

Integrated Resource Planning



STAKEHOLDER FEEDBACK: October 2024

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Stakeholder: Isaac Kort-Meade

Organization: Oregon Public Utility Commission

Applicable Public Meeting Date: 10/02/2024

1. *Staff appreciates the company updating its resources to reflect projects from its recently filed Final Shortlist in UM 2274. Staff asks that PGE update this list after the November 19 Special Public Meeting regarding the 2023 FSL acknowledgement decision. Staff believes that it is important that the proxy represent as accurately as possible the projects that PGE expects to include.*

PGE agrees with the sentiment, and as explained in the October roundtable the Company will evaluate the both the costs and benefits of incorporating new information between now and filing. For example, if there is a very slight difference between the actual project generation signed through commercial negotiations and the current RFP proxy resources included, PGE will likely not make a change for the IRP Update due to competing priorities. If on the other hand there are significant differences between the current RFP proxy and what ends up being signed, the PGE will likely prioritize this incorporation over other requested changes and improvements.

2. *Please explain the difference between the “feeder-level load forecast” and “service-point level load forecast” described on slide 14. This appears to be an improvement and Staff would like to understand more about the decisions behind this change.*

It is important to meet the input requirements of the software used for distribution planning (CYME) to create a streamlined workflow for integrating DER forecasts. PGE’s planners annually forecast for future known growth projects, any allocated top-down corporate load forecast, and the expected increased adoption of DERs. PGE is developing processes for AdopDER’s software to export data in a format that can be consumed by PGE’s CYME software suite for streamlined use in distribution planning.

Previously, AdopDER provided feeder-level load profiles and DER load impacts. To advance capabilities for handling site-specific data, PGE is enhancing its approach to report on load and DER forecasts at the SPID (Service Point Identifier) level. SPIDs represent unique service points, roughly corresponding to individual meter locations.

Within the forecast horizon, AdopDER will calculate a SPID-level hourly load profile for each SPID in PGE service territory, and for each DER type modeled (e.g., Solar PV, batteries, EV charging). The ability to generate SPID level forecast will allow the planning team to look more precisely at impacts on sites, feeder lines and substation transformer capacities. Understanding the locational impacts of various DER

combinations will enable the distribution planning team to analyze and develop more accurate, targeted distribution action plans.

3. Please provide additional data and a description of the curves on slides 20-22. In particular, explain the flattening of the "Solar PV Energy Production" chart on slide 20, the "Solar PV Production (ref case) in MWa" chart on slide 21, and the "Solar PV Production in MWa" chart on slide 22. Additionally, explain the assumptions driving the changes between the 2023 CEP/IRP and the 2023 CEP/IRP Update in the curves on slide 21 and 22.

Rooftop solar in Oregon has grown significantly over the past decade, driven by declining costs, technological advancements, state policies, and rising environmental awareness. This growth is expected to continue through the next decade but may stabilize in later years due to several factors:

- **Incentive Programs:** Near-term adoption is heavily supported by state and federal incentives like the Residential Clean Energy Credit and Investment Tax Credit, available through 2032, with credit rates decreasing to 26% in 2033 and 22% in 2034. These incentives are likely to reduce or phase out in the longer term.
- **Reduced Rooftop Availability:** Rooftop solar currently generates less than 1% of Oregon's electricity, but as adoption continues, suitable rooftop space will become more limited, slowing future adoption.

Solar forecasts are based on updated data from PGE's Interconnections team and NREL's dGen model, which factors in retail rates, incentives, applicability, and consumer behavior. PGE also refines NREL's projections to align with historical trends within its service territory, ensuring accuracy in its AdopDER solar output. Recent forecasts from AdopDER have proven highly accurate, with actuals within 1% of projections for Q3 2024 and around 5% for Q2 2024.

4. Staff appreciates the inclusion of BPA's Evolving Grid Projects in the analysis of future transmission capacity. Staff expects that, within reason, PGE will update its analysis of future transmission planning based on amendments to BPA's planning process and additions or subtractions from the list of Evolving Grid projects. In addition, in its analysis of these projects, Staff suggests that PGE include an analysis of what infrastructure, if any, PGE will need to construct to integrate the BPA infrastructure onto its system.

PGE agrees and appreciates the caveat of updating information 'within reason'. It should be noted that the Evolving Grid Projects, and this is especially true for the newest tranche of projects, should still be viewed as conceptual with the full scope of upgrades not yet fully known. Additionally, PGE will have to include these projects in our planning processes and study impacts to our system. PGE does not at this time, fully know what impacts these may have on our system. Additionally, any transmission work or projects will be articulated in PGE's local transmission plan, including work PGE needs to do to accommodate neighbor's projects.

5. Staff is interested in understanding more about how VPP will be considered in the IRP Update and whether PGE is making changes from how VPPs were considered in the last IRP. If changes are being made for the IRP Update, Staff would like to understand the nature of those changes, the assumptions being used, and how they impact other aspects of planning and modeling.

PGE is not planning a change for the CEP/IRP Update from how the VPP was evaluated in the 2023 CEP/IRP. The potential resource acquisitions included in the VPP are being incorporated into the IRP Update, primarily coming from resource acquisition estimates from AdopDER. The addition of these

resources modifies both the Company's energy and capacity needs. Further, resource adequacy modeling PGE assumes that resources behave with perfect coordination, which is the primary benefit of the VPP.