



# Powering a clean energy future

Safe, affordable, reliable energy for all





# It takes all of us

At PGE, we understand our critical role in our customers' lives and in the well-being of the communities we serve. We are honored to provide essential electric service to our fellow Oregonians.

By working together, we can achieve tomorrow's clean, safe, reliable, accessible and affordable energy system for all. Customers expect it, and our future depends on it.

Transforming the electric system will not be easy, but the opportunities and consequences are immeasurable for this and future generations.

We are committed to working collaboratively with the people and communities we serve to help give everyone a voice in shaping the energy system of the future. Together, we can navigate the uncertainties ahead to power a more equitable, prosperous economy, build vibrant communities and provide clean, emissions-free electricity to power the advancement of society.



“Our plans reflect the values and expectations of customers who, for decades, have made clean energy a top priority. Achieving decarbonization will require continued collaboration with our customers and community partners at the local, state and federal levels. At PGE, we are committed to making the investments in innovation, diverse resources and the electric grid necessary to reliably and affordably decarbonize our energy system.”

—Maria Pope, CEO



# Who we are

Portland General Electric is a fully integrated energy company that generates, transmits and distributes electricity, serving roughly half of Oregon's population and 75% of its commercial and industrial activity.

Over the course of our 130-year history, PGE has constantly invested in customers and in new ways to generate power and deliver it to nearly one million homes and businesses. That investment continues today, as PGE works to make our grid smart, adaptive and resilient as we decarbonize. Our dedicated team is working hand-in-hand with customers, business owners, communities and partners. It's this innovative, people powered energy that will continue to light the way for the next 130 years.

## Purpose

### We exist to power the advancement of society

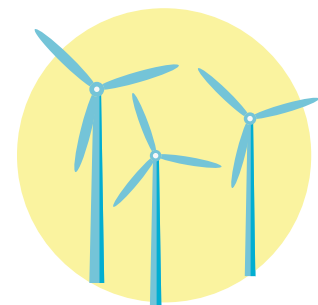
We energize lives, strengthen communities and foster energy solutions that promote social, economic and environmental progress.

## Vision

### To lead the clean energy future

Together with our customers, stakeholders and communities, we are leading the energy transformation by decarbonizing, electrifying and performing.

## Corporate strategic imperatives



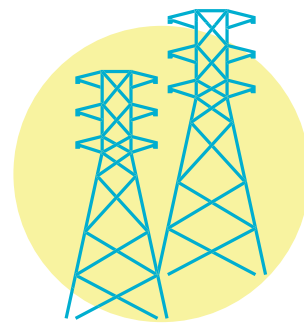
### Decarbonize

Reduce greenhouse gas emissions associated with electricity served to retail customers.



### Electrify

Increase beneficial electricity use to capture the benefits of new technologies while building an increasingly clean, flexible and reliable grid.



### Perform

Improve efficiency, safety and system and equipment reliability while maintaining affordable energy service.

# Our clean energy commitments

## Greenhouse gas emissions reduction target

To meet the targets set in state law, we must reduce PGE's greenhouse gas emissions from power sold to retail customers in Oregon by 80% by 2030, 90% by 2035 and 100% by 2040.

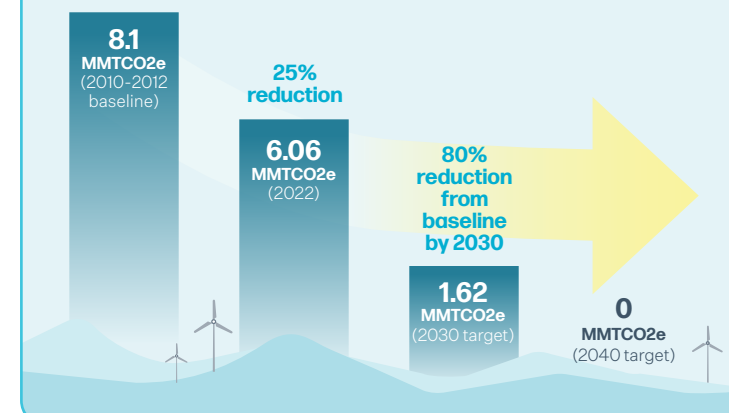
## Net-zero emissions goal

Achieve net-zero emissions from PGE's Scope 1, 2 and 3 sources of emissions—which reflect our carbon footprint across our corporate operations by 2040.<sup>1</sup>

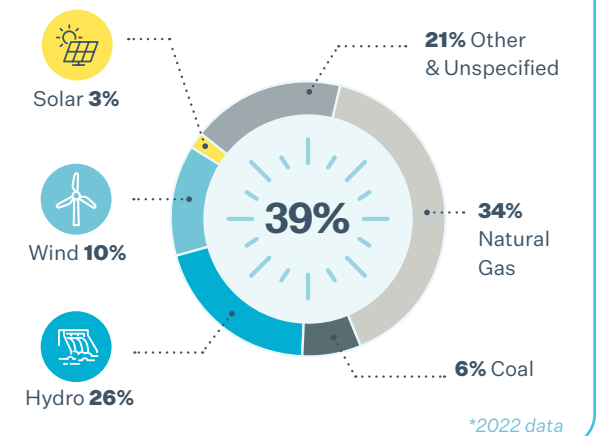
## Non-emitting resources goal

Serve 100% clean electricity to retail customers in Oregon by 2040.

### Decarbonizing our power supply while adding reliable, clean energy resources



### Current resource mix for power served to PGE customers



PGE is the first utility in the U.S. to sign The Climate Pledge

THE CLIMATE PLEDGE

There are

**385 companies & counting**

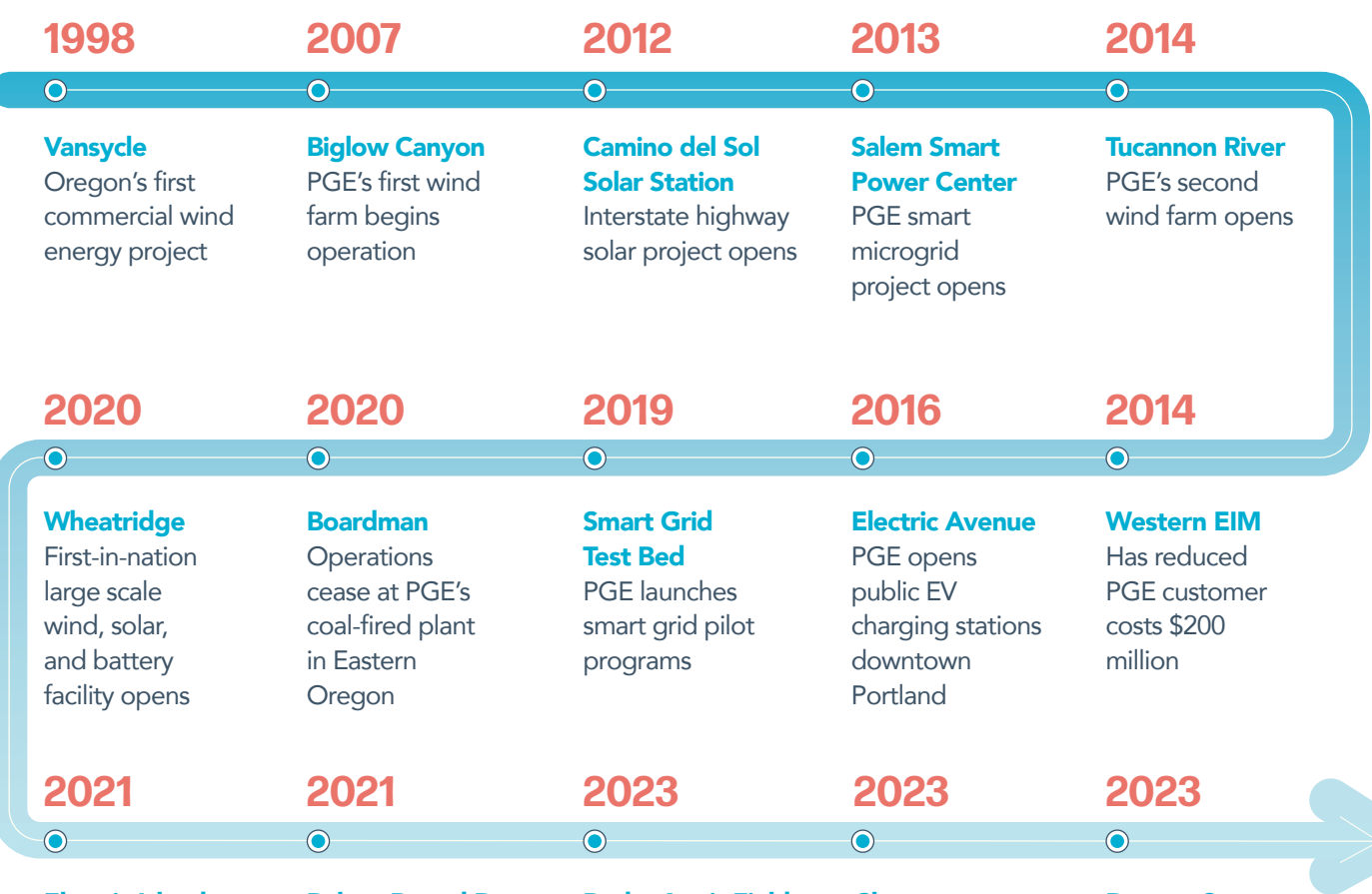
across 55 industries and 33 countries that have signed The Climate Pledge<sup>2</sup>

More information on PGE's reporting and disclosure of data and how we measure our progress towards our greenhouse gas emissions reduction, net-zero emissions, and non-emitting resources targets and goals is available in PGE's Environmental, Social & Governance Report: [portlandgeneral.com/about/who-we-are/sustainability](https://portlandgeneral.com/about/who-we-are/sustainability)

1. Scope 1, 2 and 3 accounting reflects a company's carbon footprint across all corporate operations. PGE's Scope 1,2 and 3 accounting includes emissions, above and beyond those associated with power served to Oregon customers.
2. PGE has committed to net zero emissions by 2040, 10 years ahead of the Paris Accords. The Climate Pledge's voluntary targets align with the best available science to minimize the risks of climate change. [www.theclimatepledge.com/us/en/Signatories](https://www.theclimatepledge.com/us/en/Signatories)

# What we've done

For decades, PGE has been at the forefront of clean energy innovation, building wind, solar, and battery storage projects. We are taking bold steps toward achieving our climate goals, and we have plans for much more.



In 2023, Pachwaywit Fields, seen here, Oregon's largest solar facility with 471,156 solar panels, began generating power for Green Future Impact customers. The Green Future Impact Program helps businesses and municipalities source up to 100% of their electricity from wind and solar facilities.

# Where we're going

For over a decade, PGE customers have set the standard for prioritizing clean energy with the number one voluntary renewable energy program in the country, serving more than 225,000 customers through our Green Future Program. We are also driving growth and innovation in Oregon's Silicon Forest, as the semiconductor industry, data centers, and the technology sector partner with us to build new wind and solar energy projects to power their operations.

To successfully make the transition to a clean energy future, we are balancing reliability and affordability, which drives us to continuously explore and innovate – deploying new technologies, simplifying processes and reducing costs in delivering exceptional value to customers.

Standing still has never been an option. To deliver on our strategic goals, we worked with stakeholders and the Oregon Legislature to set some of the most ambitious emissions targets in the country—while also exploring new technologies to reach net zero emissions across our company operations by 2040.

Our path to decarbonization and a clean energy future will be achieved with five key strategies detailed in the pages to follow. It all starts with the needs, values and expectations of our customers.



# How we get there

1. Exceed customer expectations
2. Build a smarter grid
3. Power our system with clean energy
4. Unlock regional power
5. Electrify transportation & buildings



# 1 Exceed customer expectations

Putting customers first is at the center of all that we do, and we know some customers want to go further and faster to decarbonize. At the same time, we recognize that an affordable electric bill is essential for customers as they face the rising cost of living. Wherever customers are on their energy journey, we intend to provide them with options, and be a trusted resource for information, advice and solutions to meet their goals.



## Putting customers in charge of their energy use

We are taking concrete steps to help customers manage their energy use and save money using programs and tools, such as energy dashboards, usage alerts, Peak Time Rebates, Smart Thermostats, EV Smart Charging, just to name a few.



## Using technology & digital tools to improve customer service

At PGE, we improved customer service through accelerating investments in technology to improve outage restoration information, digital payment tools and an online marketplace, as well as to drive operational efficiencies.



## Increasing customer savings and energy efficiency upgrades

Through the Energy Trust of Oregon, PGE's customers have had the highest rates of energy efficiency in the country for more than a decade. We are building upon these successes and working together to expand and integrate solutions.



## Partnering with businesses for innovation and growth

PGE is working with business customers of all sizes to help power their operations and meet their clean energy goals. As our service area sees strong commercial and industrial growth, particularly in semiconductors, data centers, and the technology sector, PGE is increasingly integrated with customers' operations while continuing to provide business customers with the essential service of safe and reliable, affordable energy.



## A bill discount program that works

PGE was the first utility in Oregon to introduce an Income-Qualified Bill Discount program, providing a 15-25% discount for eligible customers. PGE also works closely with state and federal agencies to ensure that program dollars make a difference for customers right here in Oregon who are most in need of support and energy assistance.



## Maximizing federal funding to manage customer costs

With the passage of the Inflation Reduction Act and the Infrastructure Investment & Jobs Act, Congress delivered a comprehensive federal policy response to climate change and an investment package to support broad clean energy, climate, and infrastructure projects. The significance of the federal funds is game changing and will accelerate adoption of technologies like solar panels and electric vehicles by both residential and business customers alike. PGE is taking advantage of this once in a generation investment and is pursuing grant opportunities that will leverage more than \$1 billion in funding for infrastructure projects that promote new technologies to enhance the reliability and resiliency of the power grid, lower costs for customers and further enable the decarbonization of our energy supply. We are also bringing our expertise and support to state, local and Tribal partners as they seek millions in federal funding for projects ranging from new electric school buses to microgrids to EV charging along highway corridors.



At PGE we put customers first.  
Pictured: Madalyn D. with her bike  
on the Tilikum Crossing.



# 2 Build a smarter grid

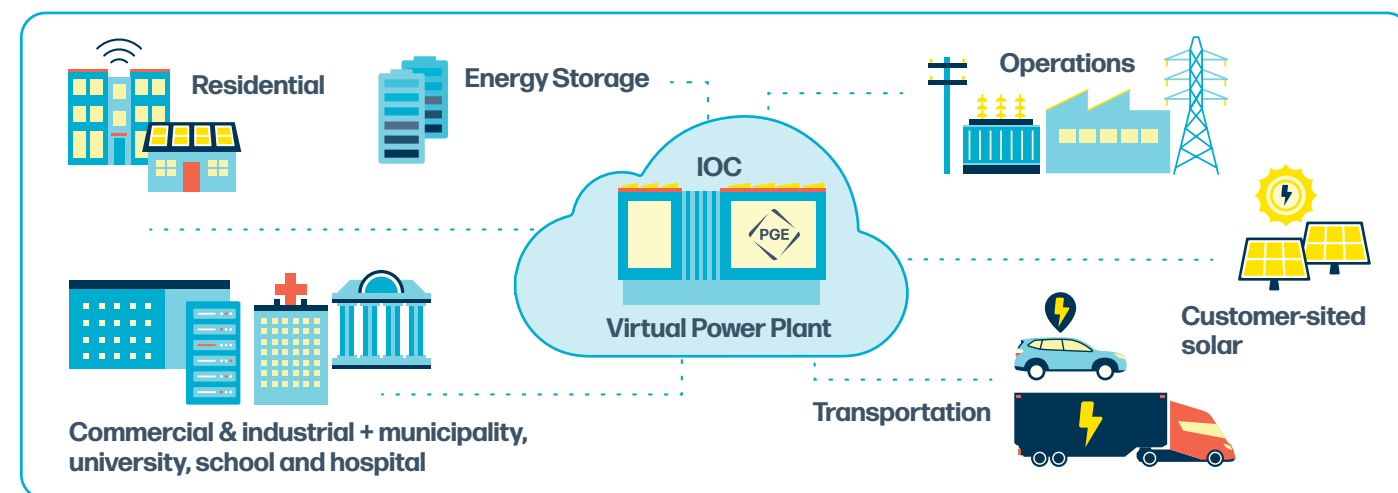
Our customers count on us to provide reliable electricity that can meet peak energy needs at any time and under all weather conditions. We are adapting to an increasingly unpredictable climate by hardening our system, engaging communities in distribution system planning for resilience, investing at a record pace in renewable energy resources and non-emitting back up capacity and improving our forecasting to better account for severe weather and variable renewable energy generation.

## Building resilience to recover faster

Resilience is our ability to anticipate, withstand and quickly recover from disruptive events. PGE is investing in infrastructure and putting parts of the distribution system underground. We are also using wireless smart sensors and centrally controlled automated switches to help isolate disruptions and more quickly reroute power, preventing or shortening disruptions. During outages, we strive to share timely, accurate information with customers—notifying them when their power goes out and providing updates through digital and mobile channels. We are deploying weather monitoring systems, advanced cameras and smart sensors and switches to withstand extreme weather, particularly in high-risk wildfire areas.

## Smart & adaptive grid: Partnering with customers on a Virtual Power Plant

As we work towards our shared climate goals, mutually beneficial partnerships with customers are essential. Powered by advanced intelligence, we are building a grid that is smart and adaptive, allowing for two-way energy transfers, incentivizing customer participation and allowing customers to save money as we partner with them on rooftop solar, battery storage and electric vehicle charging. This flexible grid is orchestrated through a technology platform called a Virtual Power Plant, a system that will allow us to meet customers' power needs while improving reliability and lowering costs.



A virtual power plant is effectively a power plant consisting of distributed energy resources and flexible loads, orchestrated through a technology platform to provide grid and power operations services.



We are working actively to have as much as 25% of the power needed on the hottest and coldest days of the year come from customers and distributed energy resources by 2030.

To get there, we are investing now in tools and technology. Our Advanced Distribution Management System is a centralized software platform for monitoring, modeling, controlling and operating PGE's distribution network in real time and increasing automation throughout the system. Our Integrated Operations Center, which finished its first full year of operations in 2022, is fulfilling its role as the nerve center for an increasingly complex and intelligent energy network.

PGE's partnership with the city of Beaverton to deploy a clean energy microgrid at the new Beaverton Public Safety Center is an example of simultaneously delivering local and systemwide decarbonization and resilience benefits. The collaboration integrates on-site solar, battery storage and backup generation connected with PGE's power grid. This allows the Center to provide continuous emergency services during natural disasters.

At PGE, we are investing in technology and tools to lower costs for customers and enhance reliability.





# 3 Power our system with clean energy

PGE's combined Clean Energy Plan and Integrated Resource Plan is a comprehensive roadmap detailing how we will meet customers' energy needs and greenhouse gas emissions targets while maintaining safety, reliability and affordability. These plans are centered on replacing and reducing fossil fuel generation and purchases with non-emitting energy and capacity resources while we actively work with customers to help them manage their energy use.

PGE will need to procure and integrate clean energy resources and capacity at an accelerated pace to meet customers' energy demands and achieve 2030 greenhouse gas emissions targets. Key actions include:

- **New utility scale renewable projects** like wind and solar installations, both in-state and out-of-state, and the necessary transmission to bring it to local customers. In addition to existing wind, solar and hydropower capacity, as well as 1,000 MW from existing procurements, PGE will need to procure over 500 MW of non-emitting resources each year through at least 2028.
- **Non-emitting capacity** such as batteries. We plan to acquire sufficient capacity to maintain system reliability, estimated to be over 600 MW in summer and winter.
- **Customer-sited solutions**, including solar, battery storage, energy efficiency and customer demand response programs integrated through PGE's Virtual Power Plant to benefit customers through lower costs and increased reliability.
- **Community-Based Renewable Energy**, projects on a scale of less than 20 megawatts each which provide direct benefits to the communities they serve, includes stand-alone community-scale solar photovoltaic resources, solar paired with storage microgrids for resilience and small low-impact hydro. PGE is working collaboratively with communities to develop these projects and explore the benefits community-based renewables may provide, from access to low-cost energy and resilience, to job creation and economic development.

**For more information on PGE's Clean Energy Plan and Integrated Resource Plan, visit:**

[Portlandgeneral.com/resourceplanning](https://portlandgeneral.com/resourceplanning)

# 4 Unlock regional power with transmission & regional markets

Transmission is a challenge to both PGE and the region. Timing and long lead-times for permitting are hurdles for transmission projects, and solutions will depend on successful regional coordination and cooperation, as well as on federal, state and local support for siting transmission resources.

In the coming years, the region will need additional transmission lines to meet growing and changing energy needs and access new non-emitting resources. Accessing hydropower from British Columbia, wind resources from Montana and Wyoming and solar generation from the desert Southwest will help ensure reliability and provide stability across the Western grid.

To meet increasing electricity loads and ensure reliability, PGE is advancing over a dozen transmission projects with significant involvement of regional partners. We are collaborating with the Bonneville Power Administration to accelerate upgrades and reinforce key substations and transmission lines as well as working to identify new options for incremental capacity.

## Regional Energy Markets

We are working with our partners across the West to integrate regional energy markets, which deliver cost savings and reliability benefits by economically dispatching participating utilities' generation assets to balance supply and demand over a wider geographic region. This is becoming more critical as changing climate patterns mean we can no longer consistently predict future winter and summer energy peaks. As we work to decarbonize, regional partnerships will help us deliver better value and enhanced reliability. PGE helped lead the development of the Western Resource Adequacy Program to provide transparency in planning and operational support to enhance reliability across the region. Additionally, our participation in the Western Energy Imbalance Market (EIM) effectively expands our resource footprint, allowing PGE access to a wider diversity of resources when we need them most. Since 2014, the Western EIM has reduced PGE customer bills by approximately \$200 million.

*PGE linemen restoring power for customers after a storm*





# 5 Electrify transportation & buildings

Electrifying transportation, buildings and infrastructure offers a key opportunity to significantly reduce greenhouse gas emissions across the economy. To accelerate this transition, we are working in partnership with customers and communities to electrify vehicles, homes and workplaces in a reliable, equitable manner.

## Transportation: Electric vehicles and charging infrastructure

The transportation electrification market is rapidly maturing, through accelerated electric vehicle (EV) adoption, automaker investment, and state and federal incentives and policy actions. Creating a connected and accessible electric mobility ecosystem that works for everyone will include:

- **Planning for infrastructure investment and growth:** PGE is enhancing our modeling and forecasting capabilities which provide necessary insights to inform how we serve this new, swiftly growing load. By understanding the expected demand for charging across different geographies and customer segments—including municipal, fleet, multi-family, and heavy-duty vehicles—we can plan for and make targeted grid investments.
- **Focus on managed charging:** To effectively manage future load from EVs and optimize the grid, we are enabling and scaling tools, like vehicle telematics, that will encourage charging during off-peak times, deliver flexible load and support the growth of the Virtual Power Plant.
- **Key customer solutions:** We continuously adapt our customer offerings to meet the evolving needs of both our residential and business customers. For residents, we have introduced a Residential EV Smart Charging Pilot program, providing rebates for eligible chargers and panel upgrades. For businesses, our Fleet Partner program assists in planning and installing charging infrastructure to make it easier to electrify vehicle fleets.
- **Partnership and grant offerings:** We are working closely with municipalities, non-profits and community action organizations to meet the needs of underserved communities, take advantage of new federal funding opportunities, and attract co-investment from the private sector. Our grant work through the PGE Drive Change Fund and Electric School Bus Fund funded by the Oregon Clean Fuels Program supports local projects throughout our service area.



*North Portland Electric Island: PGE and Daimler Trucks North America opened Electric Island in 2021, a first-of-its-kind heavy-duty electric truck charging site that will help accelerate the development of zero-emissions commercial vehicles and help us study charger use and performance.*

## Electrifying homes and workplaces

Motivated by the impacts of a changing climate and a desire for safer and healthier homes and communities, residential and business customers are increasingly choosing electric technologies to lower costs and increase efficiency in heating and cooling their homes and workplaces. PGE is planning for this increased energy use across our system. Improvements in heat pump technology have made electrified homes and businesses a more efficient and economical choice. These electrification efforts are supported by incentives available through the Energy Trust of Oregon, the Oregon Department of Energy and other programs.





At PGE, we are a part of the communities we serve. Pictured: PGE co-workers Chris S. and Fabian C. at the iconic St. Johns Bridge.

# Advancing an equitable system for all

## Our Guiding Behaviors

At PGE, we believe the clean energy future should be accessible to all. Underpinning our work is our commitment to diversity, equity and inclusion. Our Guiding Behaviors, which we established more than 25 years ago, are foundational to how we do business, including how we treat each other and our customers. This means listening to and supporting the diverse voices of the communities we serve.

We are engaging communities directly and with much more intentionality. By partnering with local community-based organizations, we are learning and working to address societal barriers that make it harder for some people to access energy savings and clean energy programs, technologies and energy sector jobs. We must break through racial, economic, cultural, accessibility and linguistic barriers so everyone can make decisions that enable us all to benefit from a clean energy future.

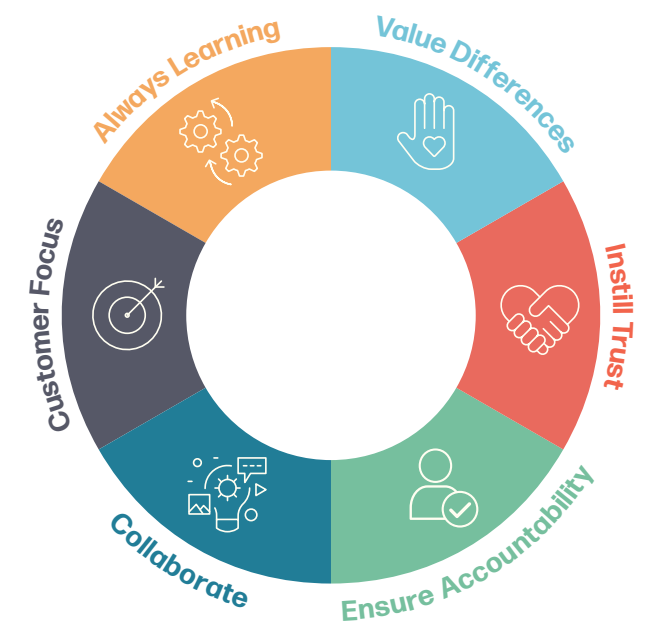
Our Community Benefits and Impacts Advisory Group, founded in 2023, is composed of individuals that represent or serve environmental justice communities. The group will weigh in on decision-making in the clean energy transition that impacts people across PGE's service area.

## Growing a clean energy workforce

We can't build a clean energy future without people—a highly-skilled, well-trained, diverse, equitable and inclusive workforce—to build, operate and maintain non-emitting resources and a smart and adaptive energy system. PGE has long worked with the International Brotherhood of Electrical Workers and other union partners. We advocate for fair hiring and labor practices. PGE will continue to work collaboratively with community partners, ranging from community colleges to our labor union partners, to build a clean energy workforce pipeline through the support of strong labor and workforce standards and policy.

## Our Guiding Behaviors

A list of attributes that define how we work



## Engaging with Tribes

Our journey toward a clean energy future must include Tribes as equal partners—respecting and embracing their integral role as sovereign governments, economic drivers, political influencers and nation builders. PGE has worked closely with Tribal governments, businesses, elders, employees and organizations for many years. We also seek to raise awareness of historic barriers and address Tribal equity issues in areas of shared concern. PGE and the Confederated Tribes of Warm Springs share ownership of Pelton Round Butte, certified low-impact hydropower facilities on the Deschutes River.

Read more about PGE's Strategic Tribal Engagement Plan and other tribal relations efforts in the 2022 ESG Report



