

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

LC 73

In the Matter of

PORTLAND GENERAL ELECTRIC
COMPANY,

2019 Integrated Resource Plan.

Reply Comments of
Renewable Northwest

December 17, 2019

I. INTRODUCTION

Renewable Northwest thanks the Oregon Public Utility Commission (the “OPUC” or the “Commission”) and OPUC Staff (“Staff”) for this opportunity to comment on the 2019 Intergrated Resource Plan (“IRP”) prepared by Portland General Electric (“PGE”). These Reply Comments address comments by PGE, Staff, and the Northwest Energy Coalition (“NWEC”).

In these Reply Comments, we continue to recommend improvements to PGE’s proposed approach to transmission in future renewables procurements. We also address stakeholder comments related to the supply-side items in the utility’s action plan and the utility’s articulation of need. We close by encouraging PGE to more thoroughly explore the costs and risks associated with its ownership of Colstrip Units 3 and 4, and to convene a conversation about the treatment of transmission in future IRPs.

II. COMMENTS

1. Interim Transmission Solution

Renewable Northwest appreciates PGE’s efforts to craft an approach to transmission in upcoming procurement processes that better recognizes the nature of variable energy resources (“VERs”) and that can contribute to a more efficient use of the regional transmission system. We include below a number of suggestions that would help improve the Interim Transmission Solution.

a. Non-firm transmission

We reiterate our recommendation that PGE allow projects that rely on non-firm transmission for delivery of the portion of maximum output for which PGE would accept short-term transmission. In its Reply Comments, PGE states that it procures renewables for their energy, capacity, and environmental attributes, and that it must ensure that they have sufficient transmission to deliver their output to PGE customers.¹ PGE also states that “[f]irm transmission products are the only way to achieve these necessary elements.”²

Renewable Northwest appreciates that PGE’s Interim Transmission Solution would allow reliance on long term transmission for delivery of less than 100% of a project’s maximum output (at least 80% under PGE’s proposal). We agree that some percentage of long term transmission service is reasonable to ensure that the capacity contribution from the resource is delivered to PGE. However, we have several questions regarding PGE’s reluctance to consider delivery over non-firm transmission for the remainder of the resource’s output.

While PGE’s description of the potential risks associated with reliance on non-firm transmission is generally correct, its concerns appear more closely related to other resources than to VERs like wind or solar than to other resources. This is especially true in light of PGE’s requirement that 80% of the maximum output (often determined by the installed capacity, or “ICAP,” of the resource) be delivered using long term firm (“LTF”) or conditional firm (“CF”) transmission. A renewable generator has output above 80% of ICAP during a limited amount of time. As a result, we encourage PGE to factor into its evaluations of both the need for firm transmission and the potential risks associated with non-firm transmission the degree to which a renewable resource’s output will be coincident with PGE’s peak capacity need hours. We also encourage PGE to consider the correlation of a resource’s output with the times of greatest risk for curtailment or lack of availability of short-term firm or non-firm transmission service.

PGE states that there is more reliability risk when using non-firm transmission.³ A higher level of risk associated with non-firm transmission may indeed exist, but it seems unlikely that any such increased risk is significant. The October 31, 2019 presentation in this proceeding by the Bonneville Power Administration (“BPA”) indicated that all of BPA’s transmission products, including non-firm and short-term firm (“STF”), have been curtailed rarely. We are not aware of any analysis that indicates either that the increased risk is sufficiently high to justify refusal of non-firm transmission or that the reliability of non-firm service is becoming more limited. On the

¹ PGE’s Reply Comments at 74.

² *Id.*

³ *Id.* at 75.

other hand, we are concerned for the potential that BPA may impose additional limitations on one of its key short-term firm products, its Hourly Firm product, beyond the limitations in the TC-20 Settlement Agreement.⁴

While curtailments could indeed result in the loss of some energy and environmental attributes, curtailments are a rare occurrence. Hence, it appears that reliance on non-firm transmission would likely have a *de minimis* impact on the value of the resource to PGE's customers. We appreciate PGE's interest in limiting risks. However, the information available in this proceeding does not indicate that there is significantly more risk associated with using non-firm transmission for the last 20% of a project's output identified by PGE. As a result, we again encourage PGE to allow bidders to rely on non-firm transmission for at least that portion of a project's output.

Finally, PGE notes that BPA charges the same rate for non-firm and firm transmission service and that this eliminates the potential for cost savings between the two products.⁵ While accepting that non-firm transmission may not impact cost savings, excluding non-firm transmission from the suite of acceptable transmission products could severely limit flexibility when, as we note above, that limitation does not seem warranted. We understand that a bidder can only reserve STF transmission a certain number of days before delivery.⁶ As a result, we worry about the potential impact of PGE's proposal to exclude delivery over non-firm transmission even in situations when STF is not available. It would seem appropriate for PGE to at the very least accept delivery over non-firm transmission when STF is not available.

b. Reserves and non-firm transmission

According to PGE, using non-firm service could require increased levels of reserve capacity if resources relying on non-firm transmission were curtailed.⁷ However, PGE proposes to base its evaluation of a project's capacity contribution only on the amount of the capacity that has long-term service.⁸ Reserve requirements are typically set as an amount of capacity above peak load. Since no renewable resource will have a capacity contribution based on megawatts served by anything other than long-term transmission, we encourage PGE to outline how energy

⁴ Bonneville Power Administration, TC-20 Settlement Agreement, Attachment 1: Terms at 2, available at [https://www.bpa.gov/Finance/RateCases/BP-20/Meetings/TC-20%20Settlement/Final_TC-20%20Settlement%20Agreement%20\(11-13-08\).pdf](https://www.bpa.gov/Finance/RateCases/BP-20/Meetings/TC-20%20Settlement/Final_TC-20%20Settlement%20Agreement%20(11-13-08).pdf).

⁵ PGE Reply Comments at 75.

⁶ *Requesting Transmission Service, BPA Transmission Business Practice Version 37* at 12-13 (Dec 31, 2019) available at

<https://www.bpa.gov/transmission/Doing%20Business/bp/tbp/Requesting-Trans-Service-Version-37-Business-Practice.pdf>.

⁷ PGE Reply Comments at 75.

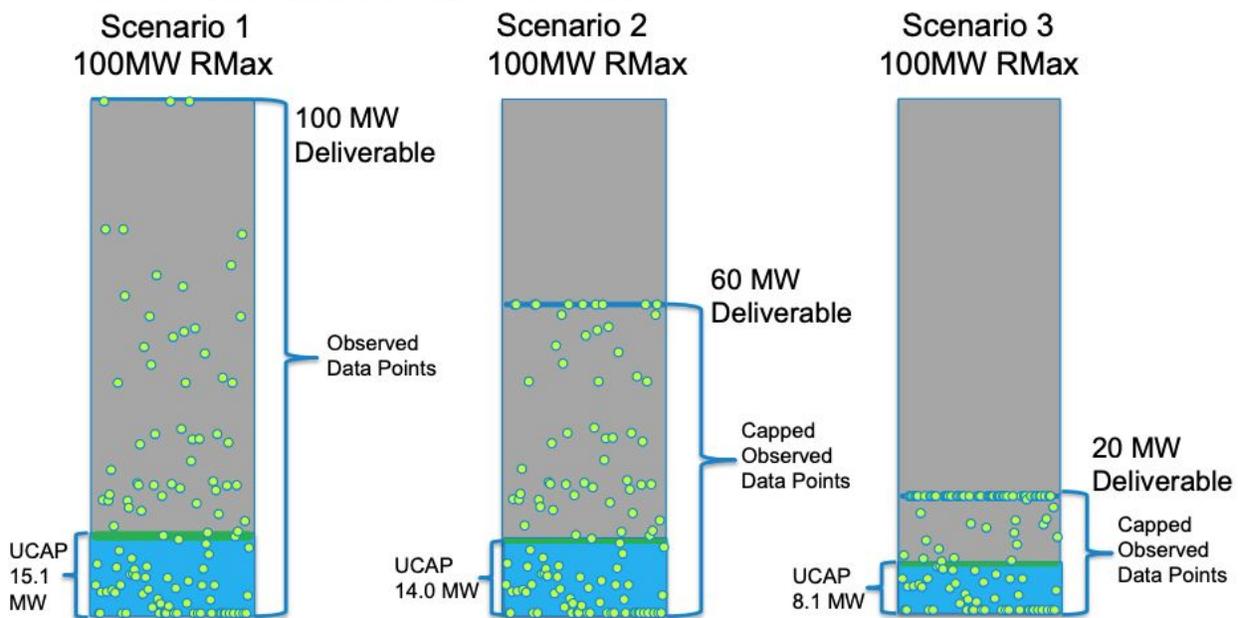
⁸ *Id.* at 84.

delivered using short-term or non-firm resources would increase the amount of reserves that it must carry.

c. PGE’s long term transmission requirement

We encourage PGE to explore whether reducing the level of maximum output for which it would require long-term transmission may be warranted. As we noted above, the capacity contribution of a VER is generally below the resource’s ICAP value. Additionally, deliverability using firm transmission service may have diminishing returns. We offer an example of analysis done by Midwest Independent System Operator (“MISO”) as it is considering the level of firm transmission service it will require to ensure deliverability of resources that are relied on for their capacity contribution towards resource adequacy requirements. As the graphic below shows, firm transmission service at 60% of ICAP for a wind resource has a minimal negative impact on the capacity contribution of the resource, as compared to the capacity contribution when the resource has firm transmission service for 100% of ICAP.⁹

- Hypothetical 100 MW Wind Resource
- Same wind resource, with different deliverable scenarios



⁹ Presentation made at MISO’s Resource Adequacy Subcommittee on October 9, 2019, “Deliverable ICAP - Intermittent Resources,” available at [https://cdn.misoenergy.org/20191009%20RASC%20Item%2004a%20Deliverable%20ICAP%20\(IR065\)389384.pdf](https://cdn.misoenergy.org/20191009%20RASC%20Item%2004a%20Deliverable%20ICAP%20(IR065)389384.pdf)

In this analysis, the capacity contribution, represented by the Unforced Capacity (“UCAP”) value, is decreased from 15.1 % to 14% when the firm transmission available to ensure deliverability of this resource is decreased from 100% to 60% of the ICAP. Capacity contribution of the resource with 80% firm transmission service would likely be very close to that at 100% firm transmission. We encourage PGE to explore whether 80% of maximum output over long-term transmission is optimal for VERs and what the impacts on a resource’s capacity contribution may be if PGE were to require lower levels. If PGE does not adopt this suggestion for a 2020 renewables request for proposals (“RFP”), we encourage PGE to explicitly identify this issue as one to explore for future renewable RFPs within the 5 years framework for the Interim Transmission Solution.

d. PGE’s Transmission Rights

PGE’s Reply Comments addressed a proposal by the Northwest Intermountain Power Producer Coalition (“NIPPC”) that PGE should make its transmission rights available to third parties.¹⁰ PGE highlighted several risks that PGE believes it would have to assume on behalf of a third-party developer as the contracting entity with BPA.¹¹ PGE concluded that it is not reasonable to expose its customers to those risks.¹²

Renewable Northwest recognizes PGE for its efforts to craft an Interim Transmission Solution that seeks to address concerns related to the scarcity of long-term firm transmission to PGE over BPA. While we appreciate PGE’s efforts, we also see potential value for customers if PGE were to accept bids by third-party developers that rely on PGE’s transmission rights. We are sensitive to PGE’s concerns regarding potential risks. As a result, we encourage PGE to consider contractual mechanisms to minimize those risks when evaluating whether the value of making those transmission rights available to third-party bidders outweigh any potential risks.

2. Action Plan

Renewable Northwest continues to support PGE’s proposed action plan as reasonable in light of past Commission guidance, while also encouraging PGE to explore whether an earlier Capacity RFP may be warranted.

¹⁰ Staff Reply Comments at 78.

¹¹ *Id.*

¹² *Id.*

a. Action Plan Compliance with IRP Guidelines

Staff questions whether PGE’s decision to conduct an RFP for RPS-eligible resources that is agnostic to technology and location is consistent with IRP Guideline 4.¹³ Staff refers to the following language in IRP Guideline 4: “An action plan with resource activities the utility intends to undertake over the next two to four years to acquire the identified resources, regardless of whether the activity was acknowledged in a previous IRP, with the key attributes of each resource specified as in portfolio testing.”¹⁴

Commission guidance indicates support for IRPs that identify general resources rather than specific ones. In adopting the current IRP Guidelines in Order 07-002, the Commission stated that “[t]o keep the IRP process separate from the procurement process, [the Commission] prefer[s] to acknowledge general, not specific resources, in the IRP process.”¹⁵ In compliance with that Commission guidance, PGE’s portfolio development and selection process led to the identification of a preferred portfolio with specific renewable energy resources (i.e. wind at specific geographic locations). More generally, PGE identified renewable energy resources that contribute energy, capacity, and Renewable Energy Certificates (“RECs”) to PGE, as part of a lowest cost, lowest risk strategy. PGE has appropriately designed a Renewable Action that requires Oregon RPS qualifying renewables that can provide energy, capacity, and RECs to PGE for the benefit of its customers and that can also pass a cost-screen. As a result, PGE’s Renewable Action has the key attributes of the resources specified in portfolio testing and is consistent with IRP Guideline 4.

We agree with PGE that an RFP for more technologically or locationally specific resources is neither required by the IRP Guidelines nor likely to be in the best interest of customers.¹⁶ Locking resources’ technology or location at the IRP stage would likely be unhelpful to customers as the specific resource choice would be based on older and more general resource assumptions prepared by consultants rather than on current and project-specific resource assumptions. Project-specific information allows PGE and stakeholders to better understand the value that a particular project could have to customers. As a result, an RFP for technologically or locationally specific resources identified in the IRP seems unlikely to be in customers’ best interest.

¹³ Staff Opening Comments at 6.

¹⁴ Oregon Public Utility Commission, Docket No. UM 1056, Order No. 07-002, Appendix A at 5.

¹⁵ Order No. 07-002 at 25.

¹⁶ PGE Reply Comments at 13.

b. Capacity Action

PGE's Reply Comments address Staff's and other stakeholders' concerns regarding the structure of the Capacity Action and the timing of a Non-emitting Capacity RFP.¹⁷ Throughout this process, we have commended PGE for its efforts to develop a 2019 IRP and action plan that incorporates learnings from the 2016 IRP process. We see the structure that PGE proposed for its of Capacity Action as likely responsive to those learnings.

We acknowledge PGE's desire to explore the availability of short and medium-term bilateral market capacity before procuring longer term-resources. However, we also acknowledge concerns raised by various stakeholders regarding the risk that a 2021 Capacity RFP may not be consistent with long lead time resources being able to compete on a comparable basis with other resources bidding to meet a 2025 capacity need. As a result, we encourage PGE to consider whether running a Capacity RFP concurrently with its exploration of the bilateral market for capacity is more sensible under current circumstances.

c. Timing of the Renewable and Capacity Actions

Staff expressed concern that "PGE is prioritizing near term renewables and the potential savings they may bring, over a real need for capacity to serve load within the action plan timeframe."¹⁸ Renewable Northwest respectfully challenges the potential underlying assumption in that the Renewables Action, in contrast with the Capacity Action, may not serve real needs of PGE. In fact, PGE's analysis shows that the renewables that PGE would procure pursuant to a 2020 Renewables RFP would contribute 160 MW to PGE's 2025 capacity need,¹⁹ as well as to PGE's energy need and to PGE's RPS need, all while resulting in savings to PGE's customers. While we encourage PGE to explore whether an earlier Capacity RFP may be warranted, we continue to strongly support PGE's plans to meet a portion of its energy, capacity, and RPS needs through a renewable procurement that PGE's analysis shows will also result in financial benefits to PGE's customers.

3. Need

Renewable Northwest continues to support PGE's load forecast, capacity need, energy need, and RPS need as reasonable.

¹⁷ *Id.* at 14.

¹⁸ Staff Opening Comments at 24.

¹⁹ PGE Reply Comments at 9.

a. Load forecast

In our initial comments, Renewable Northwest supported PGE’s “load-forecasting approach and the assumptions embedded within it as reasonable.”²⁰ While much of Staff’s response indicated that Staff is still continuing to analyze PGE’s load forecast, Staff did “note[] that one of the assumptions in the Company’s distributed energy resource forecast may exaggerate electric vehicle load.”²¹ Specifically, Staff pointed out that the Navigant study that formed the basis for PGE’s electric vehicle (“EV”) load forecast extrapolated from existing data “across all light duty vehicles in the Company’s service area,” possibly including SUVs, vans, and pick-up trucks--models that are currently underrepresented among EVs.²² In contrast, the Northwest Energy Coalition (“NWECC”) pointed out that “vehicle classes beyond light-duty are not addressed in the IRP,” raising questions of undercounting potential load attributable to electric vehicles.²³ PGE responded with a detailed narrative description of Navigant’s approach to forecasting EV load and an acknowledgement that load attributable to heavy-duty vehicle electrification is uncertain and difficult to capture.

Renewable Northwest acknowledges that there is uncertainty in the developing EV market, but trends suggest that Staff’s concerns about possible exaggeration of EV load are likely unfounded. The current underrepresentation of larger light-duty vehicles among EVs has been noted by auto manufacturers, resulting in a race to fill that gap.²⁴ At the same time, there is an ongoing push to electrify heavy-duty vehicles such as buses both nationwide and within PGE’s service territory.²⁵ Considering the variables at play here--uncertainty about EV load trends, Navigant’s sophisticated forecasting methodology, near-term electric SUV and pickup truck model releases, and potential heavy-duty EV load growth--PGE has done a thoughtful and reasonable job forecasting EV load.

²⁰ RNW Initial Comments at 4.

²¹ Staff Opening Comments at 22.

²² Staff Opening Comments at 23.

²³ NWECC Initial Comments at 5-6.

²⁴ *See, e.g.*, Reuters, Factbox: Tesla, Detroit, Amazon-backed Rivian race to electrify pickup trucks (Nov. 22, 2019), available at

<https://www.reuters.com/article/us-tesla-pickup-factbox/factbox-tesla-detroit-amazon-backed-rivian-race-to-electrify-pickup-trucks-idUSKBN1XW18T>.

²⁵ *See, e.g.*, Roberta Altstadt, TriMet News, “A US transit industry first--electric buses powered entirely by wind” (Apr. 16, 2019), available at

<https://news.trimet.org/2019/04/a-us-transit-industry-first-trimets-new-electric-buses-powered-entirely-by-wind/>.

b. Capacity need

In our initial comments, Renewable Northwest discussed PGE's range of potential capacity needs and determined "it is reasonable to conclude that PGE will likely have some near-term capacity need."²⁶ We have no further comments on PGE's proposed capacity need beyond those relating to PGE's proposed capacity action above.

c. Energy need

In our initial comments, Renewable Northwest outlined PGE's new approach to determining energy need, supported PGE's new "operational paradigm," and concluded that "PGE presents a flexible and reasonable approach to energy need that again squares with the Commission's guidance in Order No. 17-386."²⁷ While Staff reports that it "would have serious concerns with portfolio modeling that bases its energy need on its market price forecast and resulting economic dispatch model," it does not appear that Staff does express any direct concerns about PGE's actual approach to determining energy need.²⁸ Renewable Northwest notes that market price forecasting and economic dispatch modeling are appropriate elements of an energy need analysis inasmuch as the regulatory touchstone of resource planning is determining a least cost, least risk portfolio, and market reliance can bring both costs and risks. However, given the low level of concern among parties regarding PGE's approach to determining energy need, Renewable Northwest simply reiterates its support for PGE's efforts to model energy need in an evolving and increasingly complex operational paradigm.

d. Renewable Portfolio Standard ("RPS") need

In our initial comments, Renewable Northwest supported PGE's proposal to rely on physical RPS compliance, noting that not only does that approach reflect good policy but also "maintaining PGE's REC bank and meeting its RPS obligation through physical compliance is sound risk management."²⁹ Staff's Opening Comments questioned PGE's proposed physical compliance strategy, pointing to "the possibility of substantial ratepayer savings" from unbundled RECs and the similar possibility of "reliance on banked RECs to reduce costs" and "avoid some of the need for new resource procurement."³⁰ PGE responded with additional analysis "strongly suggest[ing] that RPS need and PGE's treatment of banked and unbundled RECs is not driving portfolio composition or performance, especially regarding near-term

²⁶ RNW Initial Comments at 4.

²⁷ *Id.* at 5.

²⁸ Staff Opening Comments at 25.

²⁹ RNW Initial Comments at 5.

³⁰ Staff Opening Comments at 12, 13.

renewable additions” and further demonstrating “very little difference in portfolio cost or risk” following from different RPS compliance strategies.³¹

We appreciate stakeholder efforts to better understand the nature of PGE’s needs and the drivers behind PGE’s action plan. Hence, we appreciate PGE’s additional analysis that supports that “RPS obligations are not a key driver for the Renewable Action.”³² Indeed, ultimately PGE’s analysis shows that its Renewable Action remains least-cost, least-risk even without taking into account PGE’s RPS obligations. As a result, we remain supportive of PGE’s Renewable Action.

e. GEAR

In our initial comments, Renewable Northwest did not specifically address the interaction between PGE’s Green Energy Affinity Rider (“GEAR”) green tariff program and its need assessment.³³ Staff noted that PGE’s IRP includes a sensitivity “show[ing] that when the GEAR is subscribed at 100 MW and community solar is subscribed at 93 MW, PGE’s energy need is reduced by 55 MWa and its capacity need is reduced by 38 MW in 2025,” pointed out that PGE has announced it is on the verge of procuring **160** MW to meet GEAR subscriber demand, and concluded that “it is critical that PGE update its modeling to reflect” higher GEAR subscription levels.³⁴ PGE responded that its “portfolio optimization selected significant quantities of additional renewable resources from 2023-2024 (over 520 MWa, much greater than the sum of PGE’s recommended action plus energy from the planned Green Tariff resource).”³⁵ Nevertheless, PGE went on to file an updated need assessment with an additional GEAR sensitivity whose results further indicated only “small [changes] relative to the magnitude of PGE’s resource needs and ... well within the margin of uncertainty considered within the 2019 IRP.”³⁶ Renewable Northwest agrees with PGE that PGE’s proposed action plan continues to be reasonable in light of this updated need assessment.

³¹ PGE Reply Comments at 50.

³² PGE Reply Comments at 10.

³³ For more information on the GEAR, *see generally* Oregon Public Utility Commission, Docket No. UM 1953.

³⁴ Staff Opening Comments at 15.

³⁵ PGE Reply Comments at 60.

³⁶ PGE 2019 Integrated Resource Plan Updated Needs Assessment at 10 (Nov. 27, 2019), *available at* <https://edocs.puc.state.or.us/efdocus/HAH/lc73hah10211.pdf>.

4. Others

a. Colstrip

Renewable Northwest again encourages PGE to engage in a more thoughtful evaluation of the costs and risks associated with its continued ownership of Colstrip Units 3 and 4 as well as the potential benefits of accelerated depreciation and early retirement of the Colstrip Units.

b. Transmission in the IRP

PGE's Reply Comments address stakeholder concerns about modeling of transmission in the IRP.³⁷ Renewable Northwest has advocated for the IRP to better account for the transmission landscape that PGE faces. However, the discussion of how PGE treats transmission in the IRP needs to carefully recognize the differences between the analysis that takes place in the IRP and the project-specific resource selection that takes place in the RFP. How PGE looks at transmission in the IRP deserves careful discussion. As a result, we encourage PGE to address this issue early in its 2021 IRP stakeholder process.

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³⁷ PGE Reply Comments at 79.

III. CONCLUSION

Renewable Northwest again thanks the Commission for this opportunity to comment. We reiterate our support of PGE's Renewable Action and articulation of system needs, and we encourage PGE to further refine its Interim Transmission Proposal. We also encourage PGE to deepen its analysis of the costs and risks associated with its ownership of Colstrip Units 3 and 4, and to convene a conversation about the treatment of transmission in future IRPs. We look forward to continued collaboration with the Commission, PGE, stakeholders, and Commission Staff throughout this IRP proceeding.

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