HB 2021 Implementation

Update to House Climate, Energy, & Environment Committee

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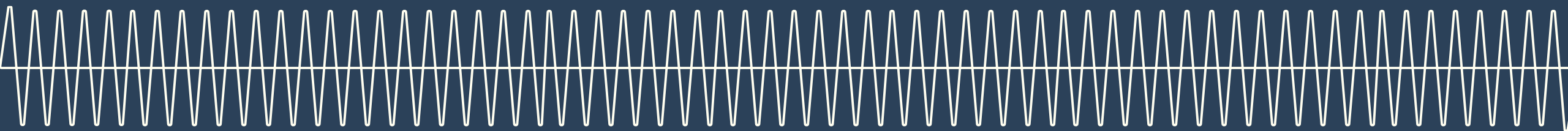


PGE at a glance

Quick facts

- Vertically integrated electric utility encompassing generation, transmission and distribution
- Approximately 900,000 retail customers within a service area of 2 million residents
- Roughly half of Oregon's population lives within PGE service area, encompassing 51 incorporated cities entirely within the State of Oregon
- 75 percent of Oregon's commercial and industrial activity occurs in PGE service area

2021 Resource Mix

• Coal	7%
• Natural Gas	40%
• Hydro	20%
• Wind	13%
• Solar	2%
• Unspecified	18%

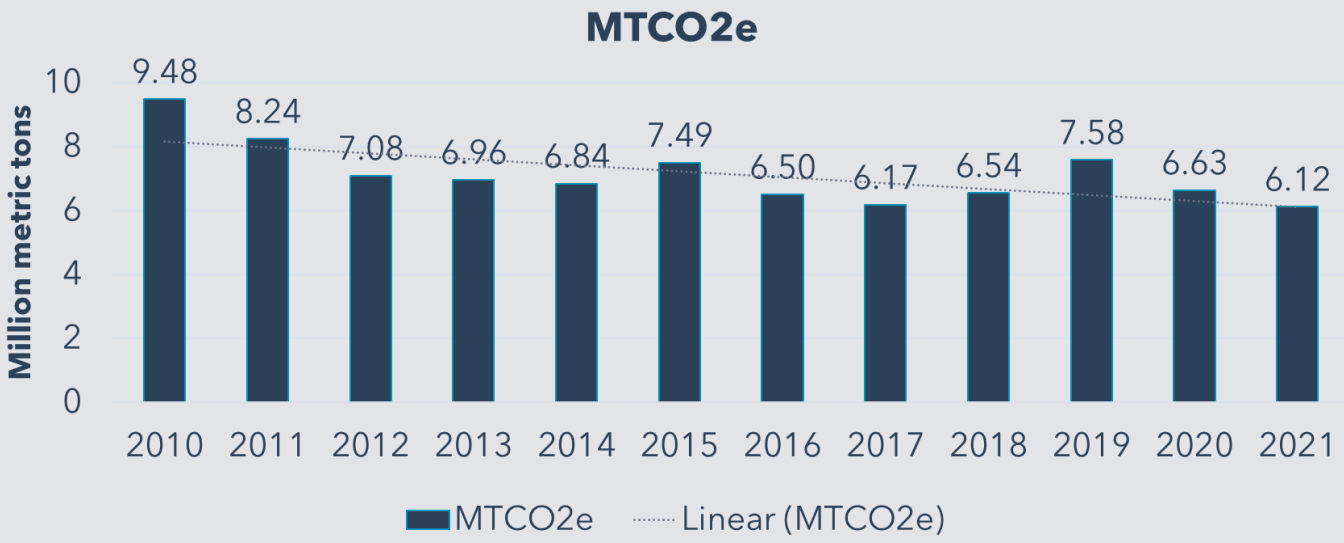
In 2021: 35% of power served to customers came from non-emitting energy resources.

3,300+ MWs of Generation

HB 2021 puts PGE on path to 100% emissions free electricity

- **Emissions targets**
- **Clean energy resource planning**
- **Outreach & engagement**
- **Community benefits & impacts advisory group (CBIAG)**

PGE's annually reported emissions to DEQ*



*Anthropogenic emissions from power generated and purchased to serve Oregon retail customers.

Emissions targets

HB 2021 requirements:

Baseline:

- 8.1 MMTCO2e per DEQ

2030 Target:

- 80% reduction to 1.62 MMTCO2e

2035 Target:

- 90% reduction to .81 MMTCO2e

2040 Target:

- 100% reduction to 0 MMTCO2e

2030 clean energy planning

Enabling Strategies
- Transmission solutions
- Regional markets
- Partnerships
- Innovation & technology

8.1 MMTCO2e

(2010-2012 baseline)

Already pursuing:
- ✓ Boardman Closure (-518 MW)
- ✓ 2021 RFP (+375-500 MW)
- ✓ Green Future Impact (+500 MW)
- ✓ Douglas PPA (+160 MW)
- ✓ Hydro Renewals (+224 MW)
- ✓ Energy Efficiency (+220 MW)

6.1 MMTCO2e

(2021actuals)

What we're anticipating:
- ❑ >3000 MW non-emitting resources
- ❑ >800 MW non-emitting capacity

- ❑ Utility scale wind & solar
- ❑ Energy storage
- ❑ Distributed generation & storage
- ❑ Community based renewables
- ❑ Energy efficiency
- ❑ Demand response
- ❑ Virtual power plant
- ❑ Colstrip ownership exit
- ❑ Contract renewals

1.62 MMTCO2e

Baseline Emissions

Reduction of 80% by 2030

Clean energy resource planning: CEP & IRP

HB 2021 requires a Clean Energy Plan (CEP) which builds off, expands on, and modifies the robust resource planning PGE is required to do for its Integrated Resource Plan (IRP).

Integrated Resource Plan

- System needs
- Preferred portfolio
- Action plan

Clean Energy Plan

- Emissions compliance
- Continuous progress
- Community benefits & engagement

Combined CEP & IRP

- Filing March 2023
- Details pathway to 2030 and beyond

PGE's CEP & IRP must **balance affordability, reliability and decarbonization**

Community benefits & community based renewable energy (CBRE)

We anticipate CBREs to be smaller scale (~ <20 MW) resources, typically front-of-the-meter and distribution-connected, that can provide community benefits, including resiliency and bill savings.

Community Lens Potential

- Analyzed potential for:
  - Standalone community-scale solar
  - Solar + storage microgrids
  - Small in-conduit hydropower
- Exploring community benefit indicators with community.

Target Setting

- Identified CBRE potential of 155MW by 2030
- Intention to include a CBRE target in IRP Action Plan.

Acquisition

Exploring potential procurement paths with community:

- CBRE RFP
- Federal and state incentives
- Other potential future programs

CEP & IRP engagement update

Our strategy for community engagement across PGE's long term planning process is informed by three goals:

Cultivate & maintain trusted and transparent relationships with historic IRP stakeholders and community-based organizations, community serving organizations, environmental justice, advocates and others.

- Monthly technical IRP workshops
- Started non-technical venue "Learning Labs" – conducted six 2hr/workshops
- Explored collaboration and partnerships with new organizations

Build awareness, inform and provide inclusive learning opportunities to communities

- Accessibility (e.g. closed caption, Zoom, Mural, material translation to Spanish)
- Established a dedicated IRP and CEP website and mailbox
- Published the archived meeting materials and information on website
- Taking Learning Lab materials to communities that were not able to attend

Collect feedback & evaluate progress

- Mural exercises
- Surveys
- Online feedback form
- Informal interviews

Stakeholder Meetings	# Meetings		
	To date	To filing	Total
IRP Roundtable	27	2	29
CEP Learning Lab	6	2	8

Community Benefits and Impacts Advisory Group update

Section 6 of HB 2021 requires the creation of a Community Benefits and Impacts Advisory Group (CBIAG) and sets forth expectations for scope and participation

PGE ***must*** engage CBIAG on

- Energy burden and disconnection
- Increase contracting
- Improve resilience
- Distribution infrastructure
- Community co-benefits
- Customer experience
- Customer engagement

PGE ***may*** engage CBIAG on

- Clean Energy Plan
- Distributed System Planning
- Contracting practices
- Best practices

PGE CBIAG engagement approach

Phase I | Phase II | Phase III

Ad-hoc Committee

- **Attendees:** Community based and community serving organizations and community members
- **Facilitation:** Interim Third-Party Facilitator
- **Outcomes:** Provide recommendation on recruitment and selection of CBIAG members,
- **Timing:** Nov ’22 - Feb ’23

Inaugural CBIAG

- **Attendees:** Recruited CBIAG members
- **Facilitation:** Long term Third-Party Facilitator
- **Outcomes:** Develop and implement operational expectations including group governance (e.g., finalize charter), identify and address gaps in energy awareness and knowledge of group members
- **Timing:** Mar – Sep ’23

PGE CBIAG

- **Attendees:** CBIAG members
- **Facilitation:** Long term Third-Party Facilitator
- **Outcomes:** Advise on topics identified in House Bill 2021, Section 6, including PGE’s Community Benefits and Impacts Biennial Report
- **Timing:** Beyond Sep ’23

Conclusion

- UM2225 has generated thorough guidelines for PGE's inaugural combined CEP and IRP filing.
- PGE is engaged in robust planning, analysis, stakeholder and community engagement to meet future energy & capacity needs while balancing affordability and the reliability of the grid.
- To meet our emissions reduction targets, we will need to add resources at an unprecedented pace and scale. We will likely be in a near-continuous procurement cycle going forward.
- We anticipate that significant transmission constraints will drive a greater role for customer-sited resources such as demand response, energy efficiency, and distributed solar/storage in this IRP/CEP compared to year's past. It also underscores the need for both on- and off-system transmission solutions.
- 2030 emissions reduction targets can be met by technologies and resources that are currently known and commercially available.
- Pathways to 2040 will require further development of non-emitting resources to meet the region's energy and capacity needs.