BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

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In the Matter of	
PORTLAND GENERAL ELECTRIC	OPENING COMMENTS OF OREGON DEPARTMENT OF ENERGY
2016 Integrated Resource Plan)

The Oregon Department of Energy (ODOE, Department) appreciates the opportunity to comment on Portland General Electric's (PGE, Company) 2016 integrated resource plan (IRP).

Summary

ODOE's comments address the following topics: (1) Prioritization of carbon-free resources; (2) Robust Evaluation of Capacity and Flexibility Needs; (3) Near-term acquisition of renewable capacity; (4) Demand Response; (5) Enabling study to evaluate the impacts of PGE joining a Western Independent System Operator; and (6) Enabling study to evaluate the location-specific benefits to PGE's transmission and distribution system of deploying distributed energy resources.

1. Prioritization of Carbon-free Resources

Overall, ODOE commends PGE for prioritizing the implementation and dispatch of carbon-free resources, including energy efficiency, demand response, and renewable energy. Additionally, ODOE appreciates the efforts to evaluate the impact of a wide-range of CO2 price scenarios on the acquisition of carbon-free resources through 2050. The Department looks forward to how these analyses evolve in future IRP cycles given the potential for the

costs of carbon-free technologies to continue to fall and efforts to further decarbonize the economy accelerate.

2. Robust Evaluation of Capacity and Flexibility Needs

The Department is pleased with the engagement of E3 as a consultant to assist PGE in developing more advanced tools for evaluating capacity and flexibility, especially with the significant increase expected in variable energy resources like solar and wind energy. PGE's use of the Effective Load Carrying Capacity (ELCC) modeling technique is in line with state-of-the-art evaluation of capacity by utilities across the country. This enables stakeholders and the Oregon Public Utility Commission (Commission) to better understand the outcome of the capacity and flexibility studies and have a higher level of confidence in the results.

3. Near-term Acquisition of Renewable Capacity

The Department supports, and encourages the Commission to acknowledge, the Company's strategy of procuring renewable resources in the near-term on the basis of cost-effectiveness for ratepayers, even in the absence of a near-term need to meet compliance obligations under the renewable portfolio standard (RPS). In this case, ODOE understands that this strategy is driven by the phase-out of the federal production tax credit (PTC) for new wind capacity. ODOE also encourages the company to continue to evaluate the ongoing cost-effectiveness of renewable generation as technology costs continue to fall.

4. Demand Response

The Department applauds PGE's focus in its Action Plan on the development of a wide-range of demand response assets across customer class within its service territory.

ODOE believes this prioritization of demand response will successfully leverage the

Company's existing leadership in the development of demand response programs in the region.

The Department would like to see PGE, however, continue to be more aggressive in this area, to include the development of critical peak pricing and other time-variant pricing programs, in addition to an evaluation of the capabilities of demand response assets to provide load shifting and other ancillary services to integrate higher levels of renewable generation on its system at lower cost.

5. Enabling Study to Evaluate the Impacts of PGE Joining a Western Independent System Operator (ISO)

There have been ongoing discussions across the region about the potential for an expanded Western Independent System Operator (ISO). This expansion could include the Balancing Authority of PGE, regardless of whether it includes any other regional utilities, joining with the existing Balancing Authority of the California Independent System Operator (CAISO). ODOE Staff and PGE Staff have actively participated in these on-going discussions in dockets led by the California Energy Commission and the CAISO. And in a letter dated July 11, 2016 to the Governor of California, Governor Kate Brown noted that a "well-designed [Western ISO] could deliver substantial benefits to the citizens of California, Idaho, Oregon, Utah, Washington, and Wyoming through a more integrated electricity grid."

Given the potential for substantial and broad benefits from PGE's potential participation in a Western ISO, the Department recommends that PGE's Action Plan include an enabling study to evaluate the costs and benefits to PGE ratepayers of becoming a participant in a Western ISO. The study should include, among other topics, the expected impact that the Company's participation would have on its acquisition of energy, capacity,

bundled renewable energy certificates, and transmission resources. The study should also include a scenario analysis of how the costs and benefits would vary dependent on which utilities across the Northwest also participated.

6. Enabling Study to Evaluate the Location-specific Benefits to PGE's Transmission and Distribution System of Deploying Distributed Energy Resources

Technological advances and falling costs are improving the cost-effectiveness of a variety of distributed energy resources (DERs), including solar, battery storage, electric vehicles, and communication-enabled loads that can interact with the grid, among other technologies. The Department recognizes that utilities around the nation have begun developing mechanisms to deploy DERs in a manner that can capture location-specific benefits to the transmission and distribution system.

To build upon the Company's existing leadership in the area of smart grid and the development of demand response programs, in addition to its increasing evaluation of electric vehicles and storage technologies, ODOE recommends that PGE's Action Plan include an enabling study to evaluate the location-specific benefits to its transmission and distribution system that it could achieve through the strategic deployment of DERs.

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Conclusion

The Department appreciates this opportunity to file opening comments in response to PGE's 2016 Integrated Resource Plan. As noted above, ODOE strongly supports PGE's efforts to prioritize carbon-free resources, including its attribution of capacity benefits to renewable resources and its proposal to procure significant new renewable capacity in the near-term to capture federal tax incentives. Additionally, ODOE recommends that PGE include the two additional enabling studies described in the Department's comments above.

DATED this 24th day of January, 2017.

Respectfully submitted,

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