NATURAL RESOURCES DEFENSE COUNCIL

Via Electronic Mail (puc.hearings@state.or.us)

August 4, 2017

Oregon Public Utility Commission
Attention: Filing Center
201 High Street SE
Salem, Oregon 97301

Re: Natural Resources Defense Council Public Comments on Oregon PUC Docket No. LC 66, Portland General Electric Co. Integrated Resource Plan

Introduction

NRDC has participated in the PGE 2017 Integrated Resource Planning process since it was initiated in 2016. We commend the utility and its IRP staff for an open and substantive process. The staff was responsive to public comments and questions, and willing to reexamine critical components of the analytic vehicle, including technical inputs and weighting of outcomes. The documentation was substantial and pertinent. NRDC has commented earlier, in writing and in oral testimony, in general support of PGE's IRP with the proviso that the Commission should not acknowledge any new baseload gas combustion turbin capacity in PGE's plan. The utility has since agree that it will not seek any such resource, and proposes instead to move with all prudent speed to acquiring new, low-carbon renewable resources as needed for its system operations.

The Commission will consider in the coming week whether to acknowledge those elements of PGE's IRP that would enable the utility to proceed with the acquisition of 500 nameplate megawatts (MW) of new wind energy as a first step toward implementing the full scope of its proposed IRP. Commission staff appear to be recommending against such an acknowledgement. NRDC herein argues for favorable Commission action on this PGE initiative, for the following reasons:

1. Economics: The economic argument for ratebasing the costs of proceeding with the wind generation or deferring it appears to be essentially a wash. The divergences

between the staff recommendations and those of many stakeholders lie largely in their hypothesized expectations of future events, most particularly the future role and functions of the regulated utility. About these there's no clear way to distinguish clear probabilities from a range of possibilities. For the record, I lean toward diminished and more differentiated roles for the utility (backup; integration; power quality; possibly unregulated customer-side-of-meter equipment and services), but not its disappearance. I acknowledge that my views are prognostications, not assured outcomes. And I believe this outcome, if it occurs, is further away than 2030.

2. Risk of overbuilding vs. risk of failing to advance low-carbon renewables: In the meantime, the Commission should weight heavily in its decision making the clear requirement for the energy sector to be rapidly developing wind, solar and other low-carbon generating resources, along with system storage, to displace existing fossil fuel generation and any new such carbon-reliant resources. Arresting and reversing the accumulation of greenhouse gases requires a full-on effort to convert the US and global energy sector sooner rather than later. Government agencies, including the OPUC, must balance risk of overbuilding and stranded assets against the risk of failure to accomplish this conversion in a sufficiently timely way. The penalties for overbuilding are to be taken seriously, certainly; the penalties for failing to make the conversion in a sufficiently aggressive time frame are decidedly more severe, and merit erring on the side of more near-term economic risk, not less.

3. Competitiveness of utility scale wind (and solar) vs. likely distributed renewable costs: Larger-scale wind and solar farms, with their capital requirements, are by a clear margin more economic today than are small-scale, distributed facilities using these technologies[1]. Until the cost lines between these two approaches are much closer to crossing, utilities and their regulators should welcome and support continued, and accelerated development of utility-scale resources (the development of which will in turn drive down costs of future distributed applications).

4. Value-added of operational experience integrating new wind: PGE and other utilities should be encouraged to proceed into wind and solar installations, even at some risk of future stranded assets, in order to gain the value added of operating experience integrating variable generation. The operating characteristics of variable generation demand utility practices and protocols ddramatically different

[1] See NREL, Lazard Freres, and other analysts papers (titles supplied on request).

from conventional system management tools. Relying heavily on modeling the integration challenges and costs they present can only be partially successful, since the models themselves need real world, realtime operational experience to iteratively refine their aim. To illustrate this point, consider the modeled expectations of utilities in 2007 of the costs of integrating wind at a 10% penetration level, as reflected in the Northwest Wind Integration Action Plan[2]. Utility modeled cost projections ranged from $3/MWh to nearly $10/MWh. Wind penetration of the NW grid at the time was around 2%, while today it has surged past the 10% level. And while with increased grid penetration new issues have arisen (e.g., periods of overgeneration), PGE's expected integration cost of incremental new wind (per technical IRP staff) remains right around $4/MWh. Modeling from ten years ago has been refined by operational experience since; risks have been mitigated, and projected integration costs have come down. Meanwhile new, cost-mitigating wind and solar operational efficiencies have been captured, while new storage technologies promise continued declines in integration costs. PGE's proposed 500 MW of new wind can be expected to contribute to driving down integration and other operational costs as operating experience is acquired.

5. Value-added of new wind developed in complementary wind regimes and integrated into PGE's system: The value of operational experience integrating utility-scale wind would be greater if the Commission directed PGE to fully explore options for bringing Eastern Slope Rocky Mountain wind resource into its PNW system. The different wind regimes should contribute to higher system wind utilization factors than can be captured from west-side wind alone. While such an acquisition within the purview of this IRP should not be at any price, PGE should be allowed to pay a modest cost premium in exchange for the added value such a resource would bring.

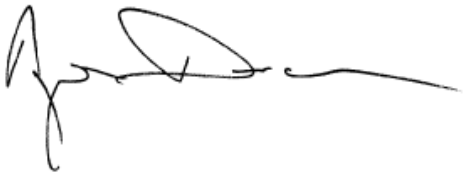
6. Risk of stranded asset: The staff report describes the risk that PGE might acquire a wind resource today, at current ratepayers' expense and risk, for 500 MW of wind that PGE might have no load for in 2030. There are two responses of merit to this. First, today's PGE ratepayers are the beneficiaries themselves of resource investments made years and sometimes decades earlier, at risk to the ratepayers of those days; resources – such as federal and PGE hydropower projects – that have proven their long-term cost-effectiveness. Today's ratepayers can in return be reasonably expected to carry some present risk to benefit their own future

[2] Adopted by the NW Wind Integration Steering Committee, March 2007, Copies available from the NW Conservation and Energy Planning Council

counterparts. Second, if the PGE of 2030 finds itself with shrinking loads and fleeing customers – an outcome by no means foregone, especially with electrification of the transportation fleet in the offing – those loads will go somewhere. A proven low-carbon resource in a high quality wind regime will certainly have a market value to the successor suppliers of the era (true even if community systems have supplanted the regulated electric utility, since such systems may well seek slices from such proven low carbon resources). And while newer technologies can supplant their older versions in increasingly foreshortened period of time, the institutions that deploy them tend to be more durable and less likely to be transformed overnight. In short, 500 MW of new wind is a modest risk to PGE and its ratepayers (of whom I am one) relative to the significant interim value added and the likely residual economic value of the resource.

I urge the Commission to act favorably in acknowledging PGE's proposition to acquire 500 MW of new wind in a manner timely enough to benefit from the remaining years of the federal Production Tax Credit.

Respectfully submitted,



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