BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 2143

In the Matter of PUBLIC UTILITY COMMISSION OF OREGON, Investigation into Resource Adequacy in Oregon.	COMMENTS OF SWAN LAKE NORTH HYDRO, LLC AND THE GOLDENDALE ENERGY STORAGE PROJECT ON STAFF'S PROCESS PROPOSAL AND RA SOLUTION STRAW PROPOSAL

The companies working to develop the Swan Lake and Goldendale Pumped Hydro Storage Projects ("Swan Lake and Goldendale") commend Commission Staff for putting forth thoughtful proposals to address resource adequacy ("RA") in Oregon in a deliberate manner, while also appropriately prioritizing this important issue. Swan Lake and Goldendale largely support Commission Staff's Process Proposal and RA Solution Straw Proposal (the "Proposals");[1] however, Swan Lake and Goldendale offer these comments to further refine and improve the Proposal in a way that ensures any RA program in Oregon fairly evaluates all clean-energy resources, particularly including long lead-time resources like pumped storage.

I. Swan Lake and Goldendale Commend Commission Staff for Their Thoughtful Proposals and Appreciate that Staff is Prioritizing RA Issues.

Before discussing some of Swan Lake and Goldendale's recommended improvements to the Proposal, Swan Lake and Goldendale would like to commend Commission Staff for the effort, thought, and flexibility already contained in the Proposal. The Proposal represents a significant

[1] *UM 2143 Investigation Into Resource Adequacy in the State – Process Proposal and RA Solution Straw Proposal*, Docket UM 2143, filed Oct. 15, 2021, available at: https://edocs.puc.state.or.us/efdocs/HAH/um2143hah145744.pdf (the "Proposal").

step in the right direction. Swan Lake and Goldendale greatly appreciate that Commission Staff appear to understand that the various LREs in Oregon have significant disparities in how each counts generation output and capacity for purposes of demonstrating the LRE has the necessary RA to meet load.[2] Much of this RA "counting" by LREs occurs through the methodology each LRE uses to calculate Effective Load Carrying Capability ("ELCC") values for a particular resource. As Swan Lake and Goldendale have repeatedly emphasized to the Commission, utilities in Oregon have significantly different methodologies for calculating ELCC values—particularly for long-duration storage resources like pumped storage—so Swan Lake and Goldendale strongly support Commission Staff's effort to find a consistent and comparable method for evaluating RA.

Swan Lake and Goldendale would also express their appreciation to Commission Staff for taking a deliberate, yet urgent, approach to a potential statewide RA program. Swan Lake and Goldendale support the Proposal's requirement to have LREs make informational filings by Jan. 25, 2022, and the effort to have new RA rules in place by the beginning of 2023.[3]

II. While Swan Lake and Goldendale Largely Support the Proposal, There are Areas Where Swan Lake and Goldendale Believe the Proposal Should be Refined.

While Swan Lake and Goldendale appreciate the effort Commission Staff has put into the Proposal, there are a few areas that Swan Lake and Goldendale believe can be refined. These refinements are necessary to ensure the Proposal accurately and fairly counts RA from all resources, including long-duration storage resources like pumped storage. First, in response to Commission Staff's request for information on how to calculate ELCC values in a consistent and comparable manner,[4] Swan Lake and Goldendale recommend using as much of the RA counting

[2] *E.g.,* Proposal at 4 ("Staff seeks feedback on the opportunity to leverage ELCCs derived from IRPs in a consistent, comparable manner.") (emphasis added).
[3] *Id*. at 2, 3.
[4] *E.g., id.* at 4 ("Staff seeks feedback on the opportunity to leverage ELCCs derived from IRPs in a consistent, comparable manner.") (emphasis added).

framework developed by the Northwest Power Pool ("NWPP") as possible, with the recognition that NWPP's RA methodology, at least for the short term, uses a simplified calculation for energy storage capacity values. Second, Swan Lake and Goldendale recommend extending the time window for the RA analysis from five years, as is currently proposed,[5] to ten years.

A. Swan Lake and Goldendale Support Using the NWPP RA Counting Method, with One Caveat.

The Proposal seeks feedback on how to leverage existing ELCC values to come up with a comparable and consistent method for counting RA.[6] Swan Lake and Goldendale support Staff's focus on the NWPP RA program and the RA solutions that would entail adopting the NWPP RA methodology.[7] However, Swan Lake and Goldendale would recommend that this methodology be modified slightly with respect to how the NWPP RA model treats energy storage capacity in the shorter term. In particular, the NWPP RA program uses a simplified calculation for energy storage capacity while penetration levels are low, which can result in misleading values for shorter duration storage devices. This simplified methodology—referred to as the "QCC method" in the NWPP RA program—is summarized by the following table from NWPP's Detailed Design document and discussed in further detail in Appendix D of that document:[8]

[5] *Id*. at 1 ("The informational filing will show the current levels of RA in the state over the next five years.").
[6] *Id*. at 4 ("Staff seeks feedback on the opportunity to leverage ELCCs derived from IRPs in a consistent, comparable manner.") (emphasis added).
[7] *E.g., id.* at 2, 6 (noting that "[The] LRE must use the modeling and methods in the July 2021 NWPP Detailed Design document . . . to the extent practicable.").
[8] *NWPP Resource Adequacy Program – Detailed Design*, NWPP, July 2021, available at: https://www.nwpp.org/private-media/documents/2021-08-30_NWPP_RA_2B_Design_v4_final.pdf.

The FS Program will use a five-hour duration requirement for the ICAP Testing methodology to determine battery system ESR QCC. Table 2-7 contains example QCCs associated with different duration ESRs.

Table 2-7. Example QCC determination for battery storage.

MW (maximum output)	Duration	Weighting	QCC
100 MW	2 hours	2/5 = 40%	100 MW * 40% = 40 MW

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100 MW	4 hours	4/5 = 80%	100 MW * 80% = 80 MW

Further information about the short term QCC analysis can be found in Appendix D, Section D.4.

Stated succinctly, this simplified QCC methodology does not account for the fact that capacity values for shorter duration storage devices tend to fall more rapidly than longer-duration storage, especially when penetration of storage resources increases and when accounting for the needs of each local balancing authority. Failing to recognize this reality of the declining capacity values as penetration increases, particularly for shorter duration storage resources, is a flaw in the NWPP RA methodology that should not be repeated or adopted by the Commission.

B. Oregon Should Allow for Seasonal Capacity Products.

As noted above, Swan Lake and Goldendale largely support adoption of the NWPP RA methodology. However, one area where Swan Lake and Goldendale would urge the OPUC to consider further refinements to the NWPP RA methodology is allowing for seasonal capacity products, which will unlock even greater utilization of resources and, thereby, result in lower

capacity prices for Oregon ratepayers. Currently, it appears Oregon is only proposing to calculate seasonal RA requirements using the NWPP methodology, without any associated rules around how a seasonal RA product could be bid into the Oregon's local resource zones.

Calculating the seasonal RA requirements, without also allowing for seasonal capacity products to be bid into a state RA program, provides an incomplete methodology that will unnecessarily limit the utilization of certain long-duration storage resources like pumped storage. If, instead, Oregon adopts a robust, flexible RA program that includes an ability to bid in a seasonal capacity product, large storage resources like pumped storage will be able to maximize their utilization, increase efficiency of dispatch, and, thereby, maximize benefit to Oregon ratepayers through lower overall capacity prices offtakers will pay for the output from these long-duration storage resources.

C. The RA Timeframe Should be Extended from Five to Ten Years and Commission Staff Should Define What Would Constitute an "Urgent" Need to Act Sooner.

The Proposal suggests that LREs informational filings, and the Oregon RA program's future rules, would require a demonstration of RA sufficiency over a five-year timeframe.[9] Given that the existing IRPs of the utilities in Oregon largely show significant capacity needs arising throughout the 2025-2030 period, Swan Lake and Goldendale suggest that the Proposal be modified to consider a ten-year timeframe, rather than the five-year period currently being considered. A ten-year RA evaluation window would also provide more accurate RA results, given that capacity retirements can occur in bunches (*e.g.*, several in a 2-4 year window, and then

[9] Proposal at 1 ("The informational filing will show the current levels of RA in the state over the next five years."); *id*. at 4 (discussing the Interim Solution and noting that, "All LREs will file in UM 2143 an RA showing that includes a load/resource balance forecast for the subsequent five years (2022-2027)."); *id*. at 5 (discussing the Long-term Solution and noting that, "The Commission will acknowledge RA plans that include a five-year action plan that demonstrates the LRE meets the 1 in 10 LOLE.").

none for a decade or more). An example of this is the many coal retirements throughout the Pacific Northwest that have, and continue to occur, in a condensed timeframe.

Failing to consider this practical reality of large capacity resource retirements may result in the RA program not accounting for significant, looming capacity needs of LREs that will not be able to fully be met by resources that can be constructed and brought online in a five-year period. The five-year RA window also disproportionately impacts long lead-time resources like pumped storage because any of the identified RA shortfalls will not be calculated sufficiently in advance to allow pumped storage to be constructed and online in time to meet the projected capacity needs. Therefore, a ten-year RA evaluation methodology would also more fairly treat all resource types and ensure all non-emitting resources have a chance to help Oregon transition its electricity portfolio to an entirely clean fuel-based fleet.

Swan Lake and Goldendale also request that Commission Staff provide further information and details about what would constitute a need for "urgent, binding" action to ensure near-term RA.[10] The Proposal indicates that:

> If the informational filings reveal the need for urgent, binding action to ensure near-term RA in the state, Staff will recommend that the Commission open a rulemaking to adopt an RA standard and program, equivalent to the NWPP standard, as an interim measure, with compliance demonstrated through seasonal forward showing filings that are acknowledged by the Commission.[11]

Swan Lake and Goldendale request further information on how Commission Staff would determine whether there is a need for "urgent, binding" action on near-term RA needs in Oregon. Specifically, Swan Lake and Goldendale have several questions about how Staff would make this finding, including: (1) would urgent be defined by the number of megawatts that are needed to

[10] *Id*. at 1.
[11] *Id*. at 2 (emphasis added).

meet the 1 in 10 loss of load probability referenced in the Proposal;[12] (2) what time period would Commission Staff look at to determine whether the shortage was sufficiently "urgent" to warrant immediate action; and (3) what role would existing IRPs and RFPs (and their associated plans to acquire or construct generation) play in determining whether the need is urgent. These questions require careful consideration because the answers to these questions will have significant impacts on whether actions are taken in the very near-term to adopt a binding RA program in Oregon.

III. Conclusion

Swan Lake and Goldendale reiterate their support for the Proposal and appreciate Commission Staff's thoughtfulness and commitment to addressing the RA issues facing the state. As discussed herein, Swan Lake and Goldendale would like to see a few improvements made to the Proposal that will allow long lead-time and long-duration storage resources like pumped storage to more fairly compete to meet Oregon's future capacity needs.

Filed: November 12, 2021

Respectfully Submitted,

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[12] *Id*. at 5.