October 27, 2020

Puget Sound Energy
IRP Team

RE: Feedback of Renewable Northwest, Electric Portfolio Model
Puget Sound Energy's October 20, 2020, Webinar Relating to the Electric Portfolio Modeling Process, Final Power Prices, Electric Sensitivities, and Inputs and Observations from Draft Results.

I. INTRODUCTION

Renewable Northwest thanks Puget Sound Energy ("PSE") for this opportunity to provide feedback as a stakeholder in PSE's 2021 Integrated Resource Plan ("IRP"). This feedback is a response to PSE's October 20, 2020, webinar regarding the Electric Portfolio Modeling Process, Final Power Prices, Electric Sensitivities, and Inputs and Observations from Draft Results for the 2021 IRP.

Renewable Northwest participated in the webinar on October 20, 2020. Below, we provide feedback based on PSE's "2021 IRP Webinar #9: Electric IRP" slide deck.

II. FEEDBACK

Renewable Northwest requests clarification respecting the determination of effective load carrying capability (ELCC) values documented on slides 27, 28, and 30, for resources being modeled for PSE's 2021 IRP.

While we recognize that ELCC values are system-dependent, PSE's values for solar, battery storage, and pumped hydro storage are lower than we would expect to see relative to ELCC values for other resources in the Northwest. For example, Portland General Electric's ELCC values in its 2019 IRP are a first-in value of approximately 16% for solar, a first-in to last-in

range of approximately 85% down to 49% for 8-hour pumped hydro storage, and a first-in to last-in range of approximately 63% down to 40% for 4-hour battery storage.[1]

To understand why PSE's values are significantly lower, we request additional detail into the methodology and values underlying PSE's ELCC calculations. Specifically, we request that PSE make available the following information:

1. A 12x24 matrix of the peak demand or hours with the highest loss of load probability which were used to calculate the ELCC values for all resources.[2]
2. An explanation of contributing factors to PSE's unusually low ELCC values for solar, battery storage, and pumped hydro storage.

Renewable Northwest also anticipates the results of the must-run temperature sensitivity on load, because climate change-based temperature and load forecasts should reflect an increasing trend toward summer peaking conditions, which in the future may increase the risk of resource deficiencies and/or capacity shortfalls.[3]

III. CONCLUSION

Renewable Northwest thanks PSE for its consideration of this feedback. We look forward to continued engagement as a stakeholder in this 2021 IRP process.

Sincerely,

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[1] Portland General Electric 2019 Integrated Resource Plan at 165, Figures 6-4 and 6-5, *available at* https://www.portlandgeneral.com/-/media/public/our-company/energy-strategy/documents/2019-integrated-resource-plan.pdf?la=en,

[2] *See*, *e.g.*, Energy+Environmental Economics (E3), "Capacity Value Framework & Allocation Options," Oregon Public Utilities Commission (UM 2011) at slide 39 (Jul. 9, 2020), *available at* https://edocs.puc.state.or.us/efdocs/HAH/um2011hah17397.pdf

[3] See, e.g., Northwest Power and Conservation Council, Resource Adequacy Advisory Committee (RAAC), "Resource Adequacy Assessment for 2025 and 2027," (Oct. 6, 2020), available at https://nwcouncil.app.box.com/s/ljkswnhndlxvbd3ij1w1m49t4x0wcwv6 (Preliminary results of RACC's resource adequacy assessment for 2025 reflect a regional trend of capacity shortfalls in the summer when considering the effects of climate change.)