**BEFORE THE PUBLIC UTILITY COMMISSION**
**OF OREGON**

UM 2011

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| In the Matter of<br><br>PUBLIC UTILITY COMMISSION OF OREGON,<br><br>General Capacity Investigation. | Comments of Renewable Northwest Regarding Staff's Capacity Value Best Practices<br><br>**October 20, 2021** |

## I. INTRODUCTION

Renewable Northwest is grateful to the Oregon Public Utility Commission ("the Commission" or "PUC") for the opportunity to comment on Staff's Capacity Value Best Practices ("Best Practices") filed with the Commission on September 30, 2021. These Best Practices represent the culmination of a thoughtful process where stakeholders have worked together to identify the most important elements of a capacity contribution and valuation methodology that captures the contributions of various resources to the reliability of Oregon's evolving electricity grid. We appreciate Staff's work in this docket to date and offer these comments for three main purposes: (1) to reiterate the purpose of this docket and underline the importance of Best Practices that apply across *all* regulatory contexts; (2) to support the value of a uniform approach that reflects the best available data and methodology; and (3) to point out additional detail and granularity that could improve the Best Practices. Overall, we commend Staff for overcoming initial uncertainty to run a productive investigation that has resulted in strong draft Best Practices.

## II. BACKGROUND

In our March 8, 2021 comments to the Commission, we began by reviewing the Commission's reasons for launching this investigation. At this juncture, we offer another reminder of those reasons, to serve as a guidestar for a final Best Practices document and potential Commission adoption order.

This docket was opened as a result of Commission Order No. 19-155. The Staff Report forming the basis for the Commission's order observed that "[t]here have been several methodologies used to establish capacity values based on resource type, such as distributed generation, utility-scale generation, energy efficiency and other upcoming technologies such as energy

storage and demand response."[1] The Commission opened this investigation in the hope that "[a] holistic investigation into … issues related to capacity could lead to a harmonization of some of these disparate approaches."[2] Renewable Northwest's engagement in this docket has generally sought to further that goal of identifying a "harmonized" approach to capacity across different contexts and dockets.

Once this docket got over some initial hurdles, the Commission issued a procedural memorandum noting Staff's proposal to "work collaboratively on a generic capacity valuation methodology and draft rules to codify that methodology"[3] and echoing the original rationale behind this docket: "The Commission opened this investigation to examine appropriate methods for capacity valuation and develop a generally applicable capacity valuation methodology, recognizing that a comprehensive approach could inform and lead to consistency across multiple dockets and resource types."[4] Stakeholders have been working since then toward that goal of "develop[ing] a generally applicable capacity valuation methodology" and creating "consistency across multiple dockets and resource types."

Additional policy developments support the importance of this docket and specifically the Commission's work to create methodological consistency across multiple dockets. First, just under a year after the Commission opened this docket, Governor Brown issued Executive Order EO 20-04 and directed a number of state agencies including the Commission to "exercise any and all discretion and authority" to reduce Oregon's greenhouse gas emissions. Because of the importance of appropriately identifying the capacity contributions of renewable and non-emitting capacity resources, Renewable Northwest identified this docket as a priority for implementation of the Executive Order.[5] Then earlier this year the Oregon Legislature passed HB 2021, establishing binding greenhouse gas emission reduction targets of 80% by 2030 and 100% by 2040 for entities serving most of Oregon's electric load.[6] To achieve those targets, HB 2021 directs utilities to develop Clean Energy Plans subject to Commission acknowledgment.[7] In reviewing those plans, "the commission shall consider: … (b) The economic and technical feasibility of the plan; [and] (c) The effect of the plan on the reliability and resiliency of the electric system," among other factors.[8] Ensuring that utilities can achieve the law's greenhouse

[1] Oregon Public Utility Commission, Docket No. UM 2011, Order No. 19-155 at Appx. A, p. 2 (Apr. 26, 2019).
[2] *Id.*
[3] Oregon Public Utility Commission, Docket No. UM 2011, *Procedural Memorandum* at 1 (Jan. 29, 2021).
[4] *Id.* at 2.
[5] Comments of Renewable Northwest on EO 20-04 Draft Work Plans at 6 (Oct. 28, 2020), *available at* https://www.oregon.gov/puc/utilities/Documents/EO20-04-Comments-RNW.pdf.
[6] HB 2021 at sec. 3 (2021).
[7] *Id.* at sec. 4.
[8] *Id.* at sec. 5(2).

gas targets while maintaining a reliable system will likely require a robust, well-vetted, and consistent capacity contribution methodology.

For all these reasons, we encourage Staff and the Commission to maintain a focus on using this docket to establish Best Practices for use across all other applications, including resource planning and greenhouse gas reduction efforts.

## III. COMMENTS

Overall, we are encouraged by the Best Practices developed by Staff and hope to see them applied as widely as possible as Oregon's investor-owned utilities work toward achieving our state's nation-leading climate-and-energy policy. That said, we offer a few recommendations for improvement as Staff works toward a final Best Practices document for potential Commission adoption.

Staff's draft Best Practices document mentions at the outset that "[t]hese policies and procedure are applicable when assigning a capacity value to a supply or demand side resource, *outside of* an Integrated Resource Plan portfolio analysis, Request for Proposals under Division 89, or Resource Adequacy program(s)" (emphasis added). Narrowing the detailed stakeholder discussions in workshops and written comments that have led to the development of these Best Practices to a limited subset of use-cases runs the risk of creating a disconnect among multiple dockets and utility planning and procurement efforts. For this reason, we recommend striking paragraph one of the Best Practices document or clarifying that the Best Practices should be considered in all relevant dockets.

Utilities use several software tools to obtain a measure of system reliability and calculate capacity contribution of resources that deliver electrical energy to the grid. These tools consist of electric production cost models, reliability models, or a combination of both. Depending on the specific model, it is possible to obtain production cost and reliability estimates from the same model. Since each investor-owned utility models capacity contribution and reliability using their proprietary model or one contracted from a different third-party vendor, it is important to have a uniform set of principles and a methodological framework to ensure that each utility is operating on a level playing field with respect to the resources being modeled and their capacity contribution values. The requirements listed in Staff's Best Practices relating to modeling and valuation of capacity create that uniformity by highlighting the critical factors affecting resources' effective load carrying capability ("ELCC") and ensuring that the modeling inputs and assumptions are derived from the most up-to-date scientific knowledge on capacity accreditation and reliability assessment. For example, Staff's guideline 4a highlights the importance of "using

no less than eight years of the most recent output data for the resource" and "[w]here eight years of actual data is not available, the utility must use synthetic data that reasonably represents future actual data with respect to mean and variance."[9] We appreciate the guideline's eight-year output data requirement to calculate ELCC values and believe this should be fundamental to ELCC calculations in all dockets since using a larger dataset captures the inter-annual variability in solar and wind resources. Requiring this level of data creates a uniform set of guidelines that provide stakeholders and customers with confidence that, regardless of the utility and how they conduct their IRP modeling, the methodology remains fair, accurate, and scientifically sound.

There are also some guidelines provided in the document that can be improved upon by adding specificity. For example, guideline 3b, which states that "[e]ach defined resource (which includes hybrid) class should capture a meaningful and distinct set of characteristics such as plant design, age, and geography for renewable resources and duration and efficiency for energy storage" could be revised to include "technical configurations and designs" since hybrid and storage resources can be operated in distinct configurations[10] that can alter their capacity value significantly. We also recommend removing guideline 3c's five percent buffer, which allows unnecessary flexibility to the utilities and incentivizes not adding a resource class even though ELCC values may differ significantly in later years as the resource mix and load profile of a utility shifts. For guideline 4, while we support the eight-year data requirement, we recommend changing the term "third-party vendor" to one that encompasses public data sources such as NREL.[11] And while guideline 12 includes an opportunity for review of third-party vendor data, we recommend adding language that ensures that opportunity is an inclusive one available to stakeholders at a point in the process where they can review it before its use in ELCC calculations.

[9] Best Practices at 2.
[10] A model for evaluating the configuration and dispatch of PV plus battery power plants. DiOrio, 2020. https://www.sciencedirect.com/science/article/abs/pii/S0306261919321531?via%3Dihub
[11] Renewable Northwest Reply Comments Re: Staff workshop (Apr. 26, 2021), *available at* https://edocs.puc.state.or.us/efdocs/HAC/um2011hac17291.pdf.

## IV. CONCLUSION

Renewable Northwest again thanks the Commission for this opportunity to comment regarding Staff's Capacity Value Best Practices. We appreciate Staff's work to incorporate stakeholder feedback and look forward to continued participation in this investigation.

Submitted this 20th day of October, 2021,

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