

BEFORE THE
STATE OF WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of
Pacific Power & Light Company's
2017 Integrated Resource Plan.

Docket UE-160353

National Grid USA's Comments

National Grid USA ("National Grid") appreciates the opportunity to provide comments to the State of Washington Utilities and Transportation Commission ("the Commission" or "WUTC") on the Pacific Power & Light Company's 2017 Integrated Resource Plan ("IRP") in accordance with the "Notice of Opportunity to File Written Comments and Notice of Recessed Open Meeting," dated April 26, 2017, which was issued in this proceeding.

A. Interests of National Grid

National Grid is a subsidiary of National Grid plc, a Fortune Global 500 company and one of the largest investor-owned energy companies in the world, with a market capitalization of over \$50 billion. National Grid plc has utility operations in both the United Kingdom and the United States. National Grid is actively engaged in the development and operation of bulk transmission and grid-scale storage assets that will be necessary as the United States transitions the electric system to a low-carbon grid cost-effectively and reliably.

National Grid believes that pumped storage hydropower will be critical to ensuring flexibility of the electricity system with unprecedented penetration levels of renewables. Pumped storage hydropower is a mature and commercially proven technology. Because it can be deployed at utility-scale cost-effectively, pumped storage is uniquely positioned to leverage existing regional transmission infrastructure and generation resources to address current and foreseeable significant regional operational challenges, including grid reliability and the integration of additional renewable energy resources.

National Grid is presently pursuing development of the two most promising pumped storage projects in the Pacific Northwest, the JD Pool Pumped Storage Hydropower Project in southern Washington ("JD Pool Project") and the Swan Lake North Pumped Storage Hydropower Project in southern Oregon ("Swan Lake Project"). Both projects will utilize environmentally-friendly "closed-loop" technology, are located near existing high-voltage transmission corridors (i.e. AC-DC Interties), are capable of providing unmatched and environmentally unconstrained flexibility, are capable of serving multiple uses, and can provide stacked benefits on an individual utility and/or regional basis. Both projects will be able to take advantage of low-cost California solar mid-day oversupply. The JD Pool Project will have an installed capacity

of 1,200 MW in generating mode and is strategically located approximately 8 miles southwest of Goldendale, Washington, at the top of the AC-DC Interties along a major import/export path to SP 15. JD Pool would support and enhance beneficial regional power exchanges between California and the Pacific Northwest. In addition, JD Pool is a highly viable project with secure water rights and little controversy. The Swan Lake Project, which is being jointly developed by National Grid and Rye Development, has an installed capacity of 393.3 MW in generating mode and will be located approximately 11 miles northwest of Klamath Falls, Oregon.¹

B. Comments of National Grid

National Grid supports the 2017 IRP submitted by Pacific Power & Light Company (hereinafter “Pacific Power” or “PacifiCorp”) to the degree that it facilitates transitioning to a low-carbon grid. In particular, National Grid supports PacifiCorp’s plan for the first ten year planning period during which it will significantly increase renewable generation in a manner that is cost-effective and promotes reliability. National Grid notes, however, that the IRP indicates that following the first ten year planning period, in 2029, PacifiCorp will build new natural gas-fired generation. Rather than accepting this portion of PacifiCorp’s plan, the Commission should direct PacifiCorp to undertake a thorough analysis of potential alternatives, including pumped hydro storage in the immediate near-term and continue to build on its storage IRP reports and analysis on a sub-hourly basis the benefits that pumped storage provides.² This is consistent with PacifiCorp’s statements in its IRP: “Recognizing the long time horizon before the first natural gas plant is added, PacifiCorp will continue to evaluate potential long-term supply alternatives, including the potential penetration of energy storage, through its on-going resource planning efforts.” *See* IRP Vol. I at 238.

In the PacifiCorp regionalization benefit study prepared by Energy and Environmental Economics (“E3”) that was the primary motivator to seek joining CA-ISO, E3 found integration would have significant benefits such as more efficient unit commitment and dispatch, lower peak capacity needs, more efficient overgeneration management, and renewable procurement savings.³ National Grid is confident that further analysis will show that Pacific Northwest pumped hydro storage could provide significant benefits to Washington as well as Oregon and California, and would facilitate regional GHG reduction efforts, integration of renewable energy, and overall reliability. Pacific Northwest pumped storage may also accelerate coal retirements

¹ The Swan Lake Project filed a license application at the Federal Energy Regulatory Commission on October 28, 2015 (FERC Project No. 13318).

² In the IRP, PacifiCorp has included an appendix in which contains a Bulk Storage Study prepared by Black & Veatch. *See* IRP, Vol. II, App. P. In this appendix two of the three pumped storage projects discussed are National Grid’s JD Pool and Swan Lake projects. *Id.* at 3-5.

³ *See* Energy and Environmental Economics, *Regional Coordination in the West: Benefits of PacifiCorp and CAISO Integration*, October 2015, at 37, available at <http://www.oatioasis.com/PPW/PPWdocs/StudyBenefits-PacifiCorp-ISOIntegration.pdf>

due to obsolescence since a large number of PacifiCorp's coal units were built before 1980.⁴ Many of the coal units are nearing the end of their useful life.⁵

National Grid recognizes that to do a regional pumped storage study PacifiCorp would have to collaborate with other utilities and balancing authorities, including the California Independent System Operator ("CAISO"). Due to the fact that its service area stretches into Washington, Oregon, and California, National Grid believes that PacifiCorp is the best positioned utility to lead such a study. PacifiCorp has already taken on a leadership role with respect to regional integration, particularly with respect to formation of the now robust western Energy Imbalance Market ("EIM") and potential expansion of the CAISO. The modeling work that PacifiCorp has already done with the CAISO should facilitate cooperation on a regional pumped storage study. Moreover, to the degree that Oregon and California will be considering procurement of pumped storage in their own IRP proceedings, it would be advantageous to PacifiCorp to ensure that such consideration include interregional projects from which PacifiCorp will benefit.

National Grid recognizes that the Commission recently issued a *Draft Report and Policy Statement on Treatment of Energy Storage Technologies in Integrated Resource Planning and Resource Acquisition* ("Draft Policy Statement on Storage").⁶ National Grid believes that its request to have PacifiCorp study the benefits of pumped storage for Washington, Oregon, and California is consistent with WUTC's Draft Policy Statement on Storage and National Grid's filed comments on the Draft Policy Statement on Storage.⁷

National Grid points out ordering such a study would also be consistent with the "Western Public Utilities Commissions' Joint Action Framework on Climate Change," ("Joint Action Framework") which representatives of WUTC, the Oregon Public Utilities Commission ("Oregon PUC"), and California Public Utilities Commission ("CPUC") recently signed.⁸ Under the Joint Action Framework, the commissions agree to work together to address climate change and to, among other things, "[e]xplore the collaborative development and use of low-carbon energy capacity resources to lower customers' costs and improve system reliability."

In order to facilitate coordinated action on its study request, National Grid will be filing comments on the PacifiCorp IRP proceeding not only in this proceeding, but also before the Oregon PUC and the CPUC. These comments provide relevant background information

⁴ For example, information provided by PacifiCorp about the Huntington, Jim Bridger, Naughton, and Wyodak plants indicates that all units at these plants were built before 1980. See plant descriptions at <https://www.pacificorp.com/es/thermal.html>.

⁵ See PacifiCorp IRP Vol. I at Table 5.3 (showing that of PacifiCorp's 24 existing coal units, 11 will reach their assumed end-of-life year by 2030).

⁶ See *Draft Report and Policy Statement on Treatment of Energy Storage Technologies in Integrated Resource Planning and Resource Acquisition*, WUTC Docket Nos. UE-151069 and U-161024, dated March 6, 2017.

⁷ See Comments of National Grid filed docket on March 31, 2017, WUTC Docket Nos. UE-151069 and U-161024.

⁸ Available at <https://www.utc.wa.gov/regulatedIndustries/utilities/Documents/2017-03-07%20Western%20States%20MOU%20%28002%29.pdf>.

regarding state goals, discuss relevant sections of the IRP, and offer recommendations regarding what the PacifiCorp study of pumped storage should cover.

National Grid will be filing extensive comments on the PacifiCorp IRP with the Oregon PUC next week by the Oregon PUC filing deadline of June 23, 2017. National Grid will supplement its comments in this docket when the comments are filed with the Oregon PUC.

Dated this 16th day of June, 2017.

Respectfully submitted,

A handwritten signature in blue ink that reads "Nathan Sandvig". The signature is written in a cursive style and is positioned above a horizontal line.

Nathan Sandvig
Director, Business Development
National Grid USA