

**Docket No. UM 1953  
Witness: Michael O'Brien**

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 1953**

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

**RENEWABLE NORTHWEST'S EXHIBIT 300**

**Phase II Opening Testimony of Michael O'Brien**

**July 26, 2019**

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**INTRODUCTION**

**Q. Please state your name, occupation and business address.**

A. Michael O'Brien, Regulatory Director at Renewable Northwest. My business address is 421 SW 6<sup>th</sup> Avenue, Suite 975, Portland, OR 97204–1625.

**Q. On whose behalf are you testifying?**

A. This testimony is on behalf of Renewable Northwest.

**Q. What is the purpose of your Phase II opening testimony?**

A. I appreciate the opportunity to testify to the Oregon Public Utility Commission (“the Commission”) regarding Phase II of Commission Docket No. UM 1953, an investigation into the green tariff proposed by Portland General Electric Company (“PGE”). The purpose of this testimony is to respond to the issues that have been raised in Phase II by Commission Order No. 19-075,<sup>1</sup> the April 22, 2019 comments of Renewable Northwest,<sup>2</sup> the June 14, 2019 testimony of Brett Sims and Jay Tinker on behalf of PGE (“Sims-Tinker”),<sup>3</sup> and Commission Order No. 19-213.<sup>4</sup> Overall, I support the expansion of PGE’s green tariff program and offer suggestions to ensure that green tariff offerings in Oregon spur access to new, additional renewable-energy resources and contribute to the decarbonization of Oregon’s energy sector.<sup>5</sup>

**Q. Would you please summarize your testimony?**

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<sup>1</sup> Oregon Public Utility Commission, Docket No. UM 1953, Order No. 19-075 (Mar. 5, 2019).

<sup>2</sup> Oregon Public Utility Commission, Docket No. UM 1953, Comments of Renewable Northwest (Apr. 22, 2019).

<sup>3</sup> Oregon Public Utility Commission, Docket No. UM 1953, PGE / 500 (Jun. 14, 2019) (hereinafter “Sims-Tinker”).

<sup>4</sup> Oregon Public Utility Commission, Docket No. UM 1953, Order No. 19-213 (Jun. 20, 2019).

<sup>5</sup> PGE refers to its green tariff program as the Green Energy Affinity Rider, or “GEAR,” so quotes from PGE’s testimony may reflect that terminology.

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- A. Yes. My testimony is framed in response to Sims-Tinker, which in turn is organized under the headings of Green Tariff Program Design, Applicability of the Nine Conditions, Resource Procurement, and Interaction with Integrated Resource Planning. Beneath each heading, I offer responses to each of PGE's main points or proposals. Additionally, I include a fifth heading of Energy Storage, beneath which I suggest that renewable energy generation combined with energy storage could be an appropriate green tariff resource. Throughout my testimony, I use terminology that assumes familiarity with Phase I of this docket, referring back to prior testimony as necessary.

## **1. GREEN TARIFF PROGRAM DESIGN**

**Q. What are your overall impressions of PGE's Green Tariff Program Design?**

- A. PGE breaks its testimony regarding Green Tariff Program Design down into four categories: net bill savings, customer supply option eligibility, utility ownership, and risk adjustment. Regarding the first category, I support PGE's proposal to consider allowing net bill savings within the Customer Supply Option "on an individual basis with Commission approval."<sup>6</sup> Regarding the customer supply option eligibility, utility ownership, and risk adjustment categories, I support some elements of PGE's proposal but also suggest certain changes.

*a. Net bill savings*

- Q. You said you support PGE's proposal to consider allowing net bill savings within the Customer Supply Option. Would you please explain further?**

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<sup>6</sup> Sims-Tinker / 9.

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A. Yes. In my cross-answering testimony in Phase I of this docket, I explained my understanding that a “floating credit concept would allow subscribers to take on the risks associated with new renewable energy projects and, in exchange, to potentially receive credits in excess of their costs if a project yields net benefits” and concluded that “[t]he concept is a reasonable one, and it could allow PGE to procure beneficial renewable energy projects that it would not otherwise procure due to conservative project risk assessments.”<sup>7</sup> I stand by my earlier conclusion: allowing subscribers the opportunity to achieve net bill savings could be reasonable depending on the specifics of such a proposal.

**Q. Specifically, how does your conclusion that allowing subscribers the opportunity to achieve net bill savings could be reasonable relate to PGE’s proposal?**

A. PGE proposes to “consider” proposals that allow for net bill savings “on an individual basis with Commission approval.”<sup>8</sup> PGE’s approach of allowing customers to propose Customer Supply Option projects that allow for net bill savings and assessing those projects on a case-by-case basis subject to Commission approval makes sense: the approach is open to the possibility that such an arrangement could work but does not prejudge that possibility. The safeguard of Commission approval is likewise reasonable in order to ensure that any risks associated with such a proposal are borne by the would-be subscriber and not by non-subscribing customers.

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<sup>7</sup> Oregon Public Utility Commission, Docket No. UM 1953, RNW / 200, O’Brien / 3.

<sup>8</sup> Sims-Tinker / 9.

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*b. Customer supply option eligibility*

**Q. What is your understanding of PGE’s proposal regarding customer eligibility for the Customer Supply Option?**

A. PGE’s proposal is straightforward: “[t]he Customer Supply Option will be available to customers with loads greater than 10 MWa.”<sup>9</sup>

**Q. Do you think this eligibility threshold is reasonable?**

A. The threshold appears to be reasonable today, depending on the take-up of the customer supply option, but it might not be as reasonable in the future. PGE’s reason for setting the threshold at 10MWa is that “[l]oad size is important for economies of scale in administering the program.”<sup>10</sup> PGE points to the potential administrative burden of negotiating customer supply option projects with a broader set of potential green tariff subscribers.<sup>11</sup> Accordingly, PGE concludes that “[t]he right balance, for now, is struck with limiting the CSO option to PGE’s largest customers.”<sup>12</sup> On the record as it stands now, PGE’s reasoning appears to be valid. As PGE gains experience administering the customer supply option, however, it is possible that the administrative burdens associated with an expanded Customer Supply Option may be reduced or eliminated. PGE even implicitly acknowledges this when it says its proposal strikes “[t]he right balance, *for now*.”<sup>13</sup> Given PGE’s goals of driving additionality and providing a range of customers with the option to access zero-carbon electricity generation, it makes sense to revisit the eligibility threshold in future tranches.

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<sup>9</sup> Sims-Tinker / 10.

<sup>10</sup> Sims-Tinker / 10.

<sup>11</sup> Sims-Tinker / 10.

<sup>12</sup> Sims-Tinker / 10.

<sup>13</sup> Sims-Tinker / 10 (emphasis added).

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*c. Utility ownership*

**Q. What is your understanding of PGE’s position on utility ownership of green tariff resources?**

A. As it did in the first tranche of the green tariff program, PGE states again that “[t]o fulfill the second tranche of the program, PGE has no plans to include a utility-owned option.”<sup>14</sup> Nevertheless, PGE also “affirm[s] that ownership is an option” in the green tariff program writ large. Should PGE pursue utility ownership at some point, it commits to uphold “the fundamental requirement of no cost-shifting” and to allow for “appropriate consider[ation]” of “the specific attributes of an ownership structure.”<sup>15</sup>

**Q. Do you have any response to PGE’s position on utility ownership of green tariff resources?**

A. Yes. I agree with PGE that “[k]eeping options open for customers and flexibility to offer the best green tariff based on cost and risk is important.”<sup>16</sup> A robust electricity market requires that projects to be considered for procurement must be given equal consideration regardless of ownership structure. I would, however, offer one caveat. While allowing for the possibility of utility ownership is important to keep open an option that may, at times, present the most competitive projects, at the same time protecting against even the perception of potential utility bias in favor of self-owned projects is equally important. For that reason, in any procurement in which utility ownership is a possibility, the Commission’s competitive bidding rules (OAR 860-089-0010 *et seq.*) should apply to protect potential subscribers and ensure the program’s success.

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<sup>14</sup> Sims-Tinker / 11.

<sup>15</sup> Sims-Tinker / 11.

<sup>16</sup> Sims-Tinker / 11.

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*d. Risk adjustment*

**Q. Would you please briefly outline your understanding of PGE’s proposed additions to its risk adjustment to be charged to green tariff subscribers?**

A. Yes. PGE’s current, Commission-approved risk premium accounts only for the risk of under-subscription—the possibility, for example, that it may procure a 20-year power purchase agreement (“PPA”) but bring subscribers in for only a 15-year term. PGE proposes to add three new categories of risk to its risk adjustment. First, the subscriber load uncertainty category accounts for the possibility that a subscribing customer’s load drops, leaving PGE with both PPA costs and energy, capacity, and REC benefits that cannot be passed along to that customer. Second, the resource variability category accounts for the possibility that PGE must procure replacement RECs to meet subscriber demand for green attributes due to underproduction of a green tariff resource. And finally, the PPA-related risk category accounts for additional risks that PGE typically attempts to account for in contracting, such as possible scheduling mismatches.

**Q. What is your response to PGE’s proposed risk adjustment categories?**

A. In the first tranche of PGE’s proposed green tariff, I ended up supporting PGE’s proposed risk adjustment as reasonable once details about the proposal emerged over the course of PGE’s testimony. As to PGE’s proposal in Phase II, I have a mild concern that may be addressed by additional details. Specifically, it appears that PGE’s proposed “customer load variability risk” does not account for certain factors that mitigate against the risk as PGE explains it. Therefore whether the risk is reasonable or not will likely depend on how it is calculated.

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PGE states: “When a customer enrolls with 100% of their load, and their load drops by one MWa, they do not pay for the one MWa they do not consume, while PGE still makes a payment to the resource owner. PGE wears the risk of elected load variability and those uncollected subscription premiums.” What this explanation fails to capture is that PGE’s payment to the resource owner is designed to reflect the energy and capacity benefits of the green tariff project—benefits that flow to PGE and its customer base if the subscribing customer’s load drops. Because PGE should be receiving benefits equal to the credits it pays to a subscriber, the proposed “customer load variability risk” is questionable and may in some cases be negative (for example, if the energy and capacity benefits of the project that flow to PGE and its customers exceed the payments PGE makes to the resource owner). Accordingly, any premium PGE incorporates to capture customer load variability risk must be tailored to reflect a risk that, though real, may have significant mitigating factors.

## **2. APPLICABILITY OF NINE CONDITIONS**

**Q. Would you please discuss PGE’s proposed approach to the nine conditions that currently apply to voluntary renewable energy tariffs in Oregon?**

A. The Commission established the nine conditions for voluntary renewable energy tariffs (“VRETs”) or green tariff products in Oregon in Order No. 15-405. In its testimony, PGE supports replacing the nine conditions with seven more flexible guidelines.<sup>17</sup> The most notable contraction of the nine conditions under PGE’s proposal is the elimination of

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<sup>17</sup> Sims-Tinker / 25-26.



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items designed to govern the relationship between green tariffs and Oregon's long-term Direct Access program.<sup>18</sup>

**Q. What are your overall impressions of PGE's proposal?**

A. While there are some promising elements of PGE's proposal, I remain concerned that some Commission oversight is necessary to ensure that both green tariffs and Direct Access remain competitive programs. Against that backdrop, I explain in my testimony below that removal of the conditions addressing Direct Access may be acceptable provided that any utility offering a green tariff, PGE in this case, offer regular updates to the Commission regarding the relative success of the green tariff option and the Direct Access option. Additionally, I support PGE's proposal to replace conditions with guidelines subject to Commission oversight, as the flexibility afforded by guidelines will likely help utilities to develop thoughtful and innovative green tariff products in this time of rapid change in the electricity sector. Finally, I review PGE's proposed guidelines, offering my thoughts on each.

*a. Connection to Direct Access*

**Q. Do you agree with PGE that Conditions 5 and 6, which relate to Direct Access, are "irrelevant" in the case of Condition 5 and "counter to the public interest" in the case of Condition 6?**

A. Not exactly. By way of review, Condition 5 requires that green tariff "product design should be sufficiently differentiated from existing direct access programs," while Condition 6 requires green tariff "terms and conditions" to "mirror those for direct

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<sup>18</sup> Sims-Tinker / 27-28.

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access.”<sup>19</sup> While PGE correctly observes that green tariff subscribers remain cost-of-service customers, whereas “Direct Access is an opt out of cost-of-service supply option,” both green tariff products and the Direct Access program create pathways for certain customers to have their load met with renewable energy.<sup>20</sup> By their nature, the programs are differentiated in how they meet customer appetites, but the customer appetites that they are feeding could overlap. Therefore, conditions 5 and 6 are not necessarily entirely irrelevant.

As to mirroring between the terms associated with the two options, perhaps a better objective is parity. It may be that parity requires some terms to be mirrored between the two options; however, it may also be that because the programs are fundamentally different, other terms need not be mirrored.

**Q. Do you have a recommendation for how the Commission could consider the relationship between green tariffs and Direct Access?**

A. Yes. Given that green tariff products and Direct Access are fundamentally different, but both are important avenues for supplying customers with renewable energy, I recommend a more flexible approach to reviewing whether Direct Access remains viable and competitive in the face of a strong green tariff offering by a utility. Specifically, I recommend that a utility offering a green tariff product be required to submit an annual report detailing both green tariff and Direct Access activity, in order to demonstrate that both programs are truly available to interested customers and that the green tariff product is not disrupting the competitive marketplace.

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<sup>19</sup> Oregon Public Utility Commission, Docket No. UM 1690, Order NO. 15-405, at 1-2 (Dec. 15, 2015).

<sup>20</sup> Sims-Tinker / 21.

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**Q. Do you agree with PGE’s assessment of when “stakeholders [should] be concerned that a green tariff is disrupting the competitive marketplace”?**

A. To some extent. PGE says that if it “were using its regulated monopoly status to undercut the competitive market, having its cost-of-service customers subsidize a green tariff offering, then that should raise concerns.”<sup>21</sup> That much I agree with. But PGE’s followup, quoting Staff as writing that “Cost-shifting is the only way a VRET could be a ‘better deal’ than direct access,” strikes me as simplistic.<sup>22</sup> Program terms and conditions could tilt the scale in favor of a green tariff offering without shifting costs onto non-subscribing customers. If a green tariff product is offered with a rolling window for subscription, for example, while Direct Access has a limited annual subscription window, then that green tariff offering might prove a more attractive option to customers who would rather not wait 11 months to access low-cost renewable energy. Regular reporting by a utility on the two options will help the Commission and stakeholders determine whether both options remain viable for interested customers.

***b. Replacing conditions with guidelines***

**Q. You testified above that you support PGE’s proposal to replace conditions with guidelines subject to Commission oversight; would you please explain your support?**

A. At a high level, PGE’s proposal to replace firm conditions with more flexible guidelines makes sense, as long as future tranches or phases of the green tariff program are still subject to regular Commission oversight. As we have learned from the slow start of green tariffs in Oregon following the conclusion of Docket No. UM 1690, rigid conditions can

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<sup>21</sup> Sims-Tinker / 24.

<sup>22</sup> Sims-Tinker / 24 (quoting Docket No. UM 1690, Staff Recommendation to the Commission, p. 5 (Nov. 20, 2015)).

hamper innovation; in the case of green tariffs, that innovation could help transform our electricity sector, drive down greenhouse gas emissions, and meet customer demands.

Guidelines may be better suited than conditions to allow utilities to develop green tariff programs that are tailored to current conditions in the fast-changing electricity sector.

*c. Proposed guidelines*

**Q. What is your position on PGE's seven proposed guidelines for green tariff offerings?**

A. In general I support the seven proposed guidelines; to the extent I have more detailed or nuanced responses, I will present them below.

**Q. Do you support PGE's proposed Guideline 1 regarding RPS definitions?**

A. Yes.

**Q. Do you support PGE's proposed Guideline 2 regarding Renewable Energy Certificates ("RECs")?**

A. Yes. Moreover, I appreciate PGE's consideration of Renewable Northwest's testimony and briefing in Phase I recommending that all RECs associated with green tariff projects be retired on behalf of subscribers, and I strongly support PGE's proposal to follow this recommendation.<sup>23</sup> The requirement that RECs be retired by or on behalf of participants is the best way to ensure that the green tariff program drives additionality and reduces greenhouse gas emissions.

**Q. Do you support PGE's proposed Guideline 3 regarding eligible program resources?**

A. Yes.

**Q. Do you support PGE's proposed Guideline 4 regarding the program cap?**

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<sup>23</sup> Oregon Public Utility Commission, Docket No. UM 1953, RNW / 100, O'Brien / 4-5; Opening Brief of Renewable Northwest at 9-11 (Dec. 11, 2018).

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A. Yes, for now. I am very pleased that the first tranche of PGE's green tariff program has met with enough early success to support raising the program cap. Given this early success in bringing on subscribers and the success of green tariff programs elsewhere, I support raising the program cap to 500 MW at this time and look forward to supporting additional increases to the program cap in the future.

**Q. Do you support PGE's proposed Guideline 5 regarding utility ownership?**

A. Yes, conditionally. As I stated above, if the conditions or guidelines affirmatively allow for utility ownership of a green tariff resource, then they should also require adherence to the Commission's competitive bidding rules to ensure competitive resource procurement in any tranche where utility ownership is a possibility. I appreciate PGE's reiterating the statutory requirement of no cost-shifting where the utility owns a green tariff resource.

**Q. Do you support PGE's proposed Guideline 6 regarding costs and risks?**

A. Yes, conditionally. Again, I view this guideline as primarily a reiteration of the statutory standard but appreciate PGE's specificity regarding independent review to ensure no cost-shifting. That said, I would recommend the independent review be lodged at the Commission rather than Commission Staff.

**Q. Do you support PGE's proposed Guideline 7 regarding public availability?**

A. Yes.

### **3. RESOURCE PROCUREMENT**

**Q. Would you please discuss PGE's proposed approach to resource procurement?**

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- A. PGE breaks its discussion of resource procurement down into three categories: competitive bidding rules, defining incremental resources, and determining transmission requirements. With respect to PGE's testimony on each of these categories, I have some generally minor concerns that I explain below.

*a. Competitive bidding rules*

**Q. What is your understanding of PGE's position regarding the application of the Commission's competitive bidding rules to green tariff procurements?**

- A. Since the launch of Phase II of this docket, PGE has made it clear that it views the competitive bidding rules at OAR 860-089-0010 *et seq.* as inapplicable to green tariff procurements. Most recently, in its June 14, 2019, testimony, it again "requests a waiver for the Competitive Bidding Rules required for the IRP Request for Proposal (RFP) process."<sup>24</sup> PGE says that procurement without a full competitive bidding process would be quicker, more flexible, allow for strong developer participation, and keep the program competitive due primarily to the check of customer participation. That is, if the procurement is not competitive, PGE says, customers will not subscribe to the resource.

**Q. Do you have any response to PGE's position?**

- A. I do. As I have testified above, adherence to the competitive bidding rules remains important where utility ownership of a green tariff resource is a possible procurement outcome; however, a streamlined competitive bidding process may be appropriate for other green tariff procurements given the unique contours of this program. In any procurement process in which utility ownership is a possibility, the competitive bidding

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<sup>24</sup> Sims-Tinker / 30. "IRP" is an abbreviation for Integrated Resource Planning, discussed further below.

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rules protect against even the perception of potential utility bias in favor of self-owned projects to ensure customer and developer confidence in the green tariff program. My recommendation that the Commission require competitive bidding where utility ownership is a possible outcome, but allow a more streamlined process where it is not, strikes an appropriate balance.

As to PGE's proposed "competitive procurement process that solicits bids from a broad range of proven renewable resource project developers and operators," additional detail would help stakeholders determine whether this is the sort of more streamlined process that is most appropriate in the green tariff context.<sup>25</sup>

***b. Defining incremental resources***

**Q. Do you have any response to PGE's position "that green tariff resources [must] be new or expanded facilities"?**<sup>26</sup>

A. Yes. Requiring facilities to be new or expanded is appropriate and indeed important to ensure additionality, provided PGE is not suggesting that the resources must be built specifically for the green tariff program. Project development is a complex, lengthy endeavor, and determining at what stage in the development process a project may be deemed as "built for" the green tariff could prove equally complex. It is likely a better approach to use a project's online date as a proxy for whether that resource is new. To the extent PGE's testimony suggests projects *must* be "built for the GEAR" (as opposed to providing that projects *may* be built for the GEAR), I disagree with that suggestion.<sup>27</sup>

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<sup>25</sup> Sims-Tinker / 30.

<sup>26</sup> Sims-Tinker / 31.

<sup>27</sup> Sims-Tinker / 31.

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*c. Transmission requirements*

**Q. What is your understanding of PGE’s position regarding transmission requirements for green tariff resources?**

A. As I read PGE’s testimony, there is a distinction between the transmission requirements PGE is applying to the procurements for its first tranche and the transmission requirements PGE will apply to future tranches. While PGE reiterates that “[i]n the first tranche of PGE’s green tariff, firm transmission is a requirement for PPAs in both green tariff supply options,” it also acknowledges that “[t]he growth of renewable development ... requires that PGE reassess how it considers transmission within resource planning and procurement processes.”<sup>28</sup> To that end, PGE commits to “evolve its transmission requirements for the green tariff resource” in line with future procurements arising out of the IRP process.<sup>29</sup>

**Q. Do you have any response to PGE’s position regarding transmission?**

A. Yes. As long-term firm transmission is increasingly difficult to obtain on Bonneville Power Administration’s system, I appreciate PGE’s openness to relaxing its transmission requirement in future tranches of the green tariff program. As my Renewable Northwest colleagues and I pointed out in our April 22, 2019 comments, PGE’s long-term firm transmission requirement likely imposes significant restrictions on the pool of resources that are available to serve its green tariff.<sup>30</sup> Our comments also pointed out that relaxing transmission requirements in the short-term would help to unlock the full suite of savings

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<sup>28</sup> Sims-Tinker / 32, 33.

<sup>29</sup> Sims-Tinker / 34.

<sup>30</sup> Oregon Public Utility Commission, Docket No. UM 1953, Comments of Renewable Northwest at 1-4 (Apr. 22, 2019).



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available from the sunseting federal Investment Tax Credit and Production Tax Credit.<sup>31</sup> Against this backdrop, while I support PGE's pledge to relax its transmission requirements, I would encourage PGE not to wait for "the long-term firm transmission requirement [to] evolve[] in a future RFP docket" before relaxing the transmission requirement for green tariff resources as such a course would be unlikely to affect this tranche.<sup>32</sup>

#### 4. INTERACTION WITH IRP

**Q. Would you please discuss PGE's proposed approach to the interaction between its green tariff program and its IRP process?**

A. Broadly speaking, PGE discusses two interactions between the green tariff program and IRP process. First, PGE explains how it addresses the load and resources associated with the green tariff by applying sensitivities to its IRP modeling, in order to ensure that it is adequately capturing what demand and resource needs would look like at different levels of green tariff subscription. Second, PGE explains how certain elements of its IRP modeling inform the credits that flow to subscribing customers to account for the energy and capacity values of green tariff resources. I offer a response to PGE regarding each of these interactions below.

##### *a. Sensitivity modeling*

**Q. PGE explains that "[t]he 2019 IRP includes sensitivity analyses for the green tariff" and that it "plans to continue to evaluate sensitivities around future voluntary**

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<sup>31</sup> *Id.* at 2-3.

<sup>32</sup> Sims-Tinker / 34.

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**program participation within the IRP and to take these findings into account when designing future IRP Action Plans.”<sup>33</sup> Do you have any response to PGE’s explanation of this interaction between the green tariff and the IRP process?**

- A. Yes. PGE’s explanation of its approach to accounting for green tariff load and resources in its IRP process appears to be appropriate.

*b. Credit calculation*

**Q. PGE explains that the green tariff program “will align with IRP planning by 1) crediting subscribers for undifferentiated energy using the IRP methodology only if and when PGE is energy-short, and 2) crediting subscribers for capacity using the IRP methodology only if and when PGE is capacity-short.”<sup>34</sup> Do you have any response to PGE’s proposed credit methodology?**

- A. Yes. PGE’s proposed credit calculation continues to undervalue the capacity contribution of green tariff projects by attributing a capacity value of zero to resources procured during sufficiency years. I have explained a more accurate and granular approach to capacity valuation in earlier testimony.<sup>35</sup> At this point in the green tariff process, I encourage the Commission to adopt only a placeholder decision on capacity credits pending conclusion of the recently opened General Capacity Investigation in Docket No. UM 2011.

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<sup>33</sup> Sims-Tinker 35-36.

<sup>34</sup> Sims-Tinker / 35.

<sup>35</sup> Oregon Public Utility Commission, Docket No. UM 1953, RNW / 100, O’Brien / 3-4 (providing direct testimony and citing additional resources regarding capacity valuation).

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## 5. ENERGY STORAGE

**Q. Are there any additional issues you would like to discuss?**

A. Yes. It is my understanding that, for the first tranche of the green tariff program, PGE did not allow resources that included an energy storage component. I disagree with the decision to preclude resources that include storage from consideration as green tariff resources and encourage the Commission to allow projects with a storage component in future green tariff procurements and hope PGE will be open to and comfortable with such an approach.

**Q. Would you please further explain your position regarding storage resources?**

A. In its RFQ for the first tranche of the green tariff program, PGE informed developers that it would not consider projects that included an energy storage component.<sup>36</sup> As the grid evolves and integrates ever more cost-effective, carbon-free variable resources, storage becomes increasingly important for shaping power from generation in order to meet load, as well as bringing other benefits at the distribution level. Indeed, the result of PGE's last competitive procurement was a project that included a storage component.<sup>37</sup> Because projects that integrate renewable generation with storage are not only operationally vital but also increasingly cost-effective, I would encourage the Commission to require that PGE remain open to projects with a storage component.

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<sup>36</sup> Portland General Electric, *Request for Quotation, 2019 Green Energy Affinity Rider (GEAR)* (Mar. 26, 2019) ("Energy storage is not a desired component and bids that include it will not be evaluated.").

<sup>37</sup> Portland General Electric, "Portland General Electric and NextEra Energy Resources to develop nation's first major energy facility co-locating wind, solar and battery storage" (Feb. 12, 2019), available at <https://www.portlandgeneral.com/our-company/news-room/news-releases/2019/02-13-2019-portland-general-electric-and-nextera-energy-resources-to-develop-en>.

**CONCLUSION**

**Q. Is there anything else you wish to say before concluding your testimony?**

A. Yes. As I did at the end of Phase I of this docket, I again commend PGE for taking this step to advance its green tariff program with the potential to bring hundreds of megawatts of new renewables onto Oregon's grid and continue moving toward a clean system.

**Q. Does this conclude your testimony?**

A. Yes.