflect the loss of load benefit through a capacity credit against this charge. Similarly, if a capacity credit is recognized for green tariff customers, then it is appropriate to also recognize a capacity credit for direct access customers.

Q. Are there conceptual similarities between the capacity benefit provided by green tariff subscribers and that provided by long-term opt-out customers?

A. Yes. The departure of opt-out load allows PGE to avoid adding incremental generation resources that would otherwise be needed to serve the Company's system load. Those new incremental generation resources would otherwise increase the generation costs charged to all PGE customers. This avoided fixed generation cost is thus a benefit to PGE's system and the customers who are not participating in direct access.

Q. How do you respond to PGE's arguments regarding resource adequacy requirements?

A. In the context of determining capacity credits in this docket or for direct access, PGE's arguments concerning resource adequacy are entirely misplaced. The basis for determining and recognizing capacity credits exists whether the benefit is a "generation addition" benefit or a "loss of load" benefit, as the latter results in a reduction in PGE's capacity additions. PGE's arguments should not be used to unfairly discriminate against direct access service in favor of PGE's proposed green tariff.

That said, as a separate matter, Calpine Solutions does not object to a generic investigation into resource adequacy requirements for ESSs to the extent the Commission believes such an investigation would be useful. Calpine Solutions has been serving retail customers in Oregon for fourteen years, and strictly adheres to the Commission's rules and the state's statutory requirements for being an ESS. If it is necessary to revisit the topic of resource adequacy, Calpine Solutions does not object – but such an investigation should also take into account the participation restrictions on long-term opt-out service. But in no way should claims about "resource adequacy" be used to unfairly discriminate against direct access service in contravention of the Commission's nine guidelines for filing draft VRETs issued in Order No. 15-405 in Docket No. UM 1690, in particular guideline number six, which states:

> VRET terms and conditions (including the timing and frequency of VRET offerings), as well as transition costs, must mirror those for direct access. PGE and PacifiCorp may propose VRET terms and conditions that differ from current direct access provisions but must proposed [sic] changes to their respective direct access programs to match those changes.[4]

Q. If a capacity credit is approved for the green tariff, do you believe it is necessary at this time to provide a capacity credit to direct access customers?

A. It depends. If transition adjustments for long-term opt-out service continue to be limited to a period of five years, as provided in the Partial Stipulation Regarding Direct Access Issues in PGE's rate case, Docket No. UE 335, then I believe it is acceptable at this time to maintain the current transition adjustment calculation, which does not include a capacity credit offset. Put

[4] Order 15-405, pp. 1-2.

another way, Calpine Solutions is not seeking to modify the transition adjustment terms in the Partial Stipulation Regarding Direct Access Issues submitted in UE 335 if a capacity credit is recognized in the VRET program in this proceeding. If, however, the direct access transition adjustment calculation is extended beyond five years as a result of the Commission's order in UE 335, then I recommend that the avoided fixed generation costs be credited against the fixed generation charge levied on opt-out customers after year five following the customer's departure for direct access service, as discussed and calculated in my opening testimony in that docket.[5]

Moreover, if a capacity credit is approved for VRET customers in this proceeding, then I believe it will set a strong precedent for a capacity credit for direct access customers in the long-term opt-out program in future proceedings, in light of the comparability requirements between the VRET program and direct access previously determined by the Commission. This precedent should be expressly recognized if a VRET capacity credit is approved in this proceeding. I believe that such a precedent should be taken into account in the future determination of the long-term opt-out program transition adjustment after the term of the Partial Stipulation Regarding Direct Access Issues in UE 335 (if it is approved) has run its course.

[5] As I explained in my opening testimony in Docket No. UE 335, rather than basing the capacity credit on the Schedule 201 QF Avoided Cost capacity value, I recommend that the opt-out capacity credit be based on the fixed generation costs from PGE's Integrated Resource Plan supply-side resource analysis. PGE anticipates significant capacity deficits over next five to ten-year period, and new entrants to the opt-out program could allow capacity additions to be avoided or deferred.

<u>Response to Staff Response Testimony</u>

Q. What aspect of Staff's response testimony are you addressing?

A. I address Staff's recommendation that PGE include language in its tariff that prevents the total rate under the VRET from being below the total rate under cost-of-service pricing.[6]

Q. Do you support Staff's recommendation that the total rate under the VRET should not be priced below the total rate under cost of service?

A. For the purposes of this proceeding, I do. From the outset of this case, PGE has consistently characterized its proposed green tariff as being distinguishable from direct access service in that the green tariff customer would be expected to pay full cost-of-service rates *plus* the incremental costs of participating in the green tariff program.[7] The green tariff is being promoted and distinguished by the Company as a "cost-plus" program[8] for customers with a preference for renewable energy. For example, in response to discovery asking if VRET customers would receive an incremental credit instead of an incremental charge under certain pricing assumptions, PGE responded:

> As designed, PGE cannot see a scenario in which subscribers would receive an incremental credit. Energy forecasts are based on the lowest marginal unit of energy cost, and in a world in which the proposed PPA is lower than the wholesale marginal unit, the PPA would become the marginal unit, meaning that forecast prices would lower to meet the PPA price.[9]

PGE goes on to qualify its answer, however:

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[6] Response Testimony of Lance Kaufman (Staff/100), pp. 6, 16.
[7] See, for example, Supplemental Testimony of Brett Sims and Jay Tinker (PGE/300), p. 4, lines 16-20; Direct Testimony of Brett Sims and Jay Tinker (PGE/200), pp. 8-11, 13-14.
[8] I am using "cost-plus" as shorthand for "rates in excess of standard cost-of-service rates."
[9] PGE Response to Calpine Data Request 001(a), attached as Calpine Solutions Exhibit 101.

> Regarding the hypothetical scenario presented by Calpine: PGE does not anticipate crafting a policy that would actively prevent a subscriber from receiving an incremental credit, should such a scenario arise.[10]

Yet, when asked point blank if an incremental credit for subscribers would result in a discounted rate, PGE replied:

> No. Subscribers will continue to pay all cost of service and supplemental portions of their current rate schedule, and the Green Tariff will not serve as a "discounted rate." Any proposed Green Tariff pricing will be presented to Staff of the OPUC to ensure – in part – that there is no "rate discount" or cost shift to non-participating customers.[11]

The restriction proposed by Staff would ensure that the green tariff does not turn into the type of discounted rate discussed above, consistent with PGE's stated intent in this discovery response. Absent the restriction proposed by Staff, there is no assurance that the capacity and energy credits applied to the VRET program will, in fact, produce "cost-plus" results; depending on the size of the credits, they might produce "cost-minus" results, in which case green tariff customers would wind up paying *less* than cost-of-service rates.

Q. What is wrong with that?

A. PGE's discovery response cites potential cost shifts to non-participating customers as a concern. But even if that concern is overcome, there is a more fundamental problem of comparability with direct access. If the green tariff capacity and energy credits produce VRET rates that are less than cost-of-service rates, and if similar credits are not available to new direct access customers, it

[10] *Id*.
[11] PGE Response to Calpine Data Request 001(b),attached as Calpine Solutions Exhibit 101.

would be a strong indication that the utility-sponsored VRET program was being offered on significantly more favorable terms than direct access service, in violation of the Commission's VRET guidelines, discussed above.

Q. Would you object if VRET pricing were below cost-of-service if the same capacity and energy credits were offered to direct access customers?

A. Depending on the comparability of the other terms, probably not. However, it is clear from PGE's testimony that the Company is not supportive of such an outcome, as PGE is proposing that <u>no</u> capacity credit be offered to VRET customers if it would mean that a comparable capacity credit would be offered to direct access customers. Consequently, in the context of this proceeding, I support Staff's recommendation that the total rate under the VRET should not be priced below the total rate under cost of service, unless comparable credits are made available to new direct access load.

Q. Does this conclude your Cross-Answer Testimony?

A. Yes, it does.

Docket No. UM 1953

EXHIBIT

Calpine Solutions 101

PGE Response to Calpine Solutions Data

Request No. 001

July 6, 2018

TO: Gregory M. Adams
Richardson Adams, PLLC

FROM: Stefan Brown
Manager, Regulatory Affairs

PORTLAND GENERAL ELECTRIC
UM 1953
PGE Response to Calpine Data Request No. 001
Dated June 022, 2018

Request:

Reference PGE Exhibit 200, pp. 10-11. In the example illustrating the proposed pricing and crediting mechanism, the sum of the assumed PPA price and administrative costs (collectively, $48/MWh) exceeds the sum of the assumed energy credit through AUT and capacity credit through AUT (collectively, $38/MWh), resulting in a $10/MWh incremental cost to subscribers.

a. **What would be the incremental cost to subscribers if the sum of the PPA price and administrative costs turned out to be less than the sum of the energy credit through AUT and capacity credit through AUT (in this example, say, $36/MWh)? Would it result in an incremental credit to subscribers?**
b. **If it turned out to be an incremental credit to subscribers, would it result in a discounted rate? If not, please explain why not.**

Response:

a. The proposed crediting mechanism suggested by PGE will levelize credits over the life of the Green Tariff resource, and the credits will reflect the assumptions in place at the time of contract execution. Further, the PPA cost, administrative cost, energy credit, and capacity credit will be known to the Staff of the Public Utility Commission of Oregon (OPUC), as PGE will file any proposed pricing as a compliance filing.

   As designed, PGE cannot see a scenario in which subscribers would receive an incremental credit. Energy forecasts are based on the lowest marginal unit of energy cost, and in a world in which the proposed PPA is lower than the wholesale marginal unit, the PPA would become the marginal unit, meaning that forecast prices would lower to meet the PPA price.

Regarding the hypothetical scenario presented by Calpine: PGE does not anticipate crafting a policy that would actively prevent a subscriber from receiving an incremental credit, should such a scenario arise.

b. No. Subscribers will continue to pay all cost of service and supplemental portions of their current rate schedule, and the Green Tariff will not serve as a "discounted rate." Any proposed Green Tariff pricing will be presented to Staff of the OPUC to ensure – in part – that there is no "rate discount" or cost shift to non-participating customers.