

CEO Message

At Portland General Electric (PGE), we take pride in providing safe, reliable, affordable and increasingly clean power to homes, businesses and communities. Delivering this essential service is a responsibility that we have embraced for more than 130 years, and today, one that reflects evolving values and expectations.

For decades, customers have made clean energy a top priority. Echoing that sentiment, today many customers have aggressive climate goals and communities we serve have comprehensive climate action plans. In 2021, the Oregon Legislature passed landmark public policy that affirmed and mandated PGE's goals for decarbonization. This inaugural Clean Energy Plan, filed in conjunction with our 2023 Integrated Resource Plan, is a comprehensive roadmap detailing how we will meet customers' energy needs and greenhouse gas emissions targets while maintaining reliability, safety and affordability.

These targets are also in line both with the science-driven United Nations 6th IPCC Report, and with the policy of the federal government, which is providing significant financial resources to states, communities, utilities and customers through the Inflation Reduction Act and the Infrastructure Investment and Jobs Act.

Meeting our targets and decarbonizing our system will require significant investment in diverse resources, as well as investments in new transmission infrastructure, technology and innovation, as well as wider regional collaboration. We will invest in a full range of clean energy resources and tools, including large-scale wind and solar projects, battery storage, energy efficiency, demand response, customer-sited resources and community based renewable energy.

This is a significant undertaking, requiring us to try new things as well as adopt and evolve when new technologies, opportunities and challenges present themselves.

Importantly, we cannot implement this Clean Energy Plan and Integrated Resource Plan alone. Success depends on the commitment of customers as well as leaders and partners throughout the community. This plan calls for community-based renewable energy and customer participation in energy efficiency and demand response programs. We rely on key partners, ranging from community colleges and labor unions who enable well-trained workers, to suppliers and contractors of various types and sizes who provide reliable sources of materials and equipment.

In the pages that follow, we outline how we will meet future energy and capacity needs while achieving emissions targets, reliably and affordably. Central to this plan is PGE's commitment

to diversity, equity and inclusion. We must decarbonize in ways that benefit everyone, with an attentive eye to historically underserved communities.

Thank you for your interest, partnership and willingness to think differently as we work together in building a clean energy future.

Maria Pope

A handwritten signature in black ink that reads "Maria Pope". The signature is fluid and cursive, with the first letters of "M" and "P" being notably large and stylized.

President and CEO, PGE

Introduction

Portland General Electric (PGE, or the Company) is proud to submit our combined, 2023 Clean Energy Plan and Integrated Resource Plan (CEP/IRP) for consideration by our customers, stakeholders, communities and the Public Utility Commission of Oregon (OPUC, or the Commission).

PGE's purpose is to power the advancement of society. We have served our customers with safe, reliable and affordable power for over 130 years. We engage in robust planning, analysis, stakeholder and community engagement to inform our investments in resources, customer programs and the grid. We are committed to balancing affordability, reliability and reductions in greenhouse gas (GHG) emissions across all of our planning efforts.

As Oregon's largest electricity supplier, we recognize our unique role in addressing climate change and leading an equitable clean energy transition in Oregon. We reflect this commitment in our climate-related goals and detailed disclosures of our progress in our annual environmental, social and governance (ESG) report. We also see it aligned with the climate and clean energy goals of many of the customers and communities we serve. This CEP/IRP represents a continuation of our clean energy journey, which began years ago in response to customer demands, climate science, emerging technologies and market opportunities.

Oregon's landmark clean energy legislation, HB 2021, and unprecedented federal government support for clean energy, is now transforming how PGE provides excellent service to customers. The 2023 IRP is PGE's first long-term resource plan since the passage of HB 2021, which established PGE's climate goals into law with firm targets for reducing emissions associated with Oregon retail sales. HB 2021 requires PGE to file a CEP, detailing our plans to achieve annual progress toward achieving emissions targets with consideration for the benefits for local communities.

These emissions targets and the expectations outlined in the pursuant Commission orders inherently change PGE's approach to long-term resource planning. Emissions targets are now an integral component of PGE's IRP modeling. At the same time, PGE cannot demonstrate a balanced, feasible path toward emissions targets without also estimating future energy and capacity needs and identifying an optimal portfolio of resources to meet those needs, subject to emissions constraints. Our CEP and IRP are tightly integrated and as such, PGE is submitting the CEP and IRP as a single planning document, responsive to the OPUC's requirements, guidelines and expectations for both planning documents. The CEP serves as our accessible roadmap to the clean energy transition. The IRP functions as the detailed analytical foundation. Both share common methodologies and recommendations.

Our CEP/IRP details a pathway to meeting future energy and capacity needs and emissions targets, given what we know today, and acknowledges the significant change and uncertainty confronting our industry in the coming decades. We propose measured, near-term actions to serve our customers with reliable, affordable and increasingly clean power consistent with achieving our 2030, 2035 and 2040 emissions targets. Those near-term actions represent specific steps PGE intends to take with acknowledgement by the OPUC.

This filing is the result of continued and iterative planning and analysis, during which, we have emphasized and evolved our venues for stakeholder and community input. As has been underscored throughout this process, diverse stakeholders will view the document through their own lens. To aid in reviewing this first CEP/IRP submission, we highlight the following navigational tips:

- Chapter 1 details the company's strategies, planned actions and forecasted emissions in response to HB 2021 requirements. Chapter 1, combined with Chapters 7, 13 and 14 address the bulk of CEP guidelines and expectations outlined in HB 2021 and the Commission's orders;
- Chapters 2-6 and Chapters 8-12 serve as the more traditional components of the IRP. As noted above, HB 2021 and Commission orders necessitated changes in IRP methodology and analysis. As a result, there are CEP expectations addressed in some of the IRP chapters. For example, community-based renewable energy (CBRE) resources are included in the IRP's set of Resource Options;
- Chapters 11 and 12 provide a single Preferred Portfolio and Action Plan that reflect the near-term actions we intend to pursue to satisfy energy and capacity needs and emissions reduction requirements; and
- Appendix B provides a crosswalk for the reader to identify where each particular IRP guideline or CEP expectation from HB 2021 or Commission orders are met.

Our goal throughout the planning process was to produce a CEP/IRP that provides clarity on our priorities and values, responds to feedback, and aligns with the public policy goals of Oregon. We set out to mitigate risks for customers while balancing affordability and emissions reduction during a highly dynamic period of change for our industry. We sought to create a plan that was flexible and could be adapted as we continue to learn and as conditions change and new technologies and market opportunities arise.

Importantly, we wanted a plan that would invite further conversations with our customers, communities, stakeholders and the Commission. We would like to acknowledge the time, work, valued inputs and contributions of so many participants to this process over the course of many workshops and other venues. Moving forward, it will take all of us working together to implement the actions identified in this filing and successfully navigate an equitable clean

energy transition for Oregon. We share the incredible sense of urgency and look forward to working together to implement next steps.

Summary of key findings from the 2023 CEP/IRP

- PGE has already reduced emissions from power sold to Oregon retail customers by 25 percent below 2010-2012 baseline emissions.
- Electrification of vehicles, homes and businesses will accelerate load growth in the years ahead. This CEP/IRP anticipates and plans for that load as PGE decarbonizes.
- PGE will need to add non-emitting energy resources and capacity at an accelerated pace in order to maintain system reliability while it systematically reduces fossil fuel purchases and generation to achieve emissions targets.
- PGE's planned path to emissions targets features a linear decline in emissions associated with sales to Oregon retail customers from 2026-2030 and 2030-2040. Actual reductions may vary year-by-year due to variables that impact emissions that are beyond PGE's control and/or the pace of clean energy acquisition and integration.
- Achieving emissions targets reliably and affordably will require access to a wider geographic diversity of resources and the transmission solutions to access them. Participation in regional markets and partnerships that allow PGE to pool resources and source clean energy from across the West can increase reliability and lower costs for our customers.
- Significant transmission constraints drive a greater role for customer-sited resources, including demand response and energy efficiency, and community-based renewable energy resources in this CEP/IRP. PGE plans to pursue all cost-effective energy efficiency and demand response during the Action Plan window. PGE establishes a target for CBRE resources of 155 MW by 2030 with plans to pursue at least 66 MW by 2026.
- The growing role of customer-sited and community-based renewable energy resources in PGE's decarbonization efforts underscores the importance of PGE's ongoing efforts to enhance the capacities of distributed energy resources to provide local and system value when managed as a Virtual Power Plant.

- PGE forecasts a significant capacity need of 1136 MW in summer, 1004 MW in winter, and a significant energy need of 905 MWa (~2,500 MW nameplate) by 2030.
- Policy and market changes could change PGE's estimated future energy and capacity needs but the near-term actions proposed during the Action Plan window are the same: conduct one or more Request for Proposals (RFPs) for an additional 181 MWa (~520 MW nameplate) of non-emitting generation and sufficient capacity to remain resource adequate each year.
- 2030 emissions targets can be met with technologies and resources that are currently known and commercially available.
- Pathways to 2040 emissions targets will require further development of non-emitting resources and transmission to meet the region's energy and capacity needs.
- PGE's natural gas plants will continue to play a role in helping to meet our resource adequacy needs during the clean energy transition. PGE will continue to invest in the efficiency, safety and emissions controls of those facilities as appropriate.
- Efforts to specify the sources of generation for resources currently procured through short-term market purchases will reduce PGE's reported emissions and future energy needs.
- Utilizing federal, state and local funding opportunities to support decarbonization on our system will mitigate customer price pressure during the transition.
- PGE's success will require deep and continued collaboration with our customers, communities and stakeholders and with a wide range of leaders at all levels of government.