BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1856

In the Matter of PORTLAND GENERAL ELECTRIC COMPANY, Baldock Storage Pilot	Staff Comments Informational Filing Only

The Public Utility Commission of Oregon Staff (Staff) offers these brief comments on Portland General Electric's (PGE) Draft Technical Specifications for the Baldock Energy Storage System (ESS).

BACKGROUND

On August 13, 2018, the Commission issued Order No. 18-290 in this docket, adopting a partial stipulation (Stipulation)[1] that outlined an agreed approach to the development of five energy storage projects, as well as additional analyses concerning the site locations that PGE chose for certain energy storage projects. In February 2019, PGE provided such analysis to justify its selection of the Baldock site for a 2MW/4MWh storage system as one of the five energy storage projects. PGE selected the Baldock site to explore the value of storage as a non-wires alternative to Transmission and Distribution (T&D) infrastructure investments in the presence of high penetration of solar generation and to explore the specific benefits a storage system can provide in addressing reliability and power quality issues due to high penetrations of distributed solar.

In September 2019, Staff submitted comments on PGE's justification for the selection of the Baldock location (on the Canby-Butteville substation), noting the reasonableness of PGE's selection and suggesting several factors to be considered when evaluating this

[1] Docket No. UM 1856, Partial Stipulation filed May 22, 2018.

pilot project.[2] Shortly thereafter, PGE filed the Draft Technical Specifications for the Baldock ESS.[3]

COMMENTS ON DRAFT TECHNICAL SPECIFICATIONS

Based on the information provided by PGE, Staff notes that the Draft Technical Specifications for the Baldock ESS RFP are generally well drafted and include appropriate requirements. Staff notes that additional specificity with regard to certain data requirements can and should be added by PGE to the contact for the project, once a contractor is selected. Further, Staff provides three points that PGE should keep in mind while moving forward with the Baldock ESS RFP:

- First, because this is a pilot project, the ability to evaluate many aspects of the project after it is operational, in terms of lessons to be learned and applied to future ESS developments, is of great import.

- Second, in light of the learnings to be gained, PGE should pay close attention to telemetry, data collection, data storage, and protection requirements for any contractor selected. This is important because robust, accurate, and granular data will be the only highly effective tool for PGE and Staff to conduct meaningful analysis and evaluation of the project in the future. Staff expects this information, at minimum, to be collected and recorded by PGE.

- Last, PGE will have to balance the need for specificity, comprehensiveness, and granularity in data collection with the need for the Technical Specifications to be broad and flexible enough not to exclude viable bids, nor drive up the price of the responding bids unnecessarily.

With the above comments in mind, Staff notes that the categories for telemetry included on Page 39 of the Draft Technical Specifications and in Appendix E, which in turn reference the data points listed in Appendix "Table F.3,"[4] are very broad. When evaluating responses to the RFP, and after selecting a contractor, PGE should specify a robust protocol for telemetry, collection of detailed and granular data on system performance and operations, and storage and protection of that data. For the purpose of refreshing past information, Staff refers back to some of the key goals for project learnings noted in the September 2019 Staff comments. To repeat and expand upon those comments:

- One goal of the pilot project will be to determine if a discernable benefit can be attributed to the addition of storage where there is a high penetration of solar at a feeder or distribution substation (i.e. at the Baldock site), thus, the data points collected and the intervals at which they are logged should be appropriate for

[2] Docket No. UM 1856, Staff Comments filed September 23, 2019.
[3] Docket No. UM 1856, PGE's Draft Technical Specifications for the Baldock Energy Storage System filed September 27, 2019.
[4] Staff and PGE agree this table should be renumbered to "E.1" in the final version of the Technical Specifications, for clarity.

future detailed analysis of system performance vis-à-vis the variable nature of the solar generation associated with the Baldock feeder.

- Necessarily, this analysis will need a reference point, so PGE should ensure that the data collected will be able to be compared to similar data collected from one or more of its other feeders/facilities that **does not** exhibit a high penetration of solar.

- Existing modeling software, such as the Electric Power Research Institute's (EPRI's) StorageVET tool, should be used to analyze the potential benefits of locating storage near high penetration of solar, utilizing data gathered by the Baldock project. The variables and data points utilized in the StorageVET tool are described in the StorageVET 2.0 User Guide. Once a contractor is selected, PGE should ensure that there will be no obvious deficiencies in data collection that would impede the effective use StorageVET or a comparable analysis tool.

This concludes Staff's comments.

Dated at Salem, Oregon, this 16th day of October, 2019.

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