

Portland General Electric Company *Legal Department* 121 SW Salmon Street • Portland, Oregon 97204 503-464-7701 • Facsimile 503-464-2200 **David F. White** Associate General Counsel

August 4, 2017

Via Electronic Filing

Oregon Public Utility Commission Attention: Filing Center PO Box 1088 Salem OR 97308-1088

Re: LC 66 – Portland General Electric Company's 2016 Integrated Resource Plan (IRP)

Dear Filing Center:

Enclosed for filing in the above-referenced docket is Portland General Electric Company's ("PGE") Response to Staff's Report.

Thank you in advance for your assistance.

Sincerely,

David F. White Associate General Counsel

DFW:bop

Enclosure

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

DOCKET NO. LC 66

In the Matter of

PORTLAND GENERAL ELECTRIC COMPANY

PORTLAND GENERAL ELECTRIC COMPANY'S

RESPONSE TO STAFF'S REPORT

2016 Integrated Resource Plan.

On July 28, 2017, Public Utility Commission of Oregon ("OPUC" or "Commission") Staff issued a Staff Report recommending that the Commission acknowledge, in part, Portland General Electric Company's ("PGE" or "the Company") 2016 Integrated Resource Plan ("IRP") with certain considerations. While PGE will comment on the Staff Report at the August 8, 2017 Commission meeting, the Company submits these written comments for the Commission's consideration.

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Introduction

PGE continues to appreciate the high-level of engagement from Staff and stakeholders in the Company's 2016 IRP. Throughout this process, PGE has used widely accepted methods to quantify risk and reduce uncertainty, and presented a flexible plan in order to be responsive to the evolving nature of the utility industry and rapid technological advances. PGE has also recognized customers' focus on cleaner energy and more renewable energy resources. PGE and stakeholders have worked diligently over the past two and a half years to balance customer sentiment with the Company's responsibility to provide safe, reliable, and affordable electricity.

The proposed plan allows PGE to take incremental but important steps toward meeting the shared goals of the Company, the State of Oregon, its customers and constituents for reducing carbon emissions while maintaining reliable and affordable electric service. Delaying the addition of renewable resources to PGE's generating portfolio until 2030, as some stakeholders have suggested, will not only forgo savings from production tax credits, it will also mean that over 692,000 short tons more carbon is emitted annually. The addition of renewable resources now also reduces risk and uncertainty because it allows PGE to integrate renewables on to the grid in a measured, responsible way. PGE's proposed Action Plan is a responsible path forward that presents the best combination of expected costs and associated risks and uncertainties for the Company and our customers. As such, the Commission should find that PGE's 2016 IRP adheres to the principles of resource planning established in Order No. 07-002 and acknowledge PGE's IRP. The Action Plan is set forth in the table provided in Appendix A. For convenience, PGE highlights the Major Resource, as defined in the Commission's competitive bidding guidelines ("Competitive Bidding Guidelines"), actions here.

Renewable Resources ("RPS Action"):

 Acknowledge the issuance of a Request for Proposal ("RFP") to acquire 175 MWa of new renewable resources.

Capacity Resources:

- Acknowledge a capacity need of 561 MW, 240 MW of which must be dispatchable, in 2021;
- Acknowledge PGE's procurement approach via bilateral negotiations and intention to file a waiver of the Competitive Bidding Guidelines;
- Acknowledge the issuance of an all-source RFP for any capacity needs (including dispatchable capacity) that may remain unfilled after completing the waiver and bilateral negotiation process.

Long-term planning

The IRP Guidelines set forth a process that requires the utility to thoughtfully consider how potential conditions may impact the utility and customers well into the future (at least 20 years) and to inform near-term resource decisions on the basis of these considerations. The presence of uncertainty is inherent in the process of planning for the future and it will not be resolved in the near-term. More importantly, uncertainty does not obviate the need for long-term planning. In

Order No. 07-002, the Commission understood that long-term planning is an appropriate response to risk and uncertainty, requiring that utilities evaluate such risks with a goal of "long-run public interest."

Responsible long-term planning has always and will always rely on analysis of inherently uncertain variables. PGE accounts for these uncertainties by testing resource performance under the current forecast – or Reference Future – as well as a set of robust alternative future environments that diverge over time. The futures tested by PGE intentionally explore a broad range of possible circumstances and environments that range from evolutionary change to conditions that are markedly different from the current state. For example, in the 2016 IRP, this scenario analysis approach yielded futures with average market prices ranging from \$17/MWh to \$61/MWh by 2040,¹ when the current minimum Renewable Portfolio Standard will be 50%. Across these varying futures—as well as across sensitivities that address capital costs, hydro output, variable renewable performance, and load growth—the IRP analysis found the proposed Action Plan to be robust relative to all tested alternatives.

The proposed plan also allows PGE to take incremental, but important steps toward meeting the shared goals of the Company, the State of Oregon, our customers, and constituents for reducing carbon emissions while preserving reliable and affordable electric service. Incremental action allows PGE and customers to harness the benefits of technology improvements and an evolving electric grid over time, rather than confronting the system and customers with extensive and potentially expensive changes all at once. A measured approach to new resource additions will help supplement and sustain the value of the existing system and reduce risk and uncertainty compared to extensive future changes over a short time period. While we may not know every aspect of what future technology and pricing will hold for customers, we do know the majority have emphatically stated they want a greener, cleaner electric system. PGE's Action Plan takes incremental actions to provide customers the electric service they need in an environmentally and economically sustainable manner.

The notion that long-term uncertainties are so great as to prevent moving forward with a vision for the future that achieves the objectives of the IRP, as well as the desires of our customers and policy goals of the State, fundamentally undermines the principles of long-term planning as set forth by the Commission. The future will always be uncertain, and the uncertainties of tomorrow will merely be different from those of today. PGE believes that it would be incongruous to delay or avoid actions that are clearly needed and cost-effective across a range of assumptions merely due to some unquantifiable uncertainty. To do so is to ignore the IRP Guidelines, the clear interests of the public and stakeholders, and the thorough evidence presented by PGE in support of its Action Plan.

RPS Action

PGE's proposed RPS Action is consistent with the renewable energy targets codified in Senate Bill 1547 and meet the standards of balanced cost and risk set forth in the IRP Guidelines. In addition to meeting the letter of the law and the regulatory standards for long-term planning, near-term procurement of renewables puts PGE on a path to fulfilling

¹ Market prices expressed in real 2016\$.

the ultimate goal of SB 1547 (a decarbonized energy system for Oregon customers) in a meaningful way. As noted by the Commission in Order No. 89-507 related to least-cost planning, "[t]he objective is to find ways to get utilities and ratepayers' private interest to converge towards society's public interest. . . .Commission decisions should promote the public interest. The Commission should strive to pilot Oregon toward socially appropriate conduct."² PGE's rigorous quantitative analysis and stakeholder engagement demonstrate that the Company's proposed RPS Action represents the convergence of the utility's interests, its customers' interests, and the public interest with respect to both environmental and economic considerations. Given this strong alignment, the Commission should carefully scrutinize the arguments against PGE's recommended near-term RPS Action. Careful analysis of those arguments will reveal that they offer no specific and convincing evidence to rebut the Company's well-supported recommendation.

Intergenerational Equity

Staff incorrectly asserts that early RPS Action violates the principles of intergenerational equity, arguing that PGE's pursuit of near-term RPS procurement is asking today's customers to pay for a resource that predominantly serves future generations. As discussed thoroughly in PGE's Final Reply Comments (dated June 23, 2017), physical RPS resources procured in the near-term would help meet our customers' capacity and energy needs immediately, while reducing carbon emissions and providing the economic benefit of federal tax credits. Furthermore, the IRP Guidelines are clear on how to treat inter-annual or "generational" costs and benefits over the planning horizon—and PGE adhered to these IRP Guidelines. The net present value revenue requirement ("NPVRR") calculation weighs the costs and benefits over time through the use of a Commission-required discount factor. The resulting analysis confirms that the near-term RPS Action is justified on the basis of cost and risk under every quantifiable sensitivity suggested by Staff, confirming that near-term RPS Action supports intergenerational economic equity, as codified in the IRP Guidelines.

Outside of this docket, the term "intergenerational equity" often applies to the concept of resource sustainability—actions that do not compromise the ability of future generations to benefit from a healthy planet and vibrant natural environment. Customers today benefit from the renewable hydro resources and electric system investments made many decades ago. Investing in new renewable energy resources carries forward this concept, equitably benefitting customers today and into the future. As our customers reiterated several times at the Special Public Meeting on May 15, 2017, non-carbon resources procured today will have a cumulative effect on reducing the concentration of CO₂ in the atmosphere for future generations. PGE's proposed RPS actions meet this broader standard of intergenerational equity valued by our customers, as well as the standards of intergenerational economic equity addressed in the IRP Guidelines.

Capacity procurement process

During the IRP review process, the Commissioners, Staff, and other stakeholders encouraged PGE to explore short- and medium-term opportunities to acquire capacity in the marketplace

² Order 89-507 at 13.

from existing regional resources, such as hydro generation, instead of pursing the resources included in the preferred portfolio. In light of this guidance and collaborative discussions with stakeholders about the bi-lateral approach, PGE contacted owners of existing capacity resources in the Pacific Northwest to determine whether there was available capacity starting in 2021. This market outreach confirmed that there is available medium-term capacity in the region that could be offered to meet the capacity need identified in PGE's Action Plan. Because any such bilateral transactions would occur outside of an RFP process, PGE will be submitting a request for waiver of the Competitive Bidding Guidelines to the Commission. The waiver request will also include term sheets and bid proposals for the bilateral capacity resources, as well as information respecting PGE's evaluation and ranking of the proposals. The Company is optimistic that the bilateral process will ultimately result in transactions that meet a significant portion of the remaining capacity need in 2021 (561 MW), including the portion of that need that is required to be dispatchable (240 MW). PGE intends to submit the waiver filing before the end of August and will move forward with negotiating definitive agreements subject to Commission acknowledgement of the IRP and approval of the competitive bidding guidelines waiver.

PGE requests that the Commission also acknowledge the issuance of a capacity RFP to fulfill any remaining capacity requirements (including dispatchable capacity). With respect to Staff's proposal for additional steps and conditions on moving forward with an RFP to satisfy any residual capacity needs, PGE has concerns with regard to both practicality and timing. Completing a market study, re-running IRP portfolio analysis and reporting those results back to the Commission and stakeholders prior to conducting an RFP would likely compromise PGE's ability to have the needed capacity available by the end of 2020 when Boardman is removed from service. PGE believes this would be an unnecessary and unwise risk to providing continued reliable and affordable service for our customers. The Company's concern in this area is accentuated by the significant amount of thermal unit retirements (beyond Boardman) planned from the regional electric system over the next three to five years.

PGE interprets Staff's request for a market study to be focused on excess capacity that can be firmly delivered to PGE loads in order to meet the Company's remaining capacity needs, and reiterates that the 2016 IRP accounted for market depth with respect to energy (inclusive of phenomena like low-cost excess renewables from California). Most of the capacity in the region is already subscribed to load serving entities to meet their resource adequacy needs. The availability and cost of unsubscribed capacity resources in the future is commercially sensitive information belonging to potential counterparties. PGE typically gains information of this type either through bilateral negotiations or RFPs. However, information disclosed by a counterparty in these processes is provided under a non-disclosure agreement ("NDA") and legally cannot be used for other purposes, including resource planning activities. Without an executed agreement, PGE does not have any rights to a resource and the future cost and quantity becomes unknown. While Staff proposes a market study as a practical planning step, its scope is undefined and the implementation of such a study with the aim of informing resource adequacy-driven actions is both practically and legally problematic. PGE requests the Commission consider these factors and not require a market study as it would be ineffective in reducing uncertainty in the planning or procurement processes.

Staff also suggests that PGE conduct an RFP for "specific short- to medium-term resources,"³ based, in part, on the findings of the market study, prior to issuing an all-source RFP. From a practical perspective, because PGE has reached out to the owners of existing capacity resources in the region that were understood to have appreciable amounts of un-subscribed capacity, an RFP for "specific short- to medium-term resources" would effectively amount to a repeat of the bilateral negotiation process. Such a process would potentially require PGE to pursue offers that were not competitive in the bilateral process, regardless of whether these offers would be competitive with potential new resource options that might bid into an RFP. Staff predicates its proposed process on the false assumption that existing resources will necessarily be more cost-effective for customers than new resources. In reality, potential counterparties have sole discretion in pricing their offers and there is no guarantee that their pricing will produce cost-effective solutions for customers relative to new resource options.

Finally, the time required to follow the process proposed by Staff would necessarily limit new resource options to those that could be procured, sited, and constructed at an accelerated pace relative to traditional generating resources. By limiting the resource options in this way, Staff is effectively proposing that new resource procurement should not align with the established least-cost, least-risk planning and procurement framework, but should instead favor the resources that can be deployed most quickly.

Avoided Costs

PGE's customers must pay for QF generation for 15 years at fixed prices. PGE's current avoided cost prices are substantially above the actual avoided cost for new resources as reflected in its IRP. Given this fact, and the fact that the IRP prices are still likely to be above the actual avoided cost for new renewable resources, PGE urges the Commission to issue an IRP order that effectively recognizes that the Company's real avoided cost is considerably lower than currently filed standard offer prices for QF contracts. Under the standard avoided cost update and consistent with an acknowledgement of an IRP, PGE must file to update avoided cost prices within 30 days of Commission acknowledgement. Once PGE files, there is a 90-day review period before prices become effective. For QFs that enter into a contract or achieve a legally enforceable obligation after acknowledgement of the IRP, but before approval of updated standard prices, PGE's customers would be locked into payments for QFs at prices that would be considerably out of date and higher than prices based on the 2016 IRP acknowledgement.

Given the significant decrease in PGE's actual avoided cost prices and administrative delay in making those new avoided cost prices effective, customers are exposed to the substantial risk that many QFs will seek to obtain standard contracts or achieve a legally enforceable obligation before new prices based on the Commission's decision can become effective. Entering into QF contracts that are known to be substantially above the new standard offer prices that will result from the Commission's IRP acknowledgement is unwarranted and should be prevented if at all possible.

We ask the Commission to work with the Company to protect customers from this danger. Without protection, PGE customers will be locked into paying for up to 18 years in the future

³ Staff at 37.

avoided costs prices that are considerably greater than the Company's actual avoided cost as recognized by the Commission's IRP acknowledgement. PGE will be asking the Commission to ensure that the avoided cost prices paid to QFs that enter into contracts or achieve a legally enforceable obligation after the Commission's acknowledgement match PGE's actual avoided cost based on the Commission's IRP order. Such an alignment between PGE's actual avoided costs as recognized by the Commission and the avoided cost prices customers pay for QF power is necessary to ensure that customers are paying just and reasonable prices and in the public interest.⁴ PGE will submit this request separately and stakeholders will have the opportunity to review PGE's updated avoided cost prices as part of the standard avoided cost update process. The request will also recognize that QF projects of less than 100 kW will be permitted to receive PGE's currently filed avoided cost prices until completion of PGE's standard avoided cost update.

Conclusion

PGE's 2016 IRP meets, and often exceeds, the Commission's procedural and substantive requirements. PGE has demonstrated through a robust public process and rigorous and sound analysis that its IRP and proposed Action Plan present the best combination of expected costs and associated risks for customers. Additionally, the plan aligns well with the desired direction of PGE customers and the energy policy goals of Oregon and the communities that we serve. PGE respectfully requests that the Commission acknowledge the Action Plan as described herein.

DATED this 4th day of August, 2017.

Respectfully submitted,

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⁴ 16 U.S.C. § 824a-3(b) (providing that avoided costs shall not exceed the incremental cost to the electric utility of alternative energy); Docket No. R 58, Order No. 81-319 (May 6, 1981) (established Commission policy that rates for QF purchases would be at avoided costs); Docket No. UM 1129, Order No. 05-584 at 20 (May 13, 2005) ("[T]he goal of calculating avoided costs is to accurately estimate the costs a utility would incur to obtain an amount of power that it purchases from a QF, either by the utility's self generation or by purchase from a third party."); Docket No. UM 1610, Order No. 14-058 at 3 (Feb. 24, 2014) ("PURPA requires that the rates utilities pay for electric energy purchased from QFs may not exceed the incremental cost to the electric utility of alternative electric energy, and defines 'incremental cost' as 'the cost to the electric utility of the electric energy which, but for the purchases from such [QF], such utility would generate or purchase form another source.""); ORS 758.515 (rates paid to qualifying facility "shall over the term of a contract be just and reasonable to the electric consumers of the electric utility, the qualifying facility, and in the public interest").

APPENDIX A

	Staff Proposed Revisions to PGE's	PGE's Proposed Final
Area	Action Plan	Action Plan
Area Demand-Side Actions	 Energy Efficiency (EE): Acknowledge the acquisition of 135 MWa cost-effective EE from 2017 through 2020 Other conditions: Changes to 2021 capacity need and must use the Energy Trust's most recent forecast data. PGE to provide an update on Energy Trust's activities and progress on the Large Customer funding issue in its annual IRP update in 2018. Require PGE to make available Energy 	Action Plan <u>Energy Efficiency (EE</u>): • Acknowledge the acquisition of 135 MWa of cost-effective EE
	 Trust's EE forecast data and provide an explanation of PGE's model in its next IRP. Demand Response (DR): Acknowledge the acquisition of 77 MW (winter) and 69 MW (summer) as minimum levels of DR and establish 162 MW (summer) and 191MW (winter) as reach goals. Other conditions: Launch studies on DR and consider DR committee. Identify potential DR test beds within nine months of a Commission order in this docket and establish a DR test bed no later than July 1, 2019. 	 Demand Response (DR): Acknowledge the acquisition of 77 MW of winter and 69 MW of summer Enable DR beyond PGE's current targets. Scope & define DR test bed. Launch a DR review committee.
	Conservation Voltage Reduction (CVR): Acknowledge PGE's plan with the requirement to conduct analysis and reporting.	 Conservation Voltage Reduction (CVR): Acknowledge the deployment of 1 MWa, along with the following: Expansion of AMI Continued research & development around analytics Development of an expansion plan Continue providing reports and updates through Docket UM 1657, PGE's Smart Grid Report.
Supply-Side Actions	Renewable Resources: Not acknowledge	 <u>Renewable Resources:</u> Acknowledge the issuance of an RFP to acquire 175 MWa of new renewable resources

	Staff Proposed Revisions to PGE's	PGE's Proposed Final
Area	Action Plan	Action Plan
	Capacity Resources:	Capacity Resources:
	Acknowledge issuance of RFP(s) for up to 415	Acknowledge a capacity need of 561 MW,
	MW of Dispatchable Capacity and 400 MW of	240 MW of which must be dispatchable, in
	Flexible Capacity Resources for 2021 Capacity	2021
	Need, subject to the following conditions being	Acknowledge PGE's procurement approach
	fully met prior to issuing an All Source RFP for	via bilateral negotiations and intention to
	any remaining capacity need:	file a waiver of the Competitive Bidding
	 Complete bilateral negotiations and report 	Guidelines
	to Commission.	Acknowledge the issuance of an all-source
	Complete market study.	RFP for any capacity needs (including
	Re-run models and develop new preferred	dispatchable capacity) that may remain
	portfolio using data from bilateral	unfilled after completing the bilateral
	contracts, market study and any other	negotiation process
	analyses.	
	 Issue an RFP for specific short" to medium- term resources. 	
	Dispatchable Standby Generation:	Dispatchable Standby Generation:
	 Acknowledge 16 MW expansion of DSG 	 Acknowledge 16 MW expansion of DSG
Integration	Energy Storage:	Energy Storage:
Integration	 Acknowledge submittal of storage 	 Acknowledge submittal of storage
	proposal, per HB 2193, by 1/1/2018	proposal, per HB 2193, by 1/1/2018
Enabling Studies	Studies: Acknowledge the following enabling	Studies: Acknowledge the following enabling
	studies for the next IRP:	studies for the next IRP:
	Treatment of Market Capacity	Flexible Capacity and Curtailment Metrics
	Flexible Capacity and Curtailment Metrics	 Customer Insights
	Customer Insights	De-Carbonization
	De-Carbonization	Direct Access Risks
	Accessing Resources from Montana	
	Load Forecasting Improvements	
	Study Risks Associated with Direct Access	
General	Load Forecast:	Load Forecast:
Recommendations	PGE's current load forecast should not	Conduct ongoing workshops with
	serve as the basis for the long-term	interested stakeholders to continually
	investments in new generating resources	improve PGE's forecasts.
	 Develop probabilistic load forecasts. 	Conduct out-of-sample testing and select
	Conduct ongoing workshops with	models based on these results.
	interested stakeholders to continually	Include a technical appendix in future IRPs
	improve PGE's forecasts.	that describes forecast methodology and
	 Conduct out-of-sample testing and select models based on these results. 	contains a list of the forecast modeling
	 Include a technical appendix in future IRPs 	assumptions (and explanations) and the model specifications (equations).
	that describes forecast methodology and	inouel specifications (equations).
	contains a bulleted list of the forecast	
	modeling assumptions (and explanations)	
	and the model specifications (equations).	

	Staff Proposed Revisions to PGE's	PGE's Proposed Final
Area	Action Plan	Action Plan
	Portfolio Ranking & Scoring Metrics:	Portfolio Ranking & Scoring Metrics:
	 Do not acknowledge PGE's preferred portfolio and portfolio ranking system. Direct PGE to hold workshops with interested parties to develop a simple and clear set of portfolio scoring metrics for use in future IRPs, with a focus on using only metrics that have a clear interpretation and robust discussions on the appropriate way to incorporate short- and medium-term options and the relative importance of high-cost versus low-cost outcomes. 	 Acknowledge PGE's preferred portfolio and that PGE's cost, severity, and variability metrics comply with the IRP guidelines. Direct PGE to hold workshops with interested parties to develop scoring metrics for use in future IRPs.
	Distribution System Planning:	Distribution System Planning:
	 Direct PGE to work with Staff and other parties to advance DER forecasting and DER representation in the IRP process to 	PGE is willing to work with Staff on these efforts.
	be included in the 2019 IRP.	
	 PGE should work with Staff to define a proposal for opening a distribution autom 	
	proposal for opening a distribution system planning process.	
	PURPA Avoided Costs:	PURPA Avoided Costs:
	 Capacity Deficiency period: 	Capacity Deficiency period
	 Acknowledge PGE's 2021 capacity need and acknowledge an action with conditions that PGE follow a specific order of action to fill the need. If the Commission were to acknowledge this resource action, the nonrenewable deficiency period would begin in 2021. Renewable Deficiency period Acknowledge that PGE's renewable deficiency period is 2029 and that the proxy renewable resource cost from the IRP should be used for the avoided cost price. 	 Acknowledge that PGE's capacity deficiency period begins in 2021, updating to 2025 following completion of bilateral negotiations and, if needed, a capacity RFP. Renewables deficiency period Acknowledge that PGE's renewable deficiency period begins in 2021, updating to 2030 following selection of a resource from a renewables RFP. Acknowledge that the proxy renewable resource cost from the IRP should be used for the avoided cost price.
	Transmission:	Transmission:
	 Convene a working group or hold a workshop to explore the issue of transmission and the potential access to higher capacity wind resources in Montana 	 Convene a working group or hold a workshop to explore the issue of transmission and the potential access to higher capacity wind resources in Montana
	and Wyoming before the next IRP.	and Wyoming before the next IRP.