

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 2166**

In the Matter of  
PORTLAND GENERAL ELECTRIC CO.,  
2021 All-Source Request for Proposals.

COMMENTS OF SWAN LAKE  
NORTH HYDRO, LLC AND THE  
GOLDENDALE ENERGY STORAGE  
PROJECT ON PORTLAND GENERAL  
ELECTRIC CO.'s 2021 ALL-SOURCE  
RFP – FINAL DRAFT

The companies working to develop the Swan Lake and Goldendale pumped hydro storage projects (“Swan Lake and Goldendale”) appreciate Portland General Electric Company’s (“PGE”) work that went into preparing the Final Draft of its 2021 All-Source RFP, which was filed in the above-referenced proceeding on October 15, 2021 (the “Final Draft RFP”). The parties in this proceeding agreed on a schedule that allowed staff and interested persons to submit comments on the Final Draft RFP by November 1, 2021.<sup>1</sup> These comments of Swan Lake and Goldendale are submitted in accordance with that agreed-upon schedule.

**I. Swan Lake and Goldendale Appreciate PGE’s Efforts to Consider Pumped Storage Resources**

A. PGE’s ELCC Values

Swan Lake and Goldendale would like to begin by reiterating their support for PGE’s robust model (its Sequoia model) that fairly evaluates pumped storage resources. Swan Lake and Goldendale submitted comments in support of PGE’s Sequoia model in their IRP Update

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<sup>1</sup> See Schedule for Docket UM 2166: Portland General Electric’s Application for Approval of Independent Evaluator for 2021 All-Source Request for Proposals, UM 2166, Aug. 3, 2021, available at: <https://edocs.puc.state.or.us/efdocs/HAH/um2166hah151611.pdf>.

comments,<sup>2</sup> so those comments will not be repeated here. However, Swan Lake and Goldendale would like to reiterate that PGE should be commended for doing the hard work to develop the Sequoia model in-house, as doing so is relatively unique, particularly when compared to its peer utilities in the Pacific Northwest. Swan Lake and Goldendale continue to express strong support for the appropriate effective load carrying capability (“ELCC”) value PGE attributes to pumped storage resources through its Sequoia model.<sup>3</sup>

B. Despite PGE’s Concessions Regarding the Online Date for Pumped Storage, the Final Draft RFP Still Precludes Pumped Storage from Fairly Participating.

While Swan Lake and Goldendale appreciate PGE’s concession of a longer online date deadline for long-lead time resources like pumped storage, which is clearly intended to allow those resources to participate in this RFP process, that concession does not actually allow pumped storage resources to fairly compete in this RFP, unless the Oregon Public Utility Commission (“Commission”) also revisits PGE’s previously-approved RFP scoring methodology.

The Final Draft RFP states, “All resources participating in this solicitation must be online by 12/31/2024 with the exception of pumped hydro resources that must be online by 12/31/2027.”<sup>4</sup> However, Appendix N to the Final Draft RFP contains PGE’s previously-approved scoring methodology that undermines these accommodations to pumped storage. Specifically, in the portion of Section 1.4 dealing with Online Date Certainty, PGE gives 0 points to any resource online after 12/31/2024.<sup>5</sup> This category (Online Date Certainty) is worth 88 of the possible 300

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<sup>2</sup> E.g., *Comments of Swan Lake North Hydro, LLC and the Goldendale Energy Storage Project on Portland General Electric Co.’s 2019 IRP Update*, LC 73, filed March 4, 2021, available at: <https://edocs.puc.state.or.us/efdocs/HAC/lc73hac143921.pdf> (“IRP Update Comments”).

<sup>3</sup> For example, Portland General Electric’s IRP Update suggests an eight-hour pumped storage resource would have an ELCC value in the range of 88.5% to 94.0%, depending on the size of the resource (ranging from 100 MW to 400 MW). See LC 73, IRP Update Appendices, Sec. D, “IRP Update ELCC Tables” at Table 16.

<sup>4</sup> Final Draft RFP at p. 11.

<sup>5</sup> *Id.*, Appendix N at p. 16.

non-price-related points, meaning it accounts for almost 30% of the non-price points.<sup>6</sup> If pumped storage resources, or any other long lead-time resource that is online after 2024, is attributed 0 points in a category worth nearly 30% of the non-price score, it is virtually impossible that these resources will be selected in the RFP, particularly given the other hurdles these resources already face in being competitive with cheaper renewable technologies.

Therefore, Swan Lake and Goldendale commend PGE for attempting to accommodate long lead-time resources in the Final Draft RFP. Unfortunately, without also revisiting the scoring methodology, that accommodation will not allow pumped storage resources to fairly compete in this RFP and, therefore, the accommodation PGE seeks to provide is effectively meaningless. Nevertheless, Swan Lake and Goldendale greatly appreciate PGE's attempt to respond to Swan Lake and Goldendale's repeated concerns about timing of participating in an RFP,<sup>7</sup> even if the method for participation in this Final Draft RFP does not allow pumped storage to compete on the same footing as other renewable resources.

C. While PGE Has Granted Concessions Regarding the Online Date for Long Lead-Time Resources, PGE's Transmission Requirements Are Unreasonable and May Preclude The Resources (Including Swan Lake) from Bidding into this RFP.

While PGE has made efforts to allow long lead-time resources to participate in this RFP, it appears PGE's transmission requirements for dispatchable resources may serve as a barrier to even bidding for resources that are distantly-located from PGE's system, like Swan Lake. For example, the Final Draft RFP states that

To qualify for this RFP as a dispatchable resource, a bidder must have Long-Term Firm transmission service for 100 percent of the facility's interconnection limit. Bidders relying on BPA for transmission service are required to have either previously been granted eligible transmission service or have an eligible and active OASIS status Transmission Service Request (TSR) participating in the BPA TSR

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<sup>6</sup> *Id.* at p. 14.

<sup>7</sup> *See* IRP Update Comments.

Study and Expansion Process. The transmission service must originate at the resource point of receipt (POR)/point of interconnection (POI) and provide delivery to one of the acceptable Points of Delivery, defined below, prior to project COD. Long-term rights must match the duration of the contract term or include rollover rights.<sup>8</sup>

The discussion from the Final Draft RFP suggests that to even qualify to participate in this RFP, a dispatchable resource must have long-term firm transmission for 100 percent of the facility, or, for bidders relying on BPA for transmission service, have either been granted eligible transmission service or have entered BPA's TSR Study and Expansion Process ("TSEP").

For resources like pumped storage that have several years of development remaining before they will be commercially operational, requiring that the facilities have long-term firm transmission in hand now is an unrealistic and punitive requirement. Further, the requirement that bidders relying on BPA for transmission service have entered BPA's TSEP to qualify to participate in the RFP is an unnecessarily narrow requirement that ignores many other factors and possibilities that may be relevant for delivering output to PGE's system from complex projects like Swan Lake. Additionally, such a requirement would significantly limit the projects that can be considered in this RFP, likely to the detriment of PGE's ratepayers, particularly where projects that are excluded because of this requirement may be the least cost resources.

Instead of imposing these arbitrary barriers to entry, Swan Lake and Goldendale suggest that a sound and reasonable transmission plan should be sufficient, as a minimum requirement, to be eligible to participate in the RFP. For resources that are longer lead-time like pumped storage, stating a viable transmission plan makes sense given that, because of their longer lead-times, these resources would not need to have acquired long-term firm transmission or have an active transmission service request ("TSR") as of the date of their bid to meet their projected online dates.

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<sup>8</sup> Final Draft RFP at p. 17.

Stated differently, these resources have upwards of six years to secure necessary transmission arrangements, so they should not be precluded from bidding into this RFP now.

At the very least, projects that have an active TSR with the expectation of participating in a future TSEP, to the extent applicable, such that they can reasonably meet their expected online date, should be considered in this RFP, even if they are not in the current TSEP. Furthermore, given that the most recent, currently active TSEP deadline for submitting TSRs was in August 2021, and the Final Draft RFP was not released until October 2021, it is unreasonable for PGE to include a requirement that projects already be in the BPA TSEP when the window for joining that process preceded the issuance of the Final Draft RFP by at least two months.

The requirement to participate in the BPA TSEP is also unreasonable because, particularly for complex projects like Swan Lake, BPA transmission may or may not be relevant to the ultimate delivery of the resources' output. For those projects distant from PGE's system, there are a wide variety of transmission arrangements that may be used to deliver output to PGE. This is especially true for a project like Swan Lake that is located on the AC Intertie, where many parties, including PGE itself, hold transmission rights. Such transmission arrangements for Swan Lake are just now taking shape, given the project's complexity and long development timeframe. Therefore, PGE should acknowledge that for such projects, a sound and reasonable transmission plan, that can be implemented within the project development window, is a sufficient precondition for the project to bid at this time.

Another factor that is ignored by PGE's requirement to participate in the BPA TSEP for qualifying to bid in this RFP is that PGE has its own transmission rights that may be relevant to the delivery arrangements of certain projects. When discussing a benchmark bid in Appendix P of the Final Draft RFP, PGE recognizes that:

PGE reserves its discretion to consider whether Colstrip associated transmission rights could become available across PGE's planning horizon for the benefit of PGE's customers. Should PGE make Colstrip associated transmission rights available to improve the long-term economics of a benchmark or other bid, those rights would also be made available for all bidders subject to the same constraints and limitations.<sup>9</sup>

By PGE's own acknowledgment, it may consider offering its own transmission rights to distantly located projects in Montana. However, PGE also holds significant transmission rights that would be relevant to delivering other, distantly located projects like Swan Lake. Therefore, as a matter of fairness, PGE should not limit the offer to use its own transmission rights to resources distantly located in Montana and not those similarly situated in other regions, such as Swan Lake.

## **II. PGE Should Consider the Likelihood that Events Occurring Between 2024 and 2027 are Likely to Further Increase the Need for Resources Like Pumped Storage**

Appendix Q to the Final Draft RFP discusses PGE's expected resource needs via a needs assessment update. While much of the Final Draft RFP uses 375 MW as the amount of dispatchable capacity that PGE will need through the 2025 timeframe, Appendix Q acknowledges that Oregon's recent enactment of a carbon-free electricity requirement by 2040 via HB 2021 is not factored into PGE's analysis of its dispatchable capacity need. For example, Appendix Q states:

It is important to note that consistent with the methodology used in both the 2019 IRP and IRP Update, this calculation totals the economic generation from dispatchable resources while not considering the emission targets established in HB2021. The later inclusion of these policy mandates is expected to limit the generation from existing thermal resources and create an increased reliance on market purchases.<sup>10</sup>

Given these statements in PGE's Final Draft RFP, it is clear that moving towards compliance with HB 2021's requirements will result in PGE needing even more clean, renewable, and dispatchable

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<sup>9</sup> Final Draft RFP, Appendix P at p. 3.

<sup>10</sup> Final Draft RFP, Appendix Q at p. 3.

capacity from resources like pumped storage in the post-2025 timeframe than is currently being projected in the Final Draft RFP.

In addition to PGE's own acknowledgment of an increased dispatchable capacity need, PGE's analysis does not account for the near-certain retirement of Colstrip Units 3 and 4 by 2025 (or 2027, at latest),<sup>11</sup> of which PGE has a 300 MW share. Should PGE exit Colstrip Units 3 and 4 in the timeframe that is currently being contemplated, PGE's dispatchable capacity needs in the 2025 to 2027 timeframe will further increase by an additional 300 MW. Taken together with the reduction in reliance on natural gas generation as a result of HB 2021, PGE could be facing a capacity need in the 2025 to 2027 timeframe that is orders of magnitude larger than what is currently contained in the Final Draft RFP.

Given the significant likelihood that PGE's dispatchable capacity need will significantly increase in the 2025-2027 timeframe based on the events described above, it is critical that PGE act now to acquire dispatchable, long-lead time resources like pumped storage if PGE has any hope of those resources being online when these significant needs materialize. If PGE waits until the next, 2021 IRP cycle to take any action to spur pumped storage development, projects like Swan Lake, which is among the most mature in the region, may not be available until closer to 2030.

As Swan Lake and Goldendale have previously shown to PGE and the Commission,<sup>12</sup> pumped storage projects have significantly longer lead-times than most other resources due to the

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<sup>11</sup> See *Future of Colstrip Units 3 and 4 May Be Decided in Arbitration*, Clearing Up, March 19, 2021, available at: [https://www.newsdata.com/clearing\\_up/opinion\\_and\\_perspectives/future-of-colstrip-units-3-and-4-may-be-decided-in-arbitration/article\\_a7e21164-88df-11eb-9a7c-f3d7552e67d3.html](https://www.newsdata.com/clearing_up/opinion_and_perspectives/future-of-colstrip-units-3-and-4-may-be-decided-in-arbitration/article_a7e21164-88df-11eb-9a7c-f3d7552e67d3.html) ("A recent depreciation study by PGE evaluated accelerating the depreciation schedule on its 20 percent shares to 2025, but recommended a 2027 depreciation schedule.").

<sup>12</sup> Swan Lake previously provided an example project schedule to the Commission in this docket. See *In the Matter of Portland General Electric Company, 2019 Integrated Resource Plan*, Opening Comments of Swan Lake North Hydro, LLC at Appendix A, Docket LC 73 (filed Oct. 9, 2019), available at: <https://edocs.puc.state.or.us/efdocs/HAC/lc73hac15838.pdf>; see also IRP Update Comments.

amount of time required to build the highly-technical, advanced turbines necessary for these projects. Given the longer time required to construct pumped storage resources, Swan Lake and Goldendale emphasize that PGE and the Commission must provide an opportunity for pumped storage projects to fairly compete with all other resources if PGE expects to rely on these resources to meet the post-2025 looming dispatchable capacity need. And, as further explained below, because batteries cannot be relied upon to help solve this capacity issue, PGE will be required to focus on clean, grid-scale, dispatchable, capacity resources like pumped storage.

### **III. Pumped Storage is a Hedge Against Climate Change and Future Supply Chain Issues Associated with Batteries**

Pumped storage resources like Swan Lake and Goldendale are uniquely situated to assist utilities like PGE in meeting their future capacity needs. Pumped storage is a hedge against climate change in that these resources provide maximum operational flexibility that is capable of meeting both summer and winter peaking events, including those that last for long periods of time. Unlike other storage technologies such as batteries, pumped storage resources would help PGE meet its summer and/or winter capacity needs, even during long-duration weather events. As the global climate continues to move in the direction of more extreme weather events, having a set of resources that provide maximum flexibility, on a significant scale, will be imperative for utilities like PGE to maintain reliability. Pumped storage resources are one of the few clean capacity resources that are truly capable of providing this needed flexibility.

Similarly, pumped storage resources help with renewables integration. As various states in the Pacific Northwest move toward a greener future and require (via RPS requirements, etc.) more renewable energy be integrated into the electricity system, utilities will need significant storage capability and system operating flexibility in order to reliably integrate the scale of renewable resources that will be required to meet these policy objectives. As compared to any



other resource currently under consideration by PGE, pumped storage resources are the best suited to serve these purposes, given their capacity to absorb significant energy from renewable resources, long-discharge durations, and ability to provide the services necessary to maintain a reliable electrical system. Without significant storage capability on the scale of a pumped storage project, Swan Lake and Goldendale have concerns whether a truly clean energy future is even feasible.

Furthermore, pumped storage is best-suited to meet PGE's significant capacity needs because other storage technologies are largely unproven for this purpose, or ill-suited to meeting these needs. Swan Lake and Goldendale will not repeat their prior comments on why batteries are ill-suited to providing capacity at the scale that PGE needs but would request that PGE and the Commission review the projects' prior comments on that subject that were filed in PGE's IRP Update docket.<sup>13</sup>

In addition to the concerns around whether batteries are well-suited to provide the type of capacity PGE needs, there is growing concern that the world is facing a lithium-ion shortage as the global economy moves to electrify vehicles, in addition to the proliferation of battery storage systems in utility applications.<sup>14</sup> These supply-chain issues are only likely to get worse over time, meaning PGE needs to consider a diversified approach to meeting its future dispatchable capacity needs. Such an approach requires considering technologies that can provide dispatchable, clean capacity at a scale large enough to maintain grid reliability and support customers' energy needs.

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<sup>13</sup> See IRP Update Comments.

<sup>14</sup> E.g., *Battery Scarcity Could Dwarf Chip Shortage Impact on Global Auto Sales*, Forbes, July 27, 2021, available at: <https://www.forbes.com/sites/neilwinton/2021/07/27/battery-scarcity-will-dwarf-chip-shortage-impact-on-global-auto-sales-report/?sh=38f643ff363e>; *Shortages Flagged for EV Materials Lithium and Cobalt*, Reuters, July 1, 2021, available at: <https://www.reuters.com/business/energy/shortages-flagged-ev-materials-lithium-cobalt-2021-07-01/>.

Swan Lake and Goldendale are two such resources that are perfectly situated to make a significant dent in meeting PGE's future dispatchable capacity needs.

#### **IV. Conclusion**

While PGE has made progress in the Final Draft RFP on allowing long lead-time resources like pumped storage resources to participate, primarily by extending the online date for resources bidding into the RFP, other aspects of PGE's Final Draft RFP preclude these resources from meaningfully and fairly competing in this RFP. Without changes to PGE's previously-approved scoring methodology, particularly the category of points awarded for meeting a 2024 online date, and modification of PGE's arbitrary transmission requirements for qualifying to participate in this RFP, long lead-time resources like pumped storage may not be able to bid or fairly compete in this RFP.

Swan Lake and Goldendale respectfully request that PGE and the Commission carefully consider these two existing barriers to entry for long lead-time resources and consider further modifications to, and accommodations in, the Final Draft RFP (and potentially the scoring methodology) that would allow these resources to participate on the same basis as any other resource.

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Respectfully Submitted,

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