2021 ESG REPORT

Advancing our clean energy future



PURPOSE

We exist to power the advancement of society

We energize lives, strengthen communities, and drive advancements in energy that promote social, economic and environmental progress.

VISION

To lead the clean energy future

Together, with our customers, stakeholders, and communities, we will lead the energy transformation by **decarbonizing**, **electrifying and performing**.



This report aligns with the <u>Sustainability Accounting Standards Board (SASB)</u> to provide stakeholders information about how we identify, measure and manage the subset of ESG topics that most directly impact long-term enterprise value creation. We also continue to enhance our reporting under the <u>Task Force on Climate-Related Financial Disclosures (TCFD)</u>. The inclusion of information in this report should not be contrived as characterization regarding the materiality or financial impact of that information.

2021 ESG Report

Portland General Electric / 2021 ESG Report 1

Advancing our clean energy future 2021 ESG Report



MARIA M. POPE President & Chief Executive Officer

Events of the past year, including the ongoing pandemic, social unrest, economic uncertainty, and extreme weather events caused by climate change, underscore how important it is to have a business strategy grounded in Environmental, Social and Governance (ESG) best practices.

Times of great change also present great opportunity. In 2021, we made significant investments in the resiliency of our system and focused on raising the bar in terms of our clean energy commitments, accelerating the implementation of sustainable practices, and increasing our efforts around governance. We also welcomed our first Director of Sustainability Strategy, Kristen Sheeran, to help guide our ongoing efforts around sustainable business practices and climate policy. At Portland General Electric, we are committed to creating a culture in which our ESG activities are **deeply embedded in our daily** work and operations.

The following are some of our key achievements throughout the year:

- We filed our inaugural <u>Distribution</u> <u>System Plan (DSP)</u> that will allow us to build the grid of the future and submitted a **Request for Proposals** (**RFP**) seeking 375-500 MW of renewable resources, all in service of providing customers with clean and reliable energy.
- <u>House Bill 2021</u>, Oregon's clean electricity law, marked an important milestone in making sure the state's clean energy future is inclusive and accessible to all. The bill requires PGE to convene advisory groups to help inform equitable implementation of our Clean Energy Plan and sets the benchmark of 100% decarbonization by 2040.
- We protected the environment by being good stewards of Oregon's natural and cultural resources, from habitat and water restoration projects on the <u>Deschutes</u> to seeing record breaking coho salmon returns on the Clackamas, maintaining our ecosystem and wildlife continues to be a priority.

- Equitable hiring continues to be a focus for us as we strive to reflect all people in our workforce and in our work. We identified ways to mitigate bias from the hiring process, launched programs to foster the development of underrepresented women and Black, Indigenous and People of Color (BIPOC) groups and performed pay equity studies to advance fair pay standards throughout our workforce.
- <u>Community involvement</u> is paramount and this year PGE employees completed over 15,700 hours of community service with total charitable giving from employees, corporate match, PGE Foundation and retirees of \$4.8M.

Together, we are working to create a better tomorrow through our commitment to decarbonize, investing in renewable resources, electrifying transportation, empowering our customers to choose clean energy and building relationships in our communities to better serve the needs of all. At Portland General Electric, we are committed to creating a culture in which our ESG activities are deeply embedded in our daily work and operations. It is mission critical to supporting a prosperous economy, vibrant communities, and a healthy environment, as the interconnection between people, business and planet has never been more apparent.

Looking ahead, we commit to holding ourselves to a higher standard on behalf of customers, employees, investors, partners, and the environment. We recognize our ESG work is a journey, and we cannot do it alone. It will take all of us to achieve a cleaner and more equitable future for generations to come, and PGE is proud to do our part.

ufaia race

Maria M. Pope President and CEO, PGE

A future rooted in sustainability 2021 ESG Report



KRISTEN SHEERAN Director of Sustainability Strategy Portland General Electric is committed to a future for Oregon in which all our customers, employees, and communities can thrive. That's why sustainability is core to our business and values at PGE. We pursue affordable, reliable, clean energy solutions that create lasting value for our customers and shareholders, while reducing environmental impact and protecting the health and safety of all.

We have a solid track record — but climate change demands that we intensify our efforts. Our commitments to decarbonize the power we serve; to invest in a smarter, more resilient grid of the future; to advance solutions that enable customers to generate and store their own power; to electrify transportation and buildings; and to minimize wildfire risk and ready our infrastructure for climate-related impacts are integral to achieving our state's ambitious economy-wide climate goals.

Sustainability is central to achieving a clean and reliable energy future **for a better tomorrow**.

Our responsibilities are profound and we're meeting them head on, guided along the way by our commitment to advancing equity in the communities we serve. That means listening to and accounting for the diverse needs of all of our customers and conducting our business in a way that promotes fairness and equal access. This year, we completed PGE's first Strategic Tribal Engagement Plan (STEP) to guide our collaboration with Tribes and to recognize Tribes' unique role as nation builders and economic drivers, as well as members of our community and workforce. We also released our company's first Human Rights Policy, outlining our principles and practices to protect an ongoing commitment to human rights.

While we do not have all the answers today about how we'll reach the target of zero emissions in the power we serve by 2040, we're confident we will get there, in part due to the types of technology advancements, market innovations, and collaborations across the whole energy economy outlined in this year's report. Toward that end, we've expanded and enhanced our carbon emissions reporting. We report the emissions associated with the power we serve Oregon customers, which we're committed to reduce by 80% by 2030, on a path to 100% emissions-free energy by 2040. But as a company, we are also committed to reaching net zero emissions across all of our operations, including our fleets and buildings. With that, we are also reporting Scope 1 and 2, as well as components of Scope 3 emissions through the framework of the GHG Protocol Corporate Standard to gain additional perspectives on our company's carbon footprint.

Sustainability is central to achieving a clean and reliable energy future. Our annual ESG report is an opportunity for us to reflect on our performance and build alignment with our customers, communities, shareholders, and investors about the path forward. It's also an important part of how we hold ourselves accountable to our values and goals.

For us, sustainability goes beyond our clean energy targets. It also means we have the proper programs in place internally to support hiring the right people that represent our diverse communities and providing our employees the tools and opportunities to give back to the region we all love so much. It means putting concerted effort into caring for the environment and, as a result, seeing wildlife numbers rise and habitats rehabilitated. And, most importantly, it means operating in a way we are proud of as we all strive to create a better tomorrow.

Kristen Shen

Kristen Sheeran, Director of Sustainability Strategy, PGE

2021 HIGHLIGHTS

2021 Sustainability highlights

Environmental impact



Wild coho returning

9,000

The number of adult early run wild coho returning to the Upper Clackamas from the ocean hit 9,000 in 2021, the largest seen at North Fork Dam since its construction and the start of data collection in 1958.

Electric vehicle investments

+7 Electric school buses

Number of additional electric school buses that will be on the road between 2022 and 2023.



Reducing CO₂

Electric school buses **avoid 124 tons of CO₂ emissions** over 10 years compared to a diesel bus.

Electric vehicle investment + growth

There are approximately 43,500 electric vehicles in Oregon, and the state has aggressive goals of adding 250,000 registered zero emissions vehicles statewide by 2025 and 1.1 million by 2030.



3,000 Charger pilot project

Since their installation, the two PGE pilot pole chargers in Southeast Portland have seen over **800** unique users and provided over **3,000** vehicle charging sessions.

Clean energy

34.8%

Of PGE's energy served to retail customers in 2021 came from clean energy sources.

ENERGY SERVED

GROWTH OF FLEXIBLE LOAD CAPACITY



Community impact

During the June 2021 extreme heat event, PGE worked with customers to save 62 MW of power, equivalent to powering **25,000** homes, through its existing demand response programs.

2023 500 MW Image: Image:

PGE Flex Load

Approximate number of homes served. - 25K - 100K - 200K

Charitable giving

\$4.8м

Charitable giving, including corporate contributions, PGE Foundation, employee and retiree contributions and company match totaled nearly \$4.8M in 2021.

Matching Gift Program



59% employee participation in Matching Gift Program.

Volunteering

15,760

Total volunteer hours completed, 18% employee participation.

Leadership representation



23.4% Black, Indigenous, and People of Color (BIPOC)

An Oregon kind of energy

River Mill Dam Clackamas County, OR

Oregon has its own kind of energy. Our community of over four million, nearly half of which live within PGE's service area, is united in caring about our beautiful environment — and each other. At PGE, we are right there with you. That is why we are embracing a clean energy future — one that is good for customers and the communities where they live.

AN OREGON KIND OF ENERGY

Our strategic goals aim to lead the clean energy future.



transformation that will harness the power of clean and renewable resources on behalf of all customers.



PGE is investing, enabling and partnering to drive economy-wide solutions.

Electrify



PGE remains committed to providing this essential service for all customers, as we have for 130 years.

We have supported communities with the reliable, affordable power needed to live, work and play safely for over 130 years. We will continue to do so through our clean energy transformation. Our purpose is to power the advancement of society by delivering energy solutions that promote social, economic and environmental progress.

At the center of our transformation is a commitment to equity. Our diversity, equity and inclusion (DEI) efforts are important across our business, but especially as they impact our ability to equitably decarbonize our energy supply, including our most vulnerable customers who are disproportionately impacted by climate change. Through equitable offerings and an eye towards accessibility we are committed to involving those most impacted when creating programs and solutions that will move us forward in our journey to deliver an equitable clean energy future for all. How are we creating a better tomorrow? By making a commitment to decarbonize. By investing in renewable resources. By electrifying transportation. By empowering our customers to choose clean energy. By building relationships in our communities to better serve the needs of all. By preserving and restoring natural habitats. And by building partnerships that bring us together in these efforts.

Corporate equality index

100%

In 2021, for the eighth year in a row, PGE achieved a **perfect score** on the Human Rights Campaign Foundation's Corporate Equality Index.

Top ranking

No. 2 ranked utility in the United States for **customer experience** (Forrester, The U.S. Customer Experience Index, 2021).

People's Choice winner

Recognized by The Technology Association of Oregon (TAO), as the **winner for 2021** in the People's Choice category.

Gender-Equality Index

For the third year, Bloomberg's Gender-Equality Index included PGE for our **commitment to transparency** and advancing women's equity.



How we see sustainability

Sustainability is core to our business. It means reducing the environmental impacts of our operations, protecting the health and safety of our employees, enhancing the well-being of our communities, and building lasting value for our shareholders and customers. Sustainability at PGE is firmly rooted in our commitment to equity in the communities we serve. We strive for sustainability efforts that benefit all our customers, no matter who they are or where they reside in our service territory.

As our business continues to grow and evolve, we are committed to listening to and accounting for the needs of the communities we serve, especially those experiencing economic hardship or climate change impacts.

With the competence and credibility we have earned over our 130-year history, we will lead decarbonization efforts by reducing greenhouse gas (GHG) emissions, increasing electrification, and continuously innovating in ways that reduce costs and deliver exceptional value for our customers.

The past few years have brought profound changes to our daily lives, our society and our world. The climate crisis is here — the recent Sixth Assessment Report from the Intergovernmental Panel on Climate Change confirms we face a serious and immediate global threat. In Oregon, we are experiencing unprecedented heat and wildfires, historic ice and storms, and increasing devastation from extreme weather.

As an energy provider, we know the only path toward a sustainable future is decarbonization. That is why we are fundamentally driven to lead the clean energy future together with our customers, communities and stakeholders. We are powering progress by advancing clean and renewable energy so that by 2040, all our energy that is served to customers is 100% GHG emissions-free. We are **powering progress** by advancing clean and renewable energy so that by 2040, all our energy that is served to customers is **100% GHG emissions-free**.

As we reduce the emissions associated with the power we serve, we are also looking for opportunities to partner with customers, businesses and innovators to electrify vehicles, homes and businesses to use this cleaner energy. In our state, where transportation is the largest source of GHG emissions, our efforts to expand electric mobility will support emissions reduction beyond our sector.

We have deep respect for our partners across the state, from the legislators to the local nonprofits, and aim to come together to better serve the needs of all. We also strive to have all communities and peoples reflected in our workforce and in our work. We take our job as stewards of the environment where we work seriously. Protecting Oregon's environment is critical to protecting public health and quality of life of Oregonians.

At the heart of all this are our customers

We know that our customers want us to go farther and faster in our sustainability efforts. Our customers are key in moving the region's decarbonization efforts forward and we are dedicated to providing options, information, advice and solutions to meet their goals, wherever they may be on their energy journey. Our mission at PGE is to deliver reliable, affordable, clean energy to all our customers.

By decarbonizing the power we generate and serve, we can electrify more of our communities and provide affordable energy access to all. We will do this while respecting our neighbors, preserving the environment, building a representative workforce and governing ourselves with purpose — we are united for a sustainable, clean energy future. We have far to go but the means to get there. Here is a look at what we have done this past year to pave the way: Sustainability policy. 2021 ESG REPORT

Accelerating the shift to clean energy

Biglow Canyon Wind Farm Wasco, Oregon

There is no greater imperative than to rapidly reduce greenhouse gas (GHG) emissions to address climate change and clean energy is at the center of an emissions-free future. Decarbonizing electricity requires phasing out sources of power that are no longer sustainable — like coal — and accelerating a shift to renewable energy. Successfully navigating this transition will require new tools and approaches in a more dynamic system.

Our path to an 80% reduction in 2030 is achievable through a combination of PGE, customer and community solutions

What we are already doing:	What we are planning:		
Boardman Closure (-518 MW) RFP (+375-500 MW renewables)			
Green Future Impact Phases I and II (+500 MW)	Customer-sited solar	Flexible loads	Community renewables and resiliency
Douglas PPA (+160 MW)			
Hydro Renewals (+224 MW)		-+- p3	(COC)
Energy Efficiency (+220 MW)			
	Energy storage	Regional partnerships	Working to exit Colstrip by the end of 2025

We plan to add a significant amount of energy storage to the system, and we are implementing new strategies to increase flexible load programs that can ramp energy consumption up or down on demand. As we transition our supply portfolio, we plan to operate our existing natural gas plants differently to maintain and meet peak demand rather than provide energy throughout the day. Our decarbonization efforts go beyond the energy we serve our customers: we are also committed to reducing emissions from our other operations and advancing electrification of homes, businesses and transportation in our communities to meet both state and company clean energy goals.

Decarbonizing our energy supply

Our focus is reducing GHG emissions from the power we supply while delivering reliable and affordable service to customers. Customers want us to go further and faster, which is why we worked this past year with stakeholders and the Oregon Legislature to set some of the most ambitious clean electricity targets in the country — achieving at least an 80% reduction in GHG emissions associated with the power served to customers by 2030, a 90% reduction by 2035 and a 100% reduction by 2040. In 2020, PGE voluntarily pledged to achieving net zero emissions across all our company operations by 2040, including our fleets and facilities.

Realizing the target of zero emissions by 2040 will not be easy and we do not have all the answers today. In 2021, more than one-third of the power served to Oregon retail customers came from clean energy resources as we continue our journey to reach 100% clean electricity by 2040. This future can be achieved through advances in technology, improvements in efficiency, reductions in costs and new partnerships across the entire energy economy.

Emissions reporting

We know we have a way to go to serve our customers with 100% emissions-free energy by 2040, but we are encouraged by the magnitude of investment, pace of innovation and resources focused on developing clean energy solutions, which have never been greater. While the tools and technology we have access to will continue to evolve, we are mapping our path forward and the initial strategies we will take to get there in our <u>Strategy Paper</u>.



In 2021 our preliminary number for GHG emissions from power sold to retail customers ($mtCO_2e$) is 6.26 million. Emissions year on year can swing for a variety of reasons, including variability in weather that can affect both energy demand and supply. The steps we are taking, described in the sections below, will take us farther down the path toward our 2030, 2035 and 2040 emissions targets.

There are other ways to measure our company's contribution to GHG emissions that not only include the emissions the company directly emits through fuel combustion at our generation units and vehicles, but also emissions the company is indirectly responsible for, as a purchaser of power or other inputs with carbon implications along the value chain. For those purposes, PGE reports using the GHG Protocol Corporate Standard. This year, PGE is reporting Scope 1, 2 and certain Scope 3 categories of emissions.

Advancing clean energy

We are ambitiously pursuing renewable energy to meet future needs. Combined wind, solar and battery storage is a powerful energy trifecta. The Wheatridge Renewable Energy Facility in Eastern Oregon is a first-of-its-scale resource that combines these elements to harvest and store power from renewable resources in partnership with NextEra. Wheatridge was brought online with wind power in 2020 and we expect to add solar and battery storage in 2022. The facility is able to deliver 380 MW of emissions-free power.

Every year, PGE reports the GHG emissions associated with the power it serves Oregon retail customers to the Oregon Department of Environmental Quality. This data includes emissions associated with the power we generate, as well as emissions associated with the power we purchase, to serve our customers. It is an important lens of our decarbonization efforts, as this measure of emissions will determine our compliance with Oregon's 100% clean electricity law.



Wheatridge Renewable Energy Facility

The Wheatridge Renewable Energy Facility plays a significant role in our decarbonization strategy to move away from fossil fuels without compromising a reliable, steady flow of electricity.

One of the key steps to reach the GHG emissions reductions required in Oregon is to leave coal behind. In 2020, we closed the Boardman Coal Plant, Oregon's only coal-fired power plant. Decommissioning activities, including environmental cleanup, started in 2021, readying the facility for demolition and removal in 2022. We are also working with co-owners to exit our 20% investment in the Colstrip, Montana, coal-fired power plant by the end of 2025.

As we look to the future, we know that we need to change how we operate our natural gas-fired power plants, shifting to using natural gas as Once complete, The Wheatridge Renewable Energy Facility will be able to **deliver 380 MW of emissions-free power**.

more of a fuel of last resort to support reliability of the power supply or perhaps converting to hydrogen or other cleaner fuels. In the meantime, we continue to upgrade combustion technology at our thermal units to reduce emissions. PGE entered into formal agreement with the Oregon Department of Environmental Quality (ODEQ) in August 2021, agreeing to reduce permitted emission levels of nitrogen oxides (NOx), sulfur dioxide (SO₂) and particulate matter at the Beaver/Port Westward I plant. The combined total of permitted emission levels for these three pollutants will be reduced by over 85% over a five-year period.

Green future impact

17 Businesses

In 2021, Intel joined PGE's Green Future Impact program. Intel's purchase is the **single largest in PGE's program**, joining 17 other businesses and municipalities that have committed to purchase clean power through the Green Future Impact program.

Daybreak solar facility

+138_{MW}

Intel's participation is enabling PGE to enter into a 15-year agreement with Avangrid Renewables to purchase clean, **emissions-free energy** from Daybreak Solar, a new 138 MW solar facility that will be developed in Wasco County, Oregon.



ACCELERATING THE SHIFT TO CLEAN ENERGY (continued)



Tuccanon River Wind Farm

Investing in clean energy resources

To create the clean energy future Oregonians want, we estimate that by 2030 we will nearly triple the amount of clean and renewable energy we serve customers. To achieve that goal, beyond removing coal from our portfolio, we will need approximately 1,500-2,000 MW of clean and renewable resources and approximately 800 MW of non-emitting dispatchable capacity resources. To that end, in 2021, PGE made three filings with the Oregon Public Utility Commission (OPUC):

1. Request for proposals (RFP)

We are currently in the process of seeking approximately 1,000 MW of resources through a request for proposals (RFP) public process that was approved by the OPUC and issued to market in December.

For customers, we expect to bring on approximately 375-500 MW of renewable resources. If beneficial to customers and in balance with affordability, we will work with the OPUC to evaluate the opportunity to procure additional clean and renewable resources through this RFP, with a potential target of getting up to one-third of the clean resources needed to meet the 2030 emissions reduction target. We are also seeking approximately 375 MW of non-emitting dispatchable capacity resources that can be used on the hottest or the coldest days of the year, which will allow continued reliable service for all.

2. Distribution System Plan (DSP)

We filed our inaugural Distribution System Plan (DSP) at the Oregon Public Utility Commission. Building this reliable, affordable and equitable future our customers expect will take all of us working together customers, regulators, stakeholders, technology providers and utilities. By 2030, PGE estimates as much as 25% of the power needed on the hottest and coldest of days could come from customers and distributed energy resources (DERs), like solar panels, batteries and electric vehicles.

The first part of PGE's inaugural DSP lays out plans to build the grid of the future with its customers, one that supports a two-way energy ecosystem and empowers customers to make energy management choices to support decarbonization. We are already partnering with customers to shift energy use away from peak times of demand to help keep energy clean, affordable and reliable. During the June 2021 extreme heat event, PGE worked with customers to save 62 MW of power, equivalent to powering 25,000 homes, through its existing demand response programs.

By 2030, we aspire to grow our existing flexible load portfolio to upwards of eight times the existing program: equal to serving more than 200,000 households. Building an equitable clean energy future will require intentional placement of resources like batteries, EV chargers and solar panels throughout Oregon communities. By 2030, we anticipate the potential for four times as much distributed solar and storage than today, bringing 500 MW of clean electricity to the grid. There are currently approximately 43,500 electric vehicles in Oregon, and the state has aggressive goals of adding 250,000 registered zero emissions vehicles statewide by 2025 and 1.1 million by 2030. We are planning for this significant new load and working to make sure that its system is ready.

3. Integrated Resource Plan (IRP)

To incorporate the vision of Oregon's new clean energy law (HB 2021) and encourage a robust public participation process in the development of the newly required Clean Energy Plan, an extension through March 2023 was approved by the OPUC for the next Integrated Resource Plan (IRP).

Decision-making that promotes equity

All our efforts in 2021 to advance clean energy through decarbonization

All our efforts in 2021 to advance clean energy were guided by **our commitment to equitable access to clean energy**, especially for those who will be hardest hit by climate change.

were guided by our commitment to equitable access, especially for those who will be hardest hit by climate change:

- Through the DSP, we are looking at how to serve our customers to meet all their individual needs.
- HB 2021, Oregon's clean electricity law, has paved the way to making our processes — both the DSP and IRP — more inclusive. The bill requires PGE to convene a Community Benefits and Impacts Advisory Group to help inform development and equitable implementation of our inaugural Clean Energy Plan through our next IRP, as well as help inform future DSPs.
- As a critical step toward social and environmental justice, we developed an empowered communities strategic initiative through our DSP, pursuing twin goals of racial equity and decarbonization to address and acknowledge disparities and impacts within all the communities we serve.

 We are planning for people as well as for systems. For example, we evolved our Net-Metering Map to our new Distributed Generation Evaluation Map, which integrates U.S. Census demographic data and PGE DER readiness data, providing greater transparency and visibility to customers who wish to interconnect clean energy technologies to the grid.

Building a smarter grid

To serve all our neighbors with clean energy, our grid of the future will be smart and adaptive. This intelligent, flexible electric grid will integrate our capabilities across all aspects of the energy system and involve customers as active grid participants so that we can match the variable output of wind and solar with our customers' power needs, affordably and reliably.

Our smart grid also allows for two-way energy transfers, which means residential customers save money as we continue to partner with them on DERs that can go back into the power supply, such as residential energy efficiency programs, rooftop solar and electric vehicle chargers, and battery storage.

This system will also help support reliability, even under the most uncertain and extreme conditions, particularly in high-risk wildfire areas. We are 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.

Integrated operations center

We are building a smart, clean energy future with our new Integrated Operations Center (IOC), which opened in 2021. The IOC will be the nerve center for an intelligent energy network — integrating grid-connected assets and devices, whether consumer, utility or third-party owned — while coordinating and optimizing the flow of energy and information across the system.

Meeting decarbonization goals requires a whole new level of regional collaboration. From the expansion of regional markets, to coordination on resource adequacy, to transmissions planning, utilities will rarely be acting alone. The new capabilities of our IOC and other smart grid investments provide the data, system visibility and insights to optimize resources under constantly changing conditions. More important, these advancements help accelerate our customers' and partners' clean energy transformation by leveraging the scale and diversity of West-wide generation and transmission assets, and intelligently connecting systems across the Western power grid.

In 2022, the IOC will reach full operations, including all staffing and resources, installation of support canopies for solar panels and batteries, creating a micro-grid for the IOC, as well as expanded electric vehicle charging stations.

Smart grid test bed

PGE was selected to receive a U.S. Department of Energy grant of \$6.65M that will allow us to bring more resources into our North Portland Smart Grid Test Bed. The project will include retrofitting approximately 580 buildings in Portland's Overlook/Arbor Lodge area — a portion of which includes historically underserved communities — while developing 1.4 MW of "flexible load" made up of rooftop solar, electric vehicle charging, smart devices like thermostats and water heaters, and more.

Residential battery storage pilot program

Our customers help us transition to a clean energy future by capturing and storing energy from renewable power sources, like wind and solar. In 2020, we launched a pilot program that is ongoing and has a target enrollment of 525 customers to create a virtual power plant — a network of customer batteries that PGE can control to help balance energy production with energy demand. PGE tests the benefits of using the homes' batteries, each capable of storing 12 to 16 kWh of energy, to optimize the use of renewable energy and grid capabilities. We are partnering with Energy Trust to cost-effectively procure the residential battery storage systems by leveraging the existing solar incentives program infrastructure and trade ally contractor network.

As a virtual power plant, the residential battery storage program creates a single resource that can help the grid balance energy production with energy demand, freeing up the fossil generation resources that are typically held on standby, ready to kick in when there is no wind or no sun. As a clean energy option that takes the place of fossil standby resources, the residential battery storage program also gives customers access to resilient energy, even in the event of system outages. Through the pilot, we are able to test new smart-grid control devices that allow a two-way exchange between PGE and customers, allowing PGE to more actively manage power distribution to improve power quality for all customers.

Port Westward II battery storage

This 5 MW/10 MWh Tesla battery is the first generation-sited battery energy storage system to be fully owned and operated by PGE. On its first day of operation in September 2021, before commissioning was fully completed, the battery automatically responded to

ACCELERATING THE SHIFT TO CLEAN ENERGY



Port Westward Plant Clatskanie, Oregon

a frequency response event an event that occurs when there is an unexpected loss of energy generation — providing a substantial portion of PGE's response to the event.

The battery will remain on standby to deliver emergency power for both frequency response and contingency reserve while we continue to explore additional use cases and operational value. In our current landscape, with more frequent extreme weather events, energy constraints and our journey toward a cleaner energy portfolio, it is important to have more flexible resources like this on the grid.

Reducing emissions in our operations

We have voluntarily set a goal to achieve net zero GHG emissions across our company-wide operations by 2040, including our own facility and vehicle emissions.

PGE buildings and infrastructure

PGE is committed to reducing energy use in the buildings we own. Moving forward, we will continue to upgrade our facilities to reduce carbon, incorporating net zero design technologies in new facilities, with an emphasis on supporting both resiliency and sustainability. Our current facilities strategic outlook implemented system improvements based off a detailed audit identifying critical areas to be prioritized. Projects include HVAC, lighting, asphalt and building envelope, and we have used the opportunity to shore up the resiliency and sustainability of our locations. The project upgrade investments we made in 2021 have already resulted in energy savings and GHG reductions. In addition, PGE purchases 10 million KWh of renewable energy certificates annually to source 100% of the power in our corporate headquarters from clean, renewable resources.

PGE fleet electrification

PGE has ambitious fleet electrification goals for the vehicles it owns and operates. We plan to electrify 100% of Class 1 vehicles (such as sedans, SUVs, small pickups) by 2025 and 60% of all vehicles by 2030. We converted 9% of our fleet by the end of 2021, but we remain on pace to achieving our goals and are actively preparing for rapid fleet conversion by building the charging infrastructure our fleets will need.

Pole safety

300%

With improved data analytics and machine learning, the accuracy of identifying poles that require maintenance **has improved 300%** allowing us to keep our people and communities safe.

Microgrid collaboration

PGE's collaboration with the City of Beaverton on a new microgrid supports **resilient and clean power** at the Beaverton Public Safety Center, allowing it to provide continuous emergency services for natural disasters.



Equitable access

HB 2021

HB 2021, **Oregon's clean electricity law**, has paved the way to making our processes — both the DSP and IRP — more inclusive, allowing PGE to address and acknowledge disparities and impacts within all the communities we serve. 2021 ESG REPORT

Supporting electrification

We are committed to an economy-wide clean energy future in which electricity powers more of our lives, displacing higher greenhouse gas (GHG)-emitting fossil fuels and expanding electricity's share of total energy consumption. Our customers and communities are electrifying their vehicles, homes and workplaces, and the pace is accelerating. We are working harder and faster to enable this transition, partnering with school districts, transit districts, automobile makers, government agencies and our customers to help them electrify.

Expanding clean mobility

Electrifying transportation provides one of the most significant opportunities for reducing economy-wide GHG emissions. We are accelerating this conversion through infrastructure investment, partnerships and offerings that meet our customers' and communities' needs. We have launched residential and business charging rebate programs and deployed a network of seven public charger sites. As of fall 2021, there are more than 25,000 zero emissions vehicles in our territory, with as many as 100,000 anticipated in five years.

A future where so many of our customers drive electric vehicles means the potential for significant load growth. Over the next few years PGE will invest significantly to upgrade grid and other infrastructure to support the charging needs of customers across our region. We are already working to enable a new charging load that is flexible and can be managed in partnership with our customers. Managed charging can help integrate variable renewable resources by helping match electricity supply with demand.

Fleet partner

In the summer of 2021, we launched our Fleet Partner program to help public and private fleets transition to electric vehicles and meet their sustainability and economic goals. PGE's transportation electrification

₽ = x 3,000

The charging hub will be capable of receiving **5 MW** of power from the grid, roughly equivalent to the electricity used in **3,000** residential homes.

staff develop a customer-specific fleet electrification study and help them design and build the appropriate charging infrastructure for the fleet. With a custom incentive and turnkey design and construction services, we help fleets save money and make it easy to transition to electric.

Electric island

In April 2021, Daimler Truck North America (DTNA) and PGE opened the first-of-its-kind heavy-duty electric truck charging site, known as Electric Island. Electric Island will help accelerate the development, testing and deployment of zero emissions (tank to wheel) commercial vehicles like the ones manufactured by DTNA. Electric Island opened with eight vehicle charging stations (the majority for public use) for the charging of electric vehicles of all shapes and sizes. It will serve as an innovation center, allowing both PGE and DTNA to study energy management, charger use and performance.

Electric Island is located across the street from DTNA headquarters, less than one mile from I-5, and represents the first location specifically designed for medium- and heavy-duty trucks aligned to the blueprint of the West Coast Clean Transit Corridor Initiative (WCCTCI).

As of fall 2021, there are more than **25,000 zero emissions vehicles in our territory**, with as many as 100,000 anticipated in five years.

Pole charging

To reduce transportation GHG emissions and serve the increasing number of customers driving electric vehicles, more public electric vehicle charging is needed in our service area. Public charging is essential for customers who do not have a driveway or garage for at-home charging, so we started a pilot project in the Clinton neighborhood of Southeast Portland and installed electric vehicle chargers on existing utility poles. This reduces the amount of necessary infrastructure, lowers the cost of installing chargers and creates charging access for drivers who only have on-street parking. We partnered with the City of Portland for this pilot project.

Drive Change Fund

Using funds from the Oregon Department of Environmental Quality's Clean Fuels Program, PGE awarded PGE awarded \$2.25 million in 2021 to **11 local nonprofits** across Oregon for projects that will expand access to electric transportation for Oregonians.

\$2.25 million in 2021 to 11 local nonprofits across Oregon for projects that will expand access to electric transportation for Oregonians. The 2021 PGE Drive Change Fund grants were awarded to support purchasing electric vehicles, electric vehicle charging infrastructure and education programs, including many targeting environmental justice communities and people disproportionately impacted by climate change.

Electric school bus fund

We are partnering with school districts in our service area to help bring electric school buses to Oregon. Using funding from the Oregon Clean Fuels Program (thanks to PGE customers who charge electric vehicles at home), PGE pays for the incremental cost of the electric school bus and charging infrastructure. PGE also provides technical assistance to school districts throughout the process, including site



PGE is proud to partner with public school districts in our service area to help bring electric school buses to Oregon.

assessments, cost-benefit analysis, vehicle and charger selection support, and driver and mechanic support.

This is our second-year awarding school districts with funds. In 2020 and 2021:

- We awarded over \$3 million toward transportation electrification efforts for school districts.
- We funded eight school districts with 13 electric school buses and eight chargers.

Six school districts received funding in 2021, paving the way for seven additional electric school buses to be on the road serving Oregon students in 2022 and 2023. The Beaverton, Centennial, Gresham-Barlow, Hillsboro, Portland and Salem-Keizer school districts were chosen based on their commitments to meet the needs of underserved communities and incorporate the buses more broadly into student education around climate science.

Electrifying homes and workplaces

Motivated by climate change and a desire for healthier homes and communities, people and businesses are turning to electric technologies for heating, cooling and cooking. As higher summer temperatures and extreme heat events prompt more customers to install air conditioning, electric heat pumps provide more efficient heating and cooling. Recent improvements in heat pump technology and a broader range of induction cooking options have made electrifying homes and businesses increasingly cost-effective. As a result, building developers are able to lower construction costs, meet increasing demand for all-electric homes and help communities meet their clean energy goals.

Six school districts received funding in 2021, paving the way for **seven additional electric school buses** to be on the road serving Oregon students in 2022 and 2023.

Drive Change Fund \$2.25M

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Electric school buses

124TONS

Electric school buses **avoid 124 tons of CO₂ emissions** over 10 years compared to a diesel bus.

Electric truck hub

5_{MW}

Daimler Truck North America (DTNA) and PGE opened the **first-of-its-kind** heavy-duty electric truck charging site, known as Electric Island. Capable of receiving 5 MW of power from the grid. 2021 ESG REPORT

Empowering our customers

We deliver an essential service foundational to the well-being and vitality of society. Underpinning this work is our commitment to diversity, equity and inclusion (DEI). We support everyone's right to participate in and benefit from a clean and reliable energy future. We also embrace our responsibility to provide everyone with affordable electric service. By partnering with local communitybased organizations, we are working to address societal barriers that make it harder for some people to access energy savings and clean energy.

Our focus on affordability drives us to continuously innovate, deploying new technologies, simplifying processes, reducing costs and delivering exceptional customer experiences. Integrating new digital technology in our operations extends from our frontline workers throughout our supply chain. We have implemented new design tools and procurement systems that reduce costs by automating key processes and enabling employees to connect their work to the customer experience with each decision, every day.

Enabling equitable access to energy

Together with policymakers and regulators we are working to keep affordability at the forefront of energy

2021 legislation supporting equitable energy access

HB 2475 Energy Affordability Act enables the Oregon Public Utility Commission (OPUC) to consider differential energy burdens and other economic, social equity or environmental justice factors in rates or programs.

HB 2739 temporarily increases low-income bill assistance funding by an additional \$10 million annually through 2023.

HB 3141 increases funding for low-income weatherization, directs the OPUC to set equity metrics for all funds invested by the Energy Trust of Oregon and requires investment of 25% of renewable energy program funds to serve low- and moderate-income customers.

HB 2842 establishes the Healthy Homes Program within the Oregon Health Authority to provide financial assistance to low-income households and landlords.

Oregon Energy Fund

\$2.9м

Twice a year, PGE includes an Oregon Energy Fund donation envelope in customer bills, which has resulted in **more than \$2.9 million** in PGE customer donations since 2005.

Storm recovery grants

\$225к

In 2021, we provided community grants totaling \$225,000 to local nonprofits **providing vital support** to people in five of the hardest hit counties impacted by the historic February ice storm.



discussions. PGE partners with customer and community groups to support state and federal legislation that provides support for low-income and vulnerable communities. In the 2021 Oregon Legislative Session, PGE supported legislation that increased assistance for low-income utility customers and helped reduce barriers and increase access.

PGE advocated, in coalition with others, for additional state and federal energy assistance funding, resulting in an additional \$78 million allocated to Oregon between 2020 and 2021. We also helped secure authority for community action agencies to use express enrollment when qualifying customers for state bill assistance funding, reducing the need for duplicative application processes.

Supporting customer clean energy choices

PGE customers are already #1 in the nation in choosing renewable energy programs, but we know many customers want to move further, faster. We want all our customers to be able to benefit from clean energy. That is why we are creating incentives to join us on our journey to decarbonization. We will continue to create new, innovative programs that offer a variety of choices to customers looking for clean, green energy options to power their homes and businesses.

Home energy partnerships

In 2021, we announced a partnership with Nest Renew from Google, a service for compatible Nest thermostats that makes it easy to support a clean energy future. Nest Renew Basic will help customers save energy and reduce their carbon footprint by automatically shifting their heating and cooling electricity usage to times when energy is cleaner. Customers can also enroll in PGE's Smart Thermostat program, which helps customers with compatible Nest thermostats automatically adjust their thermostat by a few degrees when energy demand is high (with rewards for participating). Nest Renew Premium also includes Clean Energy Match, which can match estimated fossil fuel electricity usage with renewable energy credits from U.S. wind and solar projects. Nest Renew complements PGE's Green FutureSM programs and aims to integrate with existing programs like Peak Time Rebates and Smart Grid Test Bed.

Electric vehicle charging pilot program

Recognizing that cost is often a barrier to electric vehicle ownership, PGE

launched a pilot program in 2021 that provides up to a \$500 rebate for residential customers who own or lease an electric vehicle to install a charger at home. Income-eligible customers can qualify for up to a \$1,000 rebate. The new rebate pilot program also rewards customers who allow PGE to shift their electric vehicle home charger's energy use when demand or prices are high, as well as when renewable resources are less available. This helps manage the grid and provides participants with a \$25 reward at the end of each season.

Equitably addressing climate impacts

Protecting energy access is more important now than ever, as we see the effects of climate change in real time across our service territory in the form of wildfire, drought, habitat loss and extreme heat. We recognize that climate change often disproportionately impacts our most vulnerable communities, including Black, Indigenous and People of Color (BIPOC) and low-income communities. PGE is rising to the challenge on both fronts — climate change mitigation and adaptation — as we work to

Investments in resilient infrastructure have a local, tangible and visible impact.

decrease emissions, mitigate wildfire risks and address the impacts of climate change on our system.

PGE partners with communities and takes inspiration from best practices in community engagement to support a people-centered approach to prioritizing energy access. This approach also respects different intersecting underserved identities such as race, gender and class that may result in some members of our communities facing greater disparities that require multipronged approaches to address.

Investments in resilient infrastructure have a local, tangible and visible impact. Infrastructure planning can and should address and redress historical harm and allow PGE to deliver electricity safely and reliably. PGE has a responsibility, in our role as an essential service provider, to create a space for respectful discourse, facilitate conversations that hold up multiple perspectives and listen to understand, as leveraged in the DSP process.

Wildfire mitigation

Even in historically wet, mild Oregon, summers are getting hotter and drier, resulting in longer and more extreme fire seasons and an overall increased risk of wildfires. We are expanding our efforts to protect the areas around our wires and equipment as well as taking proactive, comprehensive action to keep our system safe and resilient



An Asplundh tree crew member evaluates overhead safety hazards during hazard tree removal operations in Mt. Hood National Forest.

from wildfire, weather and other disaster-related crises.

Recognizing the need to address the increasing threat of wildfire, the Oregon Legislature passed SB 762 in the 2021 legislative session, which lays out a plan for a coordinated effort in the state, including the requirement that utilities operate under OPUCapproved Wildfire Mitigation plans. In December 2021, we filed our first regulatorily required Wildfire Mitigation Plan with the OPUC, which builds upon the last few years of PGE's wildfire mitigation work and analysis. We are partnering with the U.S. Forest Service, state agencies, Tribes, local municipalities, fire districts and emergency responders to coordinate wildfire responses and keep the public informed if incidents occur. We have also established a formal system for identifying vulnerable stakeholders and informing them of our public

safety power shutoff requirements. We continue to enhance our situational awareness by adding several weather stations to our portfolio and piloting an artificial intelligence-based wildfire detection system that detects fires and enhances situational awareness to prevent potential impacts.

See our website for more information: <u>portlandgeneral.com/</u> outages-safety/safety/wildfire-safety.

Post-storm support

While restoring power was the focus of PGE crews during the 2021 February Ice Storm, PGE outage support teams partnered with several counties, municipalities and the National Guard to deliver thousands of supplies to affected residents, including flashlights, batteries, electric lanterns, portable battery chargers, hand warmers, emergency info flyers and electric outage tips. 2021 ESG REPORT

Respecting our communities

Sullivan Hydro Plant A hydroelectric dam on the Willamette River

As members of the Oregon communities we serve, we care about all our neighbors.

Wherever our work impacts others, we aim to respect community needs. So, we are building strong relationships with the diverse group of stakeholders in our state. And, like all Oregonians, we are passionate about preserving our beautiful environment to enjoy for many generations to come.

Engaging with local tribes

Tribes have stewarded the lands we work in since time immemorial. They continue to have deeprooted cultural connections with the landscapes where we operate. Federally recognized Tribal sovereign governments also play a role when they review certain of PGE's environmental and licensing permits. PGE works closely with Tribes to negotiate franchise agreements for transmission lines. PGE also serves in advisory capacities within Federal **Energy Regulatory Commission** (FERC)-mandated work groups for cultural and natural resources. At PGE, we are honored to have multiple touch points with Tribal governments, organizations and members.

We recently completed PGE's first Strategic Tribal Engagement Plan (STEP) that will guide our work going forward by providing an overarching and thoughtful framework to understand the Tribes' role as economic drivers, political influencers and nation builders as well as members of the community and our workforce.

PGE works diligently to bring awareness to historic barriers and focus on establishing long-term partnerships with area Tribes. PGE does this by striving to address Tribal equity consciously and deliberately in areas of shared concern or operations and by providing continuous education to those employees who work with Tribes. PGE often consults with federally recognized Tribes prior to developing projects and initiatives, working closely with them to find mutually beneficial solutions for fish passage, water quality, recreation and cultural resources management.

PGE recognizes and respects the deep cultural connection that the Tribes have to the land, waters, flora, and fauna at Willamette Falls since time immemorial. PGE understands the Tribes view ceremonial fishing and lamprey gathering activities as vital and essential cultural practices. Upon FERC's approval of PGE's 2021 application, PGE hopes to accommodate and support these practices by allowing Tribes to access a portion of project lands safely in accordance with a Perpetual Cultural Practice Easement (PCPE).

The Pelton Round Butte relationship

In 2021, the Confederated Tribes of Warm Springs (CTWS) and PGE extended their long-standing relationship at the co-owned Pelton Round Butte project, a certified low-impact hydropower facility on the Deschutes River. Under this new agreement, PGE will continue to operate and purchase power generated from the Tribes' share of the project through 2040 and 100% of the emissions-free electricity generated at Pelton Round Butte will continue to be part of PGE's portfolio.

This long-term power purchase agreement is forecasted to fulfill 224 MW or 35% of PGE's outstanding 2025 capacity needs with clean, reliable electricity. As a flexible resource, the Pelton Round Butte project is capable of scaling output to meet customer demand and helps PGE to integrate renewable resources.

PGE Foundation grants

\$250к

In 2021, we provided **27 arts and culture organizations** with grants totaling \$250,000 to provide arts access and integrated learning opportunities for youth.



In addition to entering into this new power purchase agreement, the CTWS also increased their ownership share in Pelton Round Butte from 33% to 49%. The CTWS became co-owners of the Pelton and Round Butte facilities in 2001 through an agreement that provided the CTWS with an additional opportunity to purchase a greater share of the project in 2021.

In addition to our co-ownership of the Pelton Round Butte project, PGE is working with the CTWS on two new initiatives we believe also further the cause of restorative justice by laying a foundation for better understanding and closer engagement with the Tribes: Project Zero and PGE's Line Apprenticeship Program.

• Through Project Zero, PGE partners with CTWS and other community organizations to provide young adults with a sixmonth internship where they gain professional experience in clean energy and environmental stewardship. PGE and the CTWS worked together to provide opportunities for Tribal participation in the program, preparing its participants for jobs in the clean energy economy. In 2021, Project Zero had **13 young** adults participate in six-month internships, preparing them for future careers in the environmental and clean energy economy.

• Through PGE's Line Apprenticeship Program partnership, PGE performs annual outreach to interested Tribal members, offering information and education regarding career opportunities available in our line pre-apprenticeship and apprenticeship programs.

Investing in the next generation

The changing climate is disrupting more than the environment, it is disrupting the way we live, with communities of color impacted most. We know we can do better. Together, we are working with our communities to champion a cleaner and more equitable future for the next generation by investing time and resources for the following aspirational goals:

• Improve the resiliency of our communities and environment and protect them from the impacts of climate change.

- Educate youth on climate science, clean energy innovation and "green" jobs.
- Give every community a voice and the benefits from a just, clean energy transition.

Through PGE Project Zero, we are engaging students in learning about climate science and clean energy, enhancing parks and greenspaces in neighborhoods disproportionately impacted by climate change, and creating green sector internship opportunities for historically marginalized youth.

In 2021, 13 young adults participated in six-month Project Zero internships at community environmental organizations, preparing them for future careers in the environmental and clean energy economy. PGE's dedicated employees volunteered more than 15,000 hours to support nonprofits and schools, many of them participating in deeper engagements like our multi-month wetlands restoration at Clear Creek Middle School for use as an outdoor ecology classroom.

Serving as environmental stewards

We Oregonians love the outdoors. We feel lucky to live, work and recreate in Oregon's beautiful natural places. We know how important it is to protect these areas and the fish and wildlife that call them home. That is why we take our job as environmental stewards seriously. Our biologists and environmental scientists do on-the-ground work to study and improve conditions for fish and wildlife. Collaboration is a key part of protecting our environment: we partner with Tribes, agencies and nonprofits to expand our efforts.

Protecting fish and habitat

From the Clackamas to the Deschutes to the Willamette, we are committed to keeping natural habitat thriving and creating conditions that are safe for fish and wildlife. On the Clackamas River, we are helping fish migrate safely around our dams and achieving record returns, all while powering Oregon with clean, emissions-free hydropower. In Central Oregon, the Confederated Tribes of Warm Springs (CTWS) and PGE work together to generate electricity while advancing an ambitious, long-term effort to restore salmon and steelhead populations to the Deschutes River.

Breaking Clackamas River records for early run coho

In 2011, PGE began improving our downstream fish passage systems on the Clackamas River, with the goal of improving survival for ocean-going juvenile fish (smolts). Our new facilities increased the number of juvenile fish collected into our bypass systems, allowing fish to move quickly and safely around our dams, reaching the lower Willamette River earlier in the year when temperatures are more favorable to fish. These survival gains, when coupled with beneficial ocean conditions, have resulted in higher adult returns, successful spawning and starting the cycle over again.

The 2021 return of wild, early run coho salmon to North Fork Dam was the biggest yet — the highest return on record since the dam was built in 1958. These results are not just a one-time event: we have seen record early run coho returns in four of the last eight years. This positive trend is driven by our investments in innovative fish passage infrastructure at Westside Hydropower Project.

Pacific lamprey passage

Since 2006, we have been working to improve Pacific lamprey passage through our hydropower facilities on the Clackamas River. One of these measures is the implementation of a trap-and-haul program, which involves collecting adult lamprey at River Mill Dam and releasing them upstream of North Fork Reservoir. We hope this program will help jumpstart lamprey migration and encourage spawning in the upper basin.

Record numbers

The number of adult, early run wild coho returning to the Upper Clackamas from the ocean **was more than 9,000 in 2021**, the largest coho return seen at North Fork Dam since its construction and the start of data collection in 1958.



In 2021, we collected and transported 342 of these eel-like native fish — the most since the program began in 2017. We also piloted additional innovative monitoring in 2021 to learn more about lamprey and their movements. This included releasing some fish directly into the North Fork fish ladder to help identify trouble spots, conducting nighttime observations and collaborating in region-wide genetic research.

Habitat restoration and water quality on the Deschutes

In an effort to determine water quality concerns and priorities in the Deschutes River Basin, PGE biologists led a collaborative effort with state, federal, Tribal and NGO organizations to review, identify and visualize water quality needs throughout the Deschutes. This effort highlighted the Crooked River as the highest priority area for improvement. To meet this need, PGE and the CTWS have focused their habitat restoration investments on the Crooked River.

Along with our co-owners CTWS, we awarded a \$1 million grant to the Deschutes Land Trust for habitat restoration aiding migratory salmon in the Crooked River, a tributary of the Deschutes. The grant was awarded through a special round of funding from the Pelton Round Butte Fund, from which PGE and the Tribes have committed to contribute more than \$30 million to 57 habitat and water quality projects in the Deschutes Basin over the last 15 years.

The Deschutes Land Trust plans to use this funding to complete the first phase of a major restoration at Ochoco Preserve, the organization's 185-acre wetland and wildlife preserve outside of Prineville, Oregon. The project includes floodplain restoration, development of side-channel and wetland habitat and construction of an acclimation pond for juvenile fish.

Harborton project

In early 2021, PGE completed a major restoration project at this 53-acre site, one of the largest known breeding grounds for northern red-legged frogs and a prime spot for juvenile salmon habitat. By continuing our work on side-channel habitat for fish, removing invasive species and planting native vegetation, PGE continues to transform Harborton — a property we have owned for 80 years — into a haven for wildlife. A recent survey showed that juvenile salmon are already using the site's improved features as a rest stop on their migration to the ocean.

Avian Protection Plan

Our company-wide Avian Protection Plan (APP) aims to make our infrastructure safer for birds while also maintaining reliability for customers. It is incorporated into our design and construction standards for all new and replaced electrical infrastructure. This work includes close collaboration with the U.S. Fish and Wildlife Service and adding wildlife protective equipment to substations and poles to mitigate risks. Where necessary, we relocate nests for birds of prey and construct new platforms to provide safer alternative nesting sites. In 2021, PGE replaced more than 3,000 poles and 2,100 transformers, adding avian-safe protective covers or design features. We also installed five new nesting platforms and added wildlife protection to four substations.

Managing our parks and land

In addition to managing resources and restoring habitat, we also provide recreational opportunities so that Oregon's residents and visitors can access the natural beauty of our state. PGE's parks and recreation sites offer beautiful views, well-maintained trails, family-friendly programs and accessible features. We see approximately 400,000 visits annually at our parks and an estimated 69% of our park visitors are also PGE utility customers.

Actions such as developing new customer service and safety programs, implementing a selfguided educational program for campgrounds, and distributing over 2,300 Junior Ranger packets to youth are a few of the ways we continually seek to improve visitors' experiences and connect them to Oregon's recreational lands. We are constantly striving to make our parks more sustainable and through supply chain efficiencies have reduced our key material costs by 22%. We have continued efforts to reduce and replace lighting with energy-efficient options and have implemented the first phase of a gas-to-electric conversion for our tools and equipment.

Customer and community engagement

A strong community is the foundation for a prosperous future. Our Community Relations team, as well as our Community Impact and Government Affairs teams, are responsible for ongoing community engagement. We also conduct outreach through the form of a biannual constituent satisfaction survey to collect, record and address any feedback, including complaints or grievances, that our key constituents have with PGE.

To drive consistency of approach utilizing best practices in community

We are constantly striving to **make** our parks more sustainable.

engagement, internal coordination, and the necessary cultural competency to engage communities, we are currently in the process of standing up a DEI Alignment Council. This cross-functional internal council will aid with formation of the Community Benefits and Impact Advisory Group (CBIAG) for HB 2021, HB 3141 and HB 2475, and lead development of biennial reports.

PGE's Community Engagement Plan for DSP utilizes best practices in community engagement, including consultation conducted at early stages of the development of the Plan. We utilized co-development methods to create scopes of works early in the process with community-based organization and other advocates. We employ community engagement consultation guidelines based on best practices, as detailed in Chapter 3 of PGE's Distribution System Plan, "Empowered communities: Equitable participation in distribution decisions."

In response to HB 2021, OPUC staff guidance and partner and community feedback, and to achieve the intended equity outcomes, PGE has adopted an integrated approach that embraces both internal and external considerations. PGE's identified equity outcomes include, but are not limited to, acknowledgment of structural and systemic inequities, integration of an explicit consideration of racial equity in decisions, pursuit of procedural equity by communities having a seat at the table, and promotion of transparency and candor. These outcomes serve as our guidelines for community consultation.

Volunteer events

40+

Through sponsorship of environmental partners like SOLVE, Friends of Trees and others, PGE hosted or participated **in over 40 volunteer environmental stewardship events** this year.

Healing Hooves

200x4

This year, in partnership with Healing Hooves, 200 goats spent four days grazing on the overgrown weeds reducing the need for gas-powered tools and increasing worker safety.



Valuing our employees

At PGE, we believe people are our greatest asset. Engaged employees, who feel passion for their work and pride in their company, are not only happier but also more productive and better able to support our customers. We also strongly believe in fostering a culture of physical and psychological safety for all our employees, with an emphasis on diversity, equity and inclusion (DEI) to encourage our employees to bring their full selves to work.

PGE
Our talent and culture are vital to our ability to carry out our business strategy. We are focused on not just attracting, but also retaining, a talented, motivated and diverse workforce and a culture that reflects our core values. PGE conducts employee engagement surveys periodically to give employees the opportunity to share their perspectives and provide feedback. Survey results are shared with management so that managers can take action towards improving the employee experience. Our overall engagement score was 73 in 2021, compared to the global benchmark of 75.

Our industry is experiencing rapid transformation driven by changing customer expectations, new technologies and increased competition. To execute our corporate strategy and stay relevant to our customers, our culture must evolve to be more customer-centric, resultsoriented and purpose-driven. We developed a holistic culture roadmap to drive progress on our goals to further standardize the customer experience mindset and establish shared values across functions with the relaunch of our Guiding Behaviors. These serve as our shared core values that we uphold to provide a framework for day-to-day decision making. We also drive results through accountability, continuous feedback and recognition. We continue our commitment to create pay equity for

To execute our corporate strategy and stay relevant to our customers, our culture must evolve to be more customer-centric, results-oriented and purpose-driven.

our employees along with competitive pay and benefits, as well as invest in our employees through our training and development programs to help our people achieve their best.

Promoting fair compensation and benefits

PGE is committed to creating pay equity among its employees and offers a wide range of market competitive wages and benefits, including comprehensive health and welfare benefits and retirement plans designed to support the physical, mental and financial well-being of our employees. These benefits include medical, dental and vision insurance; paid vacation; pension plans; 401k contributions with a company match and access to the Virgin Pulse wellness platform to earn additional Health Savings Account (HSA) contributions. The Virgin Pulse platform offers fitness courses, tips on emotional and physical well-being, and collaborative challenges to hold employees

accountable to meeting their health goals. We also offer a comprehensive Employee Assistance Program that provides support through counseling and a variety of work-life services.

All employees are eligible to participate in PGE's employee stock purchase plan. Enrollment in the program is offered twice a year and employees can elect an after-tax pay deduction up to 10% of gross earnings. Share purchases occur two times per year at a 5% discount.

Fostering talent development

Our career development philosophy supports ongoing training and development while providing an environment where employees can broaden knowledge and skills to enable their fullest potential. We provide a selection of training opportunities through LinkedIn Learning. LinkedIn Learning is a leading provider of online videobased courses covering the most in-demand business, tech and creative skills taught by industry experts. We also offer an Employee Rotation Program, designed to support career development and business continuity by providing opportunities for employees to gain valuable skills as they work in different roles and departments through lateral movement. Rotations can help close critical skill gaps within PGE, lead to improved performance and help prepare employees for future roles.

PGE also offers a mentorship program for all regular, nonrepresented PGE employees to help support their growth and development. PGE recognizes employees' needs for continuous growth and sees mentorship as an additional learning resource to help keep employees agile to changing needs and opportunities within the company.

Every year, managers are also expected to provide work direction for each of their employees that will include specific performance goals When it comes to our people, we are committed to building a workforce that **looks like Oregon**.

and objectives and will serve as the basis for the employee's review. We offer resources for managers to have productive career conversations with employees and encourage employees to have development items as part of their yearly goals.

Encouraging and respecting diversity and inclusion

Our DEI efforts are important across our business. When it comes to our people, we are committed to building a workforce that looks like Oregon. That is why we take active DEI measures within our recruitment, leadership development, and training and awareness programs.

Recruitment and development

We are committed to being an employer of choice with a workforce that reflects Oregon's increasingly diverse population. In 2021 we continued to utilize diverse hiring panels as well as identify other ways to mitigate bias from the hiring process, such as utilizing masked resume reviews. We also offered two programs to foster the development of underrepresented women and Black, Indigenous and People of Color (BIPOC) groups and revised the hiring process for our pre-apprentice lineworker program to attract and train a diverse pool of applicants. In addition, we perform pay equity studies to confirm pay decisions

Our five diversity, equity and inclusion commitment areas

1. Recruitment

and development



 Leadership diversity



3. Awareness, education and training



4. Partners and suppliers



5. Customer and community engagement

VALUING OUR EMPLOYEES

are applied fairly and consistently throughout our workforce.

- 2021 gender hires: 42.7% overall; 33.3% leadership
 - Since the formation of the DEI office in 2018, this marks a 7.3% increase for women hires overall and a 21.3% increase for leadership hires.
- 2021 BIPOC hires: 37.1% overall; 37.0% leadership
 - Since the formation of the DEI office in 2018, this marks a 12.1% increase for BIPOC hires overall and a 29% increase for BIPOC leadership hires.

We are partnering with consulting firm Alignment Strategies to create a more diverse pre-apprentice pipeline. We have focused on improving our hiring process by identifying and mitigating barriers to entry. This has resulted in 35% diverse hires for our 2021 pre-apprenticeship class.

While we have made a great deal of progress with Black, Indigenous and People of Color (BIPOC) hires, we still have work to do as it relates to gender diversity. This continues to be a focus area for us, and we are working with leadership and our female employees who work in the trades to outline plans to further diversify and expand an inclusive work environment.



A PGE employee on site in Biglow Canyon.

Investing in careerconnected learning

As Oregon grows, we need a welleducated and skilled workforce ready to fill jobs at PGE and throughout our economy. In addition to our focus in the trades, we also support science, technology, engineering and math (STEM) education and the creation of pathways to increase the pipeline of diverse candidates. Through PGE's scholarship program we ask our higher education partners, including Oregon State University and Oregon Tech, to focus on recruiting efforts for these scholarships for engineering students. These universities work with campus associations, such as the Louis Stokes Alliance Minority Participation, for outreach to BIPOC communities. The PGE Foundation also funds culturally specific scholarships for STEM-related

careers and contributed \$20,000 to support the creation of a statewide advocacy organization, Oregon STEM, focused on equitable access to STEM education.

Internally, PGE also developed an IT early career rotation program. This 18-month rotational program included three six-month job rotations, curated learning and a mentor for participants. The program focused on supporting the development of early career, diverse, non-traditional IT employees at PGE. Three entry-level positions were created for pipeline entry, with recruiting focused on diverse communities. A similar program was also offered for electrical engineers, as well as a one-year training program for Design Project Managers to support the development of diverse, early career designers.

Workforce demographics

Measuring our progress

We benchmark our progress using the Deloitte Diversity & Inclusion Model. This model has four levels — the higher on the maturity model an organization goes, the more integrated DEI is within the organization. DEI work has primarily been approached from a compliance and programmatic standpoint in the past, or a Level 1 and 2 on the model. Level 3 marks the transition point in which DEI work is leader led. Final integration is achieved at Level 4, meaning that DEI is fully integrated into all aspects of the organization.

We also track our workforce demographics, including racial and gender diversity, leadership diversity, diverse hires, promotions and terminations. We look at benchmark sources such as EEO-1 data for Oregon, National Utility data and Overall National data as we consider opportunities to reach more diverse talent markets as we progress to a partially remote workforce. To drive measurable results as it relates to diversifying our workforce, we have tied leadership diversity metrics to our Annual Cash Incentive program. We also included leadership diversity metrics as part of our recent amendment to our sustainabilitylinked revolving credit facility. The amendment includes provisions that link the company's borrowing costs to metrics related to the percentage of management comprised of women and employees who identify as BIPOC, so we have given teeth to these goals in terms of financing.

Leadership diversity

Equity in leadership is crucial, which is why we are growing the diversity of our board of directors and officer team. Each time a leadership role is available, we cast a wide net to encourage as much diverse representation as possible. In 2020 and 2021, we defined internal and external DEI incentive metrics and established a leadership diversity Annual Cash Incentive (ACI).

- 2021 overall Workforce representation: 33.3% women, 25.4% BIPOC
 - Since the formation of the DEI office in 2018, this marks a 1.0% increase for overall women workforce representation and a 4.2% increase for BIPOC workforce representation.
- 2021 Leadership representation: 33.8% women, 23.4% BIPOC
 - Since the formation of the DEI office in 2018, this marks a 4.9% increase for women leaders and a 6% increase for BIPOC leaders.

We have also developed leadership diversity programs based upon analysis of our workforce. Specifically, where we see stagnating progress of women and BIPOC is in leadership. In 2021, we offered two leadership development programs — one program focused on mid-level, high potential BIPOC employees interested in leadership and one program focused on senior-level, high potential women interested in leadership — to help support these underrepresented groups advance in the organization.



Next year, we will be offering two programs: one program focused on entry/mid-level women and the other focused on senior-level BIPOC employees interested in progressing to management.

- 2021 cohorts: 54% grads, 31.5% promoted
- 2021 promotions: 35.9% female, 23.9% BIPOC

Awareness, education and training

DEI education is fundamental to building an equitable workplace culture. We provide racial equity education for our board, leadership and employees. Examples include unconscious bias, inclusive leadership and equity lens training. We require training for managers to help reveal the hidden biases that can affect hiring, promotions, evaluations and other development. Diversity courses are available to all employees and managers are setting aside time for their teams to participate in DEI training.

Our Supplier diversity program accounts for 10%, over **\$100M of our total supplier spending** as of year-end 2021.

Providing a safe work environment

PGE is committed to providing a safe and healthy place of business for employees, customers and the public. Safety is a value that is integrated into everything we do. We comply with all applicable laws, regulations and company standards and strive to continually improve our overall safety and health performance. PGE employees must perform their work in a way that does not create a safety or health hazard for themselves or others — safe behavior is a condition of employment.

We provide a variety of resources to support employees in achieving an injury-free workplace, including but not limited to the following:

- Our Safety Guidance Team helps create and sustain a grass-roots safety culture built on trust and partnership and coordinates safety culture improvements under the direction of the Executive Safety Council.
- In addition to the organizational functions, safety and training professionals are assigned at corporate and organizational levels to support an injury-free workplace.
- Employees receive safety manuals, trainings and incident reporting tools designed to incorporate safe practices into all daily activities.

Our efforts have led to a dramatic reduction in injuries. In 2021, we achieved an OSHA recordable rate decrease of 16.3% and DART (days away, restricted time) rate decrease of 27.4%.

Partnering with diverse suppliers

In addition to our DEI commitments within our own workforce, we are also **committed to increasing our purchases** from small business suppliers, including minority-, women- and veteran-owned businesses.

Increasing supply diversity

15%

We will increase our supplier diversity spending to 15% of our total supplier spending by 2022.

Total diversity spend

\$102м

Total diversity spend = \$102M or 10% across 263 different suppliers. 2021 ESG REPORT

Performing with **purpose**

River Mill Dam Clackamas County, OR

Sustainability is central to achieving a clean and reliable energy future aligned with Oregon's ambitious, economy-wide goals to combat climate change. We balance our commitment to reducing greenhouse gas (GHG) emissions with our core values and high standards of corporate governance to achieve our mission and create value for shareholders, customers and other stakeholders.

Our governance is guided by our strategic goals to decarbonize power, electrify the economy and advance our performance to address broader sustainability commitments.

PGE released a new <u>Human Rights</u> <u>policy</u> that complements our existing policies but furthers our commitment to ESG. This policy underscores PGE's commitment to human rights for our employees, communities and partners.

Sustainability reporting and governance

To align our ESG goals with our company's strategy, we have full-time staff dedicated to sustainability and environmental reporting. We have also recently added staff to our Corporate Reporting and Sarbanes-Oxley (SOX) departments to support internal alignment and timely, expanded reporting.

In February 2021, the Nominating and Corporate Governance Committee amended its charter to include responsibility for oversight of certain Sustainability and ESG matters. The Audit and Risk Committee charter was amended to include review of any required ESG-related disclosures and metrics. The Compensation and Human Resources Committee charter was amended to include their ongoing responsibility of reviewing, discussing and advising management regarding



Nominating, governance & sustainability committee. This committee provides overall governance and oversight of programs related to sustainability and ESG matters affecting PGE, including review of decarbonization goals.

Executive oversight and management. Standing committees are important delegates, monitoring specific areas of Sustainability and ESG matters and their metrics, processes and controls. ESG steering committee established to oversee execution of Sustainability and ESG planning and goals.

Business area management. Each business area is responsible for certain aspects of sustainability, and uses effective performance management techniques to align employees around successful execution of our efforts to achieve our goals.

the Company's human capital management strategies, programs and initiatives and the required disclosures, including diversity, equity and inclusion commitments.

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In 2021, we continued to align our disclosures with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB) and the Edison Electric Institute's (EEI) ESG frameworks. We have continued to strengthen our reporting by standardizing the data we share and expanding transparency around our sustainability practices.

Green financing framework

In 2021, PGE adopted a green financing framework under which we will issue green financing instruments to finance or refinance sustainable projects. The framework has been reviewed by Sustainalytics, an independent global provider of ESG research and analysis. Sustainalytics issued a second-party opinion confirming that the framework aligns with the four core components of the Green Bond Principles 2021 and that investments in the eligible categories will lead to positive environmental impacts and advance the UN Sustainable Development Goals.

The issuance of green bonds is one way that we are working toward meeting our sustainability goals and creating value for our investors, customers and communities. In September 2021, we completed the issuance of \$150 million in green bonds, our first debt issuance under our green financing framework. The net proceeds from the sale of these bonds were used to refinance the Wheatridge Renewable Energy Facility.

Board independence and diversity

We continue to engage in a robust refreshment of our board, focused on qualifications that provide constructive oversight of PGE business, risks, strategy and culture as well as diversity of skills, experiences, gender and ethnicity. Two new members joined the board in 2021 and one new member in 2022, all of whom were chosen for their deep understanding of the energy industry and ability to help create long-term value for our customers, employees and communities.

Michael Lewis, who serves on the Finance Committee and the Audit and Risk Committee, has more than 35 years of utility industry experience. As the interim president at Pacific Gas and Electric (PG&E), he oversaw wildfire prevention and response efforts, grid resiliency initiatives, vegetation management programs We continue to engage in a robust refreshment of our board, focused on qualifications that provide constructive oversight of PGE business.

and emergency preparedness. In a number of senior executive positions for Duke Energy Corporation, he oversaw safe, reliable and efficient operations of its distribution and transmission systems across six states, leading large-scale safety and operations improvement programs.

Jim Torgerson, who serves on the Compensation and Human Resources Committee and Finance Committee, has more than 30 years of experience as a utility executive. He has a track record of shareholder value creation, clean energy development, and deep financial and energy market experience.

Dawn L. Farrell was appointed to the Board effective January 1, 2022. Her considerable experience in the electric sector during a time of intense regulatory changes, increased competition and technological advances, as well as her leadership in the transformation of a carbon base company into a leading clean and renewable focused company, will support PGE's own transformation. Farrell comes to PGE with more than 35 years of energy industry experience with TransAlta and BC Hydro. Farrell was most recently the President and CEO of TransAlta Corporation since 2012, before retiring in 2021. Farrell serves on the Nominating, Governance and Sustainability Committee and Finance Committee.

Compensation aligned with ESG efforts

As part of PGE's total compensation efforts, we seek to align our company values to the way in which our employees can invest in their 401K retirement plans. Our 401K retirement plan received ESG Retirement Plan Certification by Dalbar, a financial services market research firm. ESG Plan Certification benefits both PGE and our employees in a multitude of ways, including risk mitigation, employee desirability and institutional recognition. Certification is earned by demonstrating adherence with ESG Plan Certification principles through the submission of selected plan data to Dalbar for analysis and evaluation.

We have also incorporated carbon reduction metrics as part of a longterm incentive awards program to encourage the planning and execution of actions that drive progress toward the long-term decarbonization of PGE's resource portfolio.

Enterprise risk management

Guided by our board, we committed to significantly elevating our enterprise risk management capabilities in 2021. Everyone benefits from robust risk management. By applying a consistent framework for identifying, assessing and managing risks — including environmental and social considerations — we can more effectively deliver societal and business value.

Our board's Audit and Risk Committee has an important role in overseeing our enterprise risk management program, including an annual session with in-depth joint discussions on PGE's strategy and risks (risk-informed strategy). Each year, this committee provides guidance in top areas identified as presenting notable risk, each of which is analyzed in depth at quarterly meetings. A dashboard of key risk indicators is updated and reviewed quarterly, along with corresponding mitigation strategies for areas with elevated risk.

At the management level, we underwent a comprehensive refresh of our enterprise risk management to incorporate up-to-date best practices as articulated in Committee of Sponsoring Organizations of the Treadway Commission (COSO) and International Organization for Standardization (ISO) 13000 standards. We evaluate risks across a wide range of consequences, such as financial, compliance, safety and impact on customers. Across the organization, we are having conversations about how an inclusive culture, in which diverse viewpoints

are voiced and respected, allows us to advance, better manage risk and ultimately perform.

In 2021, we led enterprisewide trainings on the basics of risk management and systems thinking to further develop our capacity to navigate the complexity that we operate within. This enables us to mitigate risk and to increase resilience of our value proposition to our customers and community.

Additional risk management capabilities we unveiled:

 Conducted integrated risk assessment into achieving a low-carbon future, prioritizing efforts to mitigate this risk and serve customers the clean, resilient energy products they want.

DEI leadership

We actively participate in CEO Action for Diversity & Inclusion[™], the largest CEO-driven business commitment to drive measurable action and meaningful change in **advancing diversity, equity and inclusion** in the workplace.



CEO ACTION FOR DIVERSITY & INCLUSION

Giving back

\$4.8M

Charitable giving, including corporate contributions, PGE Foundation, employee and retiree contributions and company match **totaled nearly \$4.8M** in 2021.

 Conducted integrated risk assessment into ways to further build and strengthen PGE's Diversity, Equity and Inclusion efforts (such as building partnerships with community-based organizations and other organizations representing environmental justice).

Business ethics and compliance

Additional information on some of our key ethics and compliance policies can be found on our website.

- Human Rights Statement
- Sustainability policy
- Supplier Code of Conduct



Investing in a clean future

\$15м

Over the next 3-5 years, PGE will invest up to \$15M in two specific Energy Impact Partners (EIP) funds to **advance the transition** to a sustainable energy future.

Advocacy and stakeholder engagement

PGE is leading the way in advancing a safe, clean, reliable and affordable energy future for all, but we cannot do it alone. Achieving a reliable, affordable clean energy future requires a deep regional collaboration: from the expansion of regional markets to coordination on a regional approach to resource adequacy, to transmissions planning, utilities will need to leverage the regional grid to achieve their goals. Thoughtful coordination at every step will be required to efficiently integrate renewable resources, operate the grid to manage weather extremes, and maximize the many benefits to our customers from a fast, efficient transition to cleaner energy technologies.

In the 2021 legislative session, the legislature took meaningful action to advance clean energy through a new 100% clean energy standard, promote an equitable energy transition, advance transportation electrification and support low-income utility customers. These bills help reduce GHG emissions, modernize energy efficiency programs and put vulnerable communities at the center of the process. PGE was an active collaborator in each of these efforts, alongside legislators, advocates, utilities and others in Oregon's energy sector.

Local goals

More than a dozen local governments in our service area have adopted or have begun developing climate action or sustainability plans. With goals for reducing GHG emissions through renewable energy, energy efficiency, transportation and building electrification, PGE is partnering with cities and counties to help them reach these ambitious goals. For the past two years, local governments have been focused on pandemic-related and other pressing issues. In 2022, climate and clean energy will again be getting attention with at least three cities embarking on new plans and a few updating existing plans. PGE will be supporting those planning efforts as well as implementation efforts, such as working to create a new community-wide green energy program, electrify buses and fleets, and improve the energy performance and efficiency of municipal buildings.

Integrated markets and systems

As one of the early participants in the Western Energy Imbalance Market, a West-wide real-time energy trading market in partnership with the California Independent System Operator, PGE has been a leader in advocating for the expansion and strengthening of wholesale market structures to increase reliability, accelerate decarbonization and lower customer costs. PGE joined the market in 2017, and since then our customers have accrued over \$120M in benefits. At the same time, we are working to expand benefits, leading discussions about further changes that will allow PGE and other entities to participate in a new extended day-ahead market framework. Going forward, PGE and our partners across the West will work to bolster coordinated planning and advance integrated markets and systems, while examining the benefits of participating in a Western regional transmission organization. We will also continue to advocate for rigorous resource adequacy standards to ensure that electric service remains reliable now and into the future, with the benefits and costs equitably shared by all.

Data verification and validation

We report data from the facilities that we own and operate, and in which we have an ownership stake. Any specific data exclusions are noted throughout the report.

We collect and aggregate performance data in various enterprise-wide systems. We use these systems throughout our business to track real time data where feasible, monitor the current state of our operations, and comply with all the regulatory requirements to which we are subject. These systems track our regulatory requirements and help us monitor our compliance. Performance data and supporting documentation within the SASB, TCFD, EEI and Key Metric templates are submitted by subject matter experts and are reviewed by management-level individuals at the company prior to inclusion in the report. Managers review the final data provided as well as the supporting information. A risk-based subset of data elements is subject to additional internal validation to review data accuracy and appropriateness.

This report is reviewed by certain executives throughout the Company prior to being released publicly on our website, including the Controller, Director of Sustainability Strategy and Disclosure Committee.

In 2021, PGE commissioned EPRI to perform a priorities assessment to drive and inform our ESG strategies and initiatives. The assessment results align with PGE's mission and core values and affirm the importance of issues such as climate change and the reduction of GHG emissions; diversity, equity and inclusion; health, safety and security; and energy reliability and affordability to our business and financial performance. These and other topics identified by the priorities assessment represent opportunities for continued innovation that will shape the evolution of our ESG strategies, including goal setting, reporting and disclosure, and communication with stakeholders.



PGE crews in Sherwood, Oregon

2021 ESG REPORT



Appendix

2021 Sustainability Accounting Standards Board (SASB) Report

This year marks Portland General Electric's third year mapping our disclosures to the SASB standard for Electric Utilities & Power Generators. Our responses reflect 2021 performance.

Торіс	Data Request	PGE Response
Greenhouse gas emissions and energy	 Gross global Scope 1 emissions, percentage covered under 	 Total MTCO₂e from Scope 1 activities: 5,859,714. Refer to the Notes for a breakout by activity.
resource planning	(2) Emissions-limiting regulations(3) Emissions-reporting regulations	(2) 99% of our Scope 1 emissions relate to our thermal generating resources, which are covered in the State of Oregon emissions- limiting regulations.
		(3) 99% of our Scope 1 emissions relate to our thermal generating resources, which are covered in the State of Oregon emissions- reporting regulations.
		Notes:
		(1) The reported Scope 1 emissions are from PGE's thermal generating resources, fuel burned by PGE's fleet and natural gas used at PGE's office facilities. Thermal generating resources make up 5,821,387* MTCO ₂ e, vehicle fleet fuel burned equates to 36,951 and natural gas use equates to 1,376.
		Emissions associated with fleet fuel burned include estimates related to the vehicle type in order to assign an emission factor. Given the emission factors for vehicle types are materially consistent, this does not materially impact emissions reported.
		*This is a preliminary number that is subject to change following regulatory agency review and approval of submittals.
	Greenhouse gas (GHG) emissions associated	6,259,178 MTCO ₂ e*
	with power deliveries	PGE is required to report emissions associated with power delivered to retail customers in Oregon to the Oregon Department of Environmental Quality (ODEQ) on an annual basis. Refer to the link for publicly available historical information.
		PGE follows ODEQ's Greenhouse Gas Reporting guidelines when calculating this number. This includes the use of ODEQ specific emission factors, removing power sold to end users outside of Oregon, and proportionally adjusting retail sales for wholesale sales in order to arrive at the total amount of MWhs sold to Oregon customers.
		Greenhouse Gas Emissions Reported to DEQ
		rio carculate 2021 emissions associated with power deliveries to retail customers in Oregon, PGE used ODEQ 2020 emission factors for purchased power and estimated emission factors for generated power as ODEQ 2021 emission factors are not yet available. This is a preliminary number and could vary from those filed with ODEQ.

Торіс	Data Request	PGE Response
Greenhouse gas emissions and energy resource planning (continued)	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets and an analysis of performance against those targets	We worked this past year with stakeholders and the Oregon Legislature to set some of the most ambitious clean electricity targets in the country — achieving at least an 80% reduction in greenhouse gas (GHG) emissions associated with the power served to customers by 2030, a 90% reduction by 2035 and a 100% reduction by 2040. The baseline for these reductions is based on the annual average of 2010, 2011 and 2012 emissions.
		Between now and 2030, we expect to nearly triple the amount of clean and renewable resources. In 2020 we closed the Boardman coal plant, and we are working with co-owners to plan an exit from Colstrip, our last coal-fired power plant.
		As discussed in our Strategy Paper, successfully navigating this transition will require new tools and approaches in a more dynamic system. We plan to add a significant amount of energy storage to the system, and we are implementing new strategies to increase flexible load programs that can ramp energy consumption up or down on demand. These solutions utilize new control technologies and pricing mechanisms for ease of use and to reduce customer energy costs, while also improving system reliability and enabling the integration of more clean energy sources.
		We realize that the target of zero emissions by 2040 will not be easy to meet, and we do not have all the answers today. This future can be achieved through advances in technology, improvements in efficiency, reductions in costs and new partnerships across the entire energy economy — supply, demand and delivery.
		We are encouraged by the magnitude of investment, pace of innovation and resources focused on developing clean energy solutions, which have never been greater. ¹
		We are also focused on lowering our Scope 1 emissions and have the following goals related to our PGE fleet:
		Electrify more than 60% of PGE's entire fleet by 2030
		 Electrify 100% of Class 1 vehicles (such as sedans, SUVs, small pickups) and forklifts by 2025
		Additionally, PGE entered into formal agreement with the Oregon Department of Environmental Quality (ODEQ) in August 2021, agreeing to reduce permitted emission levels of nitrogen oxides (NOx), sulfur dioxide (SO ₂) and particulate matter at the Beaver/Port Westward I plant. The combined total of permitted emission levels for these three pollutants will be reduced by over 85% over a five-year period.
		Achieving these goals will require the company to develop new short-term and long-term strategies which are aimed at meeting our customer needs, while prioritizing energy that is reliable, affordable and clean.
		¹ State of Climate Tech 2020, The next frontier for venture capital — PWC
		Want to learn more? View our <u>Climate Goals</u>
		More resources:
		Resource Planning
		PGE Fleet Electrification
		Strategy raper

Торіс	Data Request	PGE Response
Greenhouse gas emissions and energy resource planning (continued)	 Number of customers served in markets subject to renewable portfolio standards (RPS) Percentage fulfillment of RPS target by market 	 (1) 912,209 customers (2) 100% PGE is meeting the regulatory obligations within our market as it relates to RPS regulations.
Air quality	 Air emissions of the following pollutants: (1) NOx (excluding N₂O) (2) SOx (3) Particulate matter (PM₁₀) (4) Lead (Pb) (5) Mercury (Hg) Percentage of each in or near areas of dense population 	(1), (2), (5): Refer to section 6 of the EEI template for these metrics.PGE 2021 EEI ESG ReportPM10Pb379.0 MT0.0322 MTNote: Emissions for (3) PM10 and (4) Pb not a part of PGE 2021EEI ESG ReportPercentage near a dense populationNOx38.5%SOx3.50%PM1048.1%Pb0.003%Hg0.29%
Water management	 Total water withdrawn Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress 	 (1) 22,686 thousand cubic meters (2) 22,118 thousand cubic meters, 568 thousand meters non-consumptive N/A; PGE operations are not in High or Extremely High Baseline Water Stress areas Note: Water withdrawal and consumption data is associated with PGE thermal generating facilities only, and does not include nominal water use (e.g., drinking water) for which data was not readily available.
	Number of violations of non-compliance associated with water quantity and/or quality permits, standards and regulations	1 incident: Exceedance of Clean Water Act Section 401 Certification, for construction-related discharges that caused a violation of state water quality standards for turbidity in the Clackamas River, and miscellaneous related items. PGE settled with the Oregon Department of Environmental Quality for penalty of \$3.9K, plus a Supplemental Environmental Project (SEP) of habitat restoration. The SEP funds of \$16.3K will be used to plant 1,400 trees and shrubs and treat invasive species for 2 years.
	Description of water management risks and discussion of strategies and practices to mitigate those risks	PGE operates three hydropower generation systems licensed by the Federal Energy Resource Commission (FERC): Pelton Round Butte Hydroelectric Project (Deschutes River), Clackamas River Hydroelectric Project (Clackamas River and tributaries), and Willamette Falls Hydroelectric Project (Willamette River). License conditions (e.g., specific flow requirements based on seasonal natural resource needs) were developed in partnership with natural resource agencies and environmental stakeholders, and support our objectives of healthy native fisheries (e.g., salmon and steelhead) and long-term sustainability for wildlife and water quality in the basins where we operate. Our efforts include significant PGE-led and PGE-partnership projects in the watersheds of our hydropower facilities focused on basin-wide water conservation efforts to increase in-river flows that are critical for habitat improvement and fisheries' restoration goals.

Торіс	Data Request	PGE Response
Coal ash management	Amount of coal combustion residuals (CCR) generated, percentage recycled	125,173 MT of CCR generated from operations, 0.05% recycled. These values represent PGE's 20% share of Colstrip. The Boardman Coal Plant ceased operation in 2020.
	Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	 Total CCR impoundments: 1.6 (20% ownership of 8 impoundments; 7 active, 1 closed in 2019) Number of CCR impoundments with hazard potential classification: 1.4 (Significant) (20% ownership of 7 active impoundments), 0.2 (Incised) (20% ownership of one closed, incised impoundment) Number of CCR impoundments with structural integrity assessment rating: 1.4 (Satisfactory) (20% ownership of 7 active impoundments), 0.2 (Not Applicable) (Incised closed impoundment, top surface of which is not above grade, is not subject to 40 CFR 257.73 structural integrity criteria) Note: Boardman (ceased operation in 2020) does not have a CCR impoundment. In addition, PGE does not operate the Colstrip plant, but owns 20% of Colstrip Units 3 and 4. Thus, the values presented reflect PGE ownership percentage of Colstrip Units 3 and 4.
Energy affordability	Average retail electric rate for: (1) Residential (2) Commercial (3) Industrial customers	 (1) 12.85 cents/kWh (2) 9.99 cents/kWh (3) 6.51 cents/kWh
	Typical monthly electric bill for residential customers for: (1) 500 kWh (2) 1,000 kWh of electricity delivered per month	(1) \$72.60(2) \$133.34
	Number of residential customer electric disconnections for nonpayment, % reconnected within 30 days	Total number of residential disconnections in 2021: 2,177 Number of residential disconnections reconnected within 30 days: 1,904 As a percentage of total: 87% Due to COVID-19, PGE suspended residential disconnections beginning March 12, 2020 and resumed disconnections on August 18, 2021.

Торіс	Data Request	PGE Response
Energy affordability (continued)	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	Together with policymakers and regulators we are working to keep affordability at the forefront of clean energy transition discussions. Careful planning and policy design can reduce the costs of an emissions-free economy. Despite efforts to keep electricity broadly affordable, we recognize that some customers need more help. We support our customers by connecting them with bill assistance programs, offering more flexible payment options and advocating for additional funding. In support of our purpose to energize lives, strengthen communities and drive advancements in energy that promote social, economic and environmental progress, PGE filed a tariff with the Oregon Public Utility Commission (OPUC) to lessen energy burden for PGE customers whose household income is below 60% of the state's median income level. The Income-Qualified Bill Discount program is a new solution that will offer a monthly percentage discount on bills for income-eligible customers. Work on this program began in 2020 in anticipation of the Energy Affordability Act (Oregon House Bill 2475), which became law in 2021. This bill authorizes the Public Utility Commission of Oregon to consider differential energy burden and other inequities of affordability in rates, thus allowing utilities to offer a discount for income-qualified customers. About 17% of Oregonians live in households that are below the federal poverty level. This new program will provide a meaningful bill decrease that recognizes the need of income-qualified customers. Pending approval from the OPUC, PGE is aiming to launch this program in Q2 2022.
Workplace health and safety	 Total recordable incident rate (TRIR) Fatality rate Near miss frequency rate (NMFR) 	 (1) 1.34 (2) 0 employees (3) 3.43

Торіс	Data Request	PGE Response
End-use efficiency and demand	Percentage of electric load served by smart grid technology	>99%
	Customer electricity savings from efficiency measures, by market	 24.2* aMW (211,992* MWh) were saved from PGE's Energy Efficiency Measures in 2021. In 1999, the Oregon Legislative Assembly adopted Senate Bill 1149 which directed Oregon's two largest investor-owned electric utilities, Pacific General Electric (PGE) and Pacific Power, to collect three percent of their revenues for a public purpose charge (PPC). In 2002, the Energy Trust of Oregon (ETO), an independent non-profit organization overseen by OPUC, was created to administer the PPC funds received from the OPUC and to incent new cost-effective energy conservation, new market transformation efforts, above-market costs of new renewable energy resources and new low-income weatherization. Since then, the ETO has helped PGE customers save energy and money by providing information, assistance and cash incentives for energy efficient upgrades and renewable energy systems. In support of this mission, the OPUC directs PGE to provide ETO with a limited set of information about large and commercial industrial customers, including customer name, service address and whether the customer is applying self-direct credits against its energy-efficiency and renewable public purpose charge during each billing period. In 2021, the Oregon Legislative Assembly adopted House Bill 3141 which directs ETO to, with public utilities, jointly develop public utility-specific planned activities, resources and technologies (DSCT) and require that 25 percent be used for activities, resources and technologies that serve low and moderate income customers, including for technologies that do not have above-market costs. *These numbers are preliminary numbers as provided by the Energy Trust of Oregon. Numbers are subject to change from this report to the find find amout which will accert to the upper find.
	Percentage of electric utility revenues from rate structures that: (1) Are decoupled (2) Contain a lost revenue adjustment mechanism (LRAM)	 PGE's Sales Normalization Adjustment (SNA) is based on the difference between actual usage per customer and that projected in PGE's 2019 general rate case. The SNA mechanism applies to approximately 78.83% of 2021 customer revenues. The Lost Revenue Recovery Adjustment mechanism is based on the difference between actual energy-efficiency savings (as reported by the ETO) and those incorporated in the applicable load forecast. The LRRA mechanism applies to approximately 13.31% of 2021 customer revenues.

Торіс	Data Request	PGE Response
Nuclear safety and emergency management	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	N/A Note: The NRC regulates the licensing and decommissioning of nuclear power plants, including PGE's Trojan nuclear power plant, which was closed in 1993. The NRC approved the 2003 transfer of nuclear spent fuel from a spent pool to a separately licensed dry cask storage facility that will continue to house the fuel on the former plant site until a United States Department of Energy (USDOE) facility is available. Radiological decommissioning of the plant site was completed in 2004 under an NRC-approved plan, with the plant's operating license terminated in 2005. Spent fuel storage activities will continue to be subject to NRC regulation until all nuclear fuel is removed from the site and radiological decommissioning of the storage facility is completed. <u>2021 Form 10-K</u>
	Description of efforts to manage nuclear safety and emergency preparedness	PGE permanently ceased commercial operation of the Trojan nuclear power plant in January 1993. Since then, the plant has been dismantled as part of the decommissioning process and all nuclear fuel has been placed in long-term, dry storage as of September 2003. Trojan's nuclear fuel is stored in robust canisters which are encapsulated in vertical concrete casks that provide structural protection, radiation shielding and sufficient passive cooling to maintain the safety of the fuel. Based on this robust design and extensive analysis of hazards, there are no operations or credible accidents that result in a release of radioactive material from the canisters. As an owner of special nuclear material, PGE is licensed by the Nuclear Regulatory Commission for fuel storage. In 2019, following an extensive review of PGE's proposed Aging Management Program, the Nuclear Regulatory Commission granted an extension of PGE's license to store fuel an additional 40 years to 2059. Nuclear safety is the highest priority for the Trojan staff, and its nuclear safety culture is assessed and monitored by an Independent Spent Fuel Storage Installation (ISFSI) Safety Review Committee, which advises the Corporate Executive Responsible for Trojan or all matters related to the safe storage of spent fuel. The Trojan organization operates in compliance with a Quality Assurance Plan under which operations and security functions are regularly audited. <u>Trojan Spent Fuel Storage</u>

Торіс	Data Request	PGE Response
Grid resiliency	Number of incidents of non-compliance with physical and/or cybersecurity standards or regulations	Portland General Electric Company is subject to mandatory physical and cybersecurity standards adopted by the North American Electric Reliability Corporation (NERC). Our practice is to self-report all identified instances of actual or potential noncompliance with the NERC physical and cybersecurity standards, regardless of severity. In 2021, PGE had five instances of actual or potential noncompliance filed with the Western Electricity Coordinating Council (WECC), the Regional Entity responsible for NERC compliance monitoring and enforcement in the Western Interconnection. Four instances were generated by WECC and identified as being required to resolve a self-report from a prior year. The remaining instance was identified by PGE and self-reported. One instance was determined by WECC to be a minimal risk violation not subject to penalty or future tracking. The remaining instances are still under review by WECC's Risk and Enforcement staff.
	 (1) System Average Interruption Duration Index (SAIDI) (2) System Average Interruption Frequency Index (SAIFI) (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days 	 (1) 2,724 minutes (2) 1.67 events (3) 1,633 minutes Note: Values are inclusive of major event days. In 2021, Portland General Electric Company experienced 16 major event days. This is the highest number of major event days PGE has experienced since utilizing the major event day methodology (as outlined IEEE Standard 1366). The majority of these major event days (10), and resulting impacts to 2021 system reliability metrics, are related to the February 2021 Ice Storm. February 2021 Storm: Caused by snow and freezing rain/ice accumulation One of the most destructive storms to PGE's grid in history 740,000 customers experienced outages Estimated total storm cost: \$36 million Actions taken to mitigate the potential for future service interruptions: PGE has created multiple initiatives related to system resiliency, including but not limited to: Infrastructure Resilience, Operational Resilience, and the February 2021 Storm Prudency Review/ Benchmarking Assessment. Additionally, PGE will be creating the Customer Reliability Improvement Program (CRIP), which will focus on customers experiencing a high frequency of outage events. Continued focus and spending on tree trimming, covered wire deployment, and the distribution automation program will limit the frequency and duration of outages to customers. Mitigation will also be realized through hardening and outage mitigation synergies driven by PGE's Wildfire Mitigation and Strategic Asset Management programs.

Торіс	Data Request	PGE Response
Activity metrics	Number of: (1) Residential (2) Commercial (3) Industrial customers served	 (1) 800,372 (2) 111,569 (3) 268
	 Total electricity delivered to: (1) Residential (2) Commercial (3) Industrial (4) All other retail customers (5) Wholesale customers 	MWh in thousands (1) 7,978 (2) 7,193 (3) 5,361 (4) N/A (5) 5,946
	Length of transmission and distribution lines	As of December 31, 2021, PGE-owned electric transmission system consisted of 1,274 circuit miles as follows: 287 circuit miles of 500 kV line; 415 circuit miles of 230 kV line; and 572 miles of 115 kV line. The Company also has 28,206 circuit miles of distribution lines that deliver electricity to its customers.
	Total electricity generated, percentage by major energy source, percentage in regulated markets	Total electricity generated: <u>PGE 2021 EEI ESG Report</u> Percentage by major energy source: <u>PGE 2021 ESG Report Key Metrics</u> 100% in regulated markets
	Total wholesale electricity purchased	10,540* *in thousands of MWh

2021 Task Force on Climate-Related Financial Disclosures (TCFD)

PGE is committed to providing our stakeholders with transparency around our sustainability practices and how we are addressing climate-related issues. A summary of our response to the Task Force on Climate-Related Financial Disclosures (TCFD) follows. Additional information can be found throughout this report, in our Annual Report on Form 10-K and at the various resources linked below.

Topic Data	Request	PGE Response
Governance Describ Disclose the organization's governance around climate-related risks and opportunities.	be the board's oversight of climate-related nd opportunities.	 PGE is committed to conducting business in accordance with high standards of corporate governance to achieve our mission while creating value for our shareholders, customers and other stakeholders. Responsibility for all environmental, social and governance (ESG) performance, especially climate-related risks and opportunities, is integrated with the policies and principles that govern our company. To foster effective board leadership and independent oversight, we have: An active board refreshment program An independent board chair Strong shareholder support in our Say on Pay votes Significant director-shareholder engagement Robust board self-evaluation process

Торіс	Data Request	PGE Response
Governance Disclose the organization's governance around climate-related risks and opportunities.	Describe the board's oversight of climate-related risks and opportunities. (continued)	Although the Board has always provided oversight for PGE's decarbonization goals and our diversity, equity and inclusion performance, we implemented significant structural changes to make our responsibilities explicit and actionable. This is in line with PGE's focus on creating a cleaner future and the need we all see to set a high bar and hold ourselves accountable when it comes to decarbonization efforts.
(continued)		We formalized a "Sustainability and ESG Governance Framework" to bring a systematic approach to aligning our ESG and business goals, as well as to provide greater transparency to stakeholders around ESG risks and opportunities.
		Early in 2021, the Nominating and Corporate Governance Committee amended its charter to include oversight for sustainability and ESG matters and changed its name to the "Nominating, Governance and Sustainability Committee," highlighting the significance of this responsibility.
		We embedded ESG in the revised charters of the Audit and Risk Committee, Compensation and Human Resources Committee, as well as the Finance Committee, to keep us on track with respect to risks, disclosures, metrics and compliance. This allows us to lead by example and for PGE to continue to be a leader in the utility space when it comes to clean energy.
		Underscoring our commitment to improving Diversity, Equity & Inclusion (DE&I), we revised the charter of the Compensation and Human Resources Committee to include responsibility for DE&I programs. And we continued to refresh our independent Board while prioritizing diversity with the addition of Dawn Farrell, whose perspective and experience will help us advance our clean energy future. <u>2021 Proxy Statement</u>
	Describe management's role in assessing and managing climate-related risks and opportunities.	The executive team plans and executes on strategies designed to achieve our priorities, including ESG and sustainability-related issues and initiatives, such as growth plans and the clean energy strategy. Throughout the year, our management team regularly reports to the board on the execution of our long-term strategic plans, the status of important projects and initiatives, and the key opportunities and risks facing the company. Each business area is responsible for certain aspects of sustainability and uses effective performance management techniques and compensation design to align employees around successful execution of our efforts to achieve our goals.
		Management also engages the expertise of consultants on climate- related and broader ESG matters. PGE engaged a consultant to perform a priorities assessment in 2021 that will help us further refine what our stakeholders value most and align our strategic efforts accordingly.
		In 2021, PGE established a management led Sustainability and Environmental, Social and Governance Steering Committee. This committee is comprised of a cross-functional group with members from multiple different departments, focused on driving cohesion throughout the business and operationalizing ESG at PGE. It includes senior leaders with diverse skills and includes members from Human Resources, Environmental Services, Finance, Supply Chain, and other key departments. This committee is co-chaired by the Controller and Assistant Treasurer and the Director of Sustainability Strategy. This cross-functional committee provides governance, oversight, and support for PGE's ongoing commitment to mature our Sustainability and ESG strategies, communications, and reporting to be best-in-class, while enhancing and integrating our overall Sustainability and ESG functions throughout the organization. This committee reports to our Strategy Executive Steering Committee and met twice in 2021.

Торіс	Data Request	PGE Response
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses strategy	Describe the climate-related risks and opportunities the organization has identified over the short-, medium-, and long-term.	PGE is committed to continuing to achieve steady growth and returns as the company transforms to meet the challenges of climate change and an ever-evolving energy grid. Customers, policy makers and other stakeholders expect PGE to reduce GHG emissions, keep the power grid reliable and secure, and keep prices affordable, especially for the most vulnerable customers. The company's strategy strives to balance these interests.
and financial planning		Opportunities:
where such information		Over the short-, medium-, and long-term, PGE plans to:
is material.		 Decarbonize by reducing GHG emissions associated with the power served to customers by 80% by 2030, 90% by 2035 and 100% by 2040.
		• Electrify sectors of the economy such as transportation and buildings that are transforming to reduce GHG emissions.
		 Perform as a business, driving improvements to work efficiency, safety of our coworkers and reliability of our systems and equipment all while adhering to the company's earnings per diluted share growth guidance of 4-6% on average.
		PGE's grid of the future is increasingly smart and adaptive, so that the electric service its customers depend on remains reliable even under uncertain and extreme conditions. For example, PGE uses wireless smart sensors and centrally controlled automated switches to help isolate disruptions and more quickly reroute power, preventing or shortening disruptions. In the field, PGE uses advanced data analytics to optimize system investments and maintenance. The Company is updating its design standards, so that smart sensors and switches are constructed to withstand more extreme weather, particularly in high-risk wildfire areas. Highlights of PGE's key investments and plans for building a resilient grid are as follows:
		 Integrated Operations Center (IOC) — In the fourth quarter of 2021, PGE placed in-service the IOC with a total investment of \$175 million, including an allowance for funds used during construction (AFUDC). The IOC will centralize mission-critical operations, including those that are planned as part of the integrated grid strategy. This secure, resilient facility will include infrastructure to support and enhance grid operations and co-locate primary support functions. Acting as the nerve center of PGE's system, the IOC will enable the Company to apply smart technologies to keep an increasingly complex set of clean energy resources operating efficiently. The system integrations at the IOC will strengthen physical and cyber security of the system to meet critical infrastructure standards, such as seismic and other natural disaster readiness, with the aim of achieving greater reliability with fewer and shorter outages. Advanced Distribution Management System (ADMS) — In the fourth
		quarter of 2021, PGE placed in-service a new software platform called the ADMS with a total investment of \$30 million. The ADMS is designed to allow the Company to reduce outages by proactively detecting and responding to issues before they impact customers and providing self-healing technology for restoring power.
		 Refer to the Accelerating the shift to clean energy section of the 2021 ESG report for further discussion of our RFP, DSP and IRP.

Торіс	Data Request	PGE Response
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material. (continued)	Describe the climate-related risks and opportunities the organization has identified over the short-, medium-, and long-term. (continued)	PGE continues to be a leader in providing programs that meet customers' desires for clean energy. We have the largest renewable power program by participation in the nation with over 235,000 customers voluntarily enrolled in PGE's Green Future program. We launched the Green Future Impact program which helps businesses, cities and counties meet their ambitious sustainability and carbon reduction. In 2020, we closed the Boardman coal plant, significantly reducing fossil fuels in our generation portfolio. PGE is working to exit its partial stake in the Colstrip plant in Montana by the end of 2025. In addition, we have made a commitment to reduce emissions in other parts of our business, including a commitment to electrifying more than 60% of our vehicle fleet by 2030. We also offer time of use pricing and a robust and growing demand response program which each contribute to reducing reliance on peaking resources, which often use fossil fuels.
		PGE is also hard at work on electrifying other sectors of the economy as part of an equitable, safe and clean energy future. Recent and future enhancements to the grid to enable a seamless platform include:
		 The use of electricity in more applications, such as electric vehicles and heat pumps
		The integration of new, geographically diverse energy markets
		 The deployment of new technologies like energy storage, communications networks, automation and control systems for flexible loads and distributed generation
		 The development of connected neighborhood microgrids and smart communities
		 The use of data and analytics to better predict demand and support energy saving customer programs
		Our leadership to deliver a clean energy future affords us the opportunity to invest in solutions that meet the needs of our customers. Coupled with a focus on operating more efficiently each year, we are well-positioned to continue to deliver strong performance for our shareholders.
		Risks:
		The transition to a clean energy future is not without risk, as customers' needs continue to evolve and drive policy changes that limit GHG emissions. We limit and manage this risk by proactively managing toward a lower carbon future and advocating for sensible energy policies. Climate change brings risk in the form of more volatile and severe weather events that can impact PGE's operations, including our ability to serve customers. Drought and wildfires have necessitated more robust approaches to emergency management. We have established close working relationships with state and local authorities to make sure our efforts are well coordinated and have established Public Safety Power Shutoff zones to manage ignition risk. We have also increased our ongoing investment in vegetation management across our system, as well as continuing to invest heavily in grid resilience.
		Refer to our 2021 10-K Risk Factors for risks identified.

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Торіс	Data Request	PGE Response		
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.	Business Extreme Weather — In recent years, PGE's territory has experienced unprecedented heat, historic ice and snowstorms, and wildfires. In June 2021, temperatures in the region reached all-time recorded highs, shattering the Company's previous peak load demand, and surpassing the prior summer peak load by nearly 12%.		
businesses, strategy, and financial planning where such information is material. (continued)		Wildfire — In 2020, Oregon experienced one of the most destructive wildfire seasons on record, with over one million acres of land burned. PGE's wildfire mitigation planning includes regular system-wide risk assessment, which led to the activation of a Public Safety Power Shutoff (PSPS) in 2020 in a zone near Mt. Hood that was identified as a region at high risk of wildfire through a process started in 2019. Additionally, in response to wildfires across Oregon in 2020, PGE cut power to eight additional high-risk fire areas in partnership with local and regional agencies. The Oregon Department of Forestry has opened an investigation into the causes of wildfires in Clackamas County. The Company has received a subpoena and is fully cooperating. The Company is not aware of any wildfires caused by PGE equipment.		
		The Company is intensifying efforts on its system to increase wildfire safety and resiliency to weather and other disaster-related crises. These efforts include enhanced tree and brush clearing, replacing equipment, and making emergency plans in close partnership with local, state, and federal land and emergency management agencies to further expand the use of a PSPS, if the need should arise. Pursuant to Oregon Senate Bill 762, which was passed in June 2021, PGE submitted a risk-based wildfire protection plan to the OPUC in December 2021.		
		February 2021 Ice Storms and Damage — Beginning on February 11, 2021, an historic set of storms involving heavy snow, winds and ice impacted the United States, including PGE's service territory. On February 13, 2021, Oregon's Governor declared a state of emergency due to severe winter weather that resulted in heavy snow and ice accumulation, high winds, critical transportation failures, and loss of power and communications capabilities. The wind and ice from the storms caused significant damage to PGE's transmission and distribution systems, which resulted in over 750,000 outages, with many customers affected more than once. At peak activity during the recovery, PGE deployed over 400 repair crews across the service territory, with many of these crews provided through mutual aid arrangements from throughout the West.		
		Refer to the response to the question above, Describe the climate- related risks and opportunities the organization has identified over the short-, medium-, and long-term, for further discussion of the impact of climate related risks and opportunities on our organization's business.		
		Strategy		
		Climate-related risks and opportunities are the primary driver for PGE's strategy, centered on three long-term imperatives — electrify, decarbonize, perform. Considerable opportunity exists as we work with our customers, stakeholders and communities to lead the clean energy future. Opportunities exist in many forms, including the ability to invest in new renewables and energy storage, infrastructure to enable transportation electrification and clean, integrated customer solutions. These opportunities are evaluated and enabled by PGE's capital planning, integrated resource planning and distribution system planning processes. Refer to the 'Investing in Clean Energy' section of our report for further information related to our RFP, DSP and IRP.		
		PGE is a leader, setting comprehensive decarbonization goals that reflect our role in showing up as a good corporate citizen. In line with new clean energy legislation, we're required to reduce the GHG emissions associated with the power we deliver to customers by at least 80% by 2030, 90% by 2035 and 100% by 2040.		
		Strategy Paper		

Торіс	Data Request	PGE Response		
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material. (continued)	Describe the impact of climate- related risks and opportunities on the organization's businesses, strategy and financial planning. (continued)	 Financial Planning Climate-related risks and opportunities play an important role in our capital expenditures. Capital expenditures are critical as we transition to a Clean Energy future and as we work to meet our goals above. All material capital expenditures are discussed within PGE's annual 10-K filings. In 2021, PGE adopted a green financing framework under which the company will issue green financing instruments to finance or refinance sustainable projects. We also issued our inaugural green bonds and closed on our sustainability-linked revolving credit facility, helping us enter into a new phase of our sustainability strategy. Refer to our Green Financing website for further information. 		
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	In 2018, PGE commissioned a study of pathways for deep decarbonization in its service territory to inform its Integrated Resource Planning process and the carbon policy discussion in Oregon. This included transformation of the energy economy consistent with keeping global warming less than 2°C. This study is currently being updated to reflect the new 1.5°C targets established by House Bill 2021 (HB 2021), as well as the new state regulations on transportation fuels and natural gas in our service territory.		
		In 2020, PGE announced that it would lead the way by producing net-zero emissions company wide by 2040. <u>PGE Climate Goals</u> In 2021, the state of Oregon passed clean energy legislation (HB 2021) requiring us to reduce GHG emissions associated with the power we deliver by at least 80% by 2030 and 100% by 2040. These requirements were designed taking into consideration the research and analysis performed by the Oregon Climate Change Research Institute's Fifth Climate assessment. This is the official state analysis of the impacts of climate change on Oregon and the analysis includes warming scenarios of 1.5 degrees or higher. We've strongly supported this legislation throughout its development and are proud to support the state of Oregon in achieving its goals.		
		PGE's voluntary emissions reduction goals, the new mandatory emissions goals established by HB 2021, and our ambitious electrification efforts — adhere to the Intergovernmental Panel on Climate Change's (IPPC) recent recommendations to achieve net zero emissions globally by 2050 to avoid warming in excess of 1.5 degrees Celsius above pre-industrial levels. As outlined in our strategy paper, between now and 2030, we expect to nearly triple the amount of clean and renewable resources. In 2020 we closed the Boardman coal plant, and we are working with co-owners to plan an exit from Colstrin, our last coal-fired power plant		
		Successfully navigating this transition will require new tools and approaches in a more dynamic system. We plan to add a significant amount of energy storage to the system, and we are implementing new strategies to increase flexible load programs that can ramp energy consumption up or down on demand. These solutions utilize new control technologies and pricing mechanisms for ease of use and reduce customer energy costs, while also improving system reliability and enabling the integration of more clean energy sources.		
		Realizing the target of zero emissions by 2040 will not be easy, and we do not have all the answers today. This future can be achieved through advances in technology, improvements in efficiency, reductions in costs and new partnerships across the entire energy economy — supply, demand and delivery. We are encouraged by the magnitude of investment, pace of innovation and resources focused on developing clean energy solutions, which have never been greater.		

Торіс	Data Request	PGE Response	
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. (continued)	In addition to our own efforts to decarbonize, we are also investing in our systems and developing new products and services to enable our customers and the economy to make the transition too. We are teaming up with customers to innovate; for example, Electric Island is a heavy-duty electric truck charging site to support the commercial adaptation of electric vehicles. We invested in the Wheatridge Renewable Energy Facility, which is the first major renewable energy facility to co-locate wind and solar generation with battery storage. It is continuous innovations like these that make us confident that together we can achieve a clean energy future.	
(continued)		In 2021, we've kickstarted our Deep Decarbonization Study process again to allow us to continue to understand the transformation of the energy economy.	
		Links:	
		<u>Clean Energy Future</u>	
		Innovative Energy	
		SASB	
		Strategy Paper	
Risk management Disclose how the organization	Describe the organization's processes for identifying and assessing climate-related risks.	At PGE, our risk management is grounded in best practices, namely ISO 31000, and designed to support the execution of the company's mission and strategic initiatives.	
the organization identifies, assesses and manages climate-related risks.		PGE leverages an integrated governance structure to provide risk oversight and monitoring. The Executive Risk Committee meets monthly and is chaired by the CEO. Other members include the CFO, CIO, VP of Strategy, Energy Supply and Regulation, and General Counsel. Other decision-making bodies such as Integrated Security Executive Committee, Compliance Committee, Capital Review Group apply a consistent risk framework to support an integrated approach to risk-informed decision-making.	
		The ISO 31000 standards provide a risk management process to implement risk-informed decision-making throughout the organization.	
		We evaluate risks for impact and likelihood including:	
		Safety risks	
		Service reliability and operational risks	
		Regulatory, legal, environmental and compliance risks	
		Economic, finance and market risks	
		Business and strategic risks	
		Risk identification is an iterative process that includes surveys, risk workshops, scenario analysis, probabilistic forecasting, case studies and expert judgment. Risk analysis involves a detailed consideration of uncertainties, risk sources or drivers, consequences, likelihood, risk events, scenarios, controls and their effectiveness.	
		Risk evaluations are performed using an established set of risk criteria to prioritize risks for further treatment, which involves assessing existing controls and identifying and implementing further mitigations.	
		Links:	
		Clean Energy Future	

Торіс	Data Request	PGE Response	
Risk management Disclose how the organization identifies, assesses and manages climate-related risks. (continued)	Describe the organization's processes for managing climate-related risks.	PGE evaluates risks across a spectrum of time periods. Extreme climate events introduce both near-term and long-term risks to PGE. The climate-related risk profile is rapidly evolving and may include drought, wildfire, high winds, extreme temperatures, severe storms and sea-level rise. Other risks, such as changes in policy, regulation, socioeconomics and rapid change in electricity demand present potential near-, medium- and long-term challenges. PGE has enhanced its emergency preparedness through increased investment in vegetation management, establishing PSPS zones to reduce ignition probability, and employing meteorologists to assist in planning and event management. In addition, PGE has a robust insurance program that regularly evaluates opportunities to share risk where economic. PGE continues to invest heavily in grid resilience and coordinate with local, county and state agencies to make sure that when events do occur, the impact to customers and the communities we serve is minimized. Monitoring and Review of risks, controls, and mitigations is an important process to improve the quality and effectiveness of risk analysis, evaluation, and treatment. This provides assurance that risk responses are implemented, procedures are understood and followed, and appropriate controls are in place. Risk management and business management monitor the effectiveness of the controls and risk mitigation activities through a review of defined	
	Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Climate-related risks are a part of PGE's overall approach to enterprise risk management (ERM). PGE's ERM program supports identification, analysis, evaluation and treatment of risks such as wildfires, major storms and other natural disasters to determine their potential impact on operations and financials. This work is conducted at multiple levels within the organization, including line managers, senior management and officers. Climate-related risk is factored into PGE's strategy, centered on three long-term imperatives — electrify, decarbonize, perform — which is overseen by the board of directors. Enterprise risk management leads	
		overseen by the board of directors. Enterprise risk management leads company-wide efforts to identify, analyze, evaluate and treat risks. To analyze and evaluate risks, we use various techniques, including probabilistic analysis, scenario analysis and expert judgment. ERM and management are responsible for monitoring the effectiveness of controls and risk mitigation activities. Oversight of these activities is provided by the Executive Risk Committee comprised of PGE officers. Risk monitoring is reported to PGE's Executive Risk Committee, Audit and Risk Committee and Board of Directors.	

Торіс	Data Request	PGE Response
Metrics and targets Disclose the metrics and targets used to assess and manage relevant climate- related risks and opportunities where such information is material.	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	 PGE has numerous metrics it uses to assess and guide our actions to manage climate-related risks. Key metrics include: GHG emissions associated with the power we serve our customers Scope 1 GHG Emissions Scope 2 GHG Emissions Scope 3 GHG Emissions State of Oregon's Renewable Portfolio Standard, which establishes goals for the percentage of retail load served by qualifying renewable resources as follows: 20% by 2020 27% by 2025 35% by 2030 45% by 2035 50% by 2040 In 2021, PGE served approximately 35% of its retail load with non-emitting electricity. System reliability metrics, such as System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI), among many others Operational metrics, such as the percentage of our fleet that is electric, which we aim to have 60% electrified by 2030 On September 10, 2021, PGE amended and restated its revolving credit facility, resulting in the extension of the maturity date to September 10, 2024, and an increase in PGE's borrowing capacity to \$650 million. The amendments include provisions that link the company's borrowing costs to metrics related to its non-emitting generation capacity and the percentage of management comprised of women and employees who identify as black, indigenous, and people of color.
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Scope 1* Refer to the Greenhouse Gas Emissions section of the SASB template for Scope 1 disclosures. Scope 2* Market Based — 49,955 MTCO2e Location Based — 50,205 MTCO2e This represents emissions from electricity purchased and consumed as well as T&D line loss associated with wheeled power in 2021. Scope 3* 2,155,497 MTCO2e from the generation of purchased electricity that is sold to end users. Reporting and data collection capabilities are still being developed for other Scope 3 sources of emissions. *These metrics have been calculated using the GHG Accounting Protocol's Corporate Standard. Links: SASB Report EEI Report

Торіс	Data Request	PGE Response
Metrics and targets Disclose the metrics and targets used to assess and manage relevant climate- related risks and	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Setting ambitious climate goals is part of our commitment to our customers, and their needs and expectations live at the heart of our strategy. That means taking a holistic approach to decarbonizing the power supply while continuing to provide reliable, affordable energy to everyone we serve. It also means working closely with federal, state and local law makers, regulators, customers, communities and other key stakeholders to achieve this goal and build a clean energy future together.
such information		State of Oregon climate-related targets
is material. (continued)		Our Integrated Resource Plan (IRP) plays a major role in setting PGE's path forward as we align our power supply to company goals, Oregon's renewable portfolio standard (RPS) mandates and GHG reduction targets. We considered decarbonization and the clean energy transition through several new innovative analyses within the 2019 IRP, including our Decarbonization Study and related Decarbonization Scenario, carbon pricing reflective of a potential cap and trade program in Oregon, a scoring metric reflecting portfolio performance in a carbon-constrained future, and incorporation of market-based EV forecasts throughout our analysis. These components of our plan help to make sure that PGE will continue to drive GHGs out of our energy economy and that we will be well positioned to serve our customers in a clean energy future.
		Oregon Renewable Portfolio Standard (RPS)
		In March of 2016, Oregon State revised the RPS mandate thresholds to 27% by 2025, 35% by 2030, 45% by 2035 and 50% by 2040. It also mandated that Oregon utilities no longer serve coal-fired power to Oregon customers by a certain period in time.
		GHG Emission Reduction Requirements
		The Oregon Legislature set some of the most ambitious clean electricity targets in the country through HB 2021 — achieving at least an 80% reduction in GHG emissions associated with the power served to customers by 2030, a 90% reduction by 2035, and a 100% reduction by 2040. This is legislation that we've strongly supported throughout its development.
		In 2021, PGE was the first utility in the country to sign the Climate Pledge.
		Fleet electrification goals
		To reduce company-wide GHG emissions, PGE aims to electrify more than 60% of its vehicle fleet by 2030. Transportation is the single biggest source of GHG emissions in Oregon and a major source of other air pollutants. Electric vehicles not only reduce emissions by up to 100% compared to diesel powered vehicles, but electricity is also less expensive than diesel and prices are more stable over time. Today, PGE's fleet contains 1,089 vehicles across 29 different facilities, including 93 electrified vehicles currently in use. This new commitment will retire more than 600 internal combustion engine vehicles and deploy more than 600 electric vehicles over the port 10 years.
		By 2030, PGE's fleet will contain 61% electric vehicles:
		 100% electric Class 1 vehicles by 2025 (e.g., sedans, SUVs and small pickups)
		 70% electric light-duty Class 2 vehicles (e.g., pickups, large SUVs and vans)
		 40% electric medium-duty vehicles (e.g., flatbeds, service bodies, large vans and bucket trucks)
		 30% electric heavy-duty vehicles (e.g., digger derricks, bucket trucks and dump trucks)
		This plan is specific to electrified vehicles with a plug, including battery electric vehicles (BEVs), plug-in hybrids (PHEVs) and anti-idle job site work systems, such as electric power take-off (ePTO) systems.

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Торіс	Data Request	PGE Response
Metrics and targets Disclose the metrics and targets used to assess and manage relevant climate- related risks and opportunities where such information is material. (continued)	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. (continued)	Incentive compensation tied to clean energy In 2020, we added a new performance metric to our long-term incentive (LTI) awards granted to our executives and other key employees related to achievement of our strategic goals surrounding clean energy. This metric is used to create incentive to reduce carbon potential in the company's energy supply portfolio in support of Oregon's GHG emission reduction goals. The metric is to be measured based on average megawatts of forecast energy from carbon-free resources, Oregon Renewable Portfolios Standard-qualifying resources, and low-carbon emitting (i.e., greater than or equal to 95% carbon-free) systems of resources added to the company's energy supply portfolio during the performance period. Links: <u>Clean Energy Future</u> IRP <u>Fleet Press Release</u> 2021 Proxy Statement

2021 Edison Electric Institute (EEI) ESG/Sustainability Quantitative Information

Parent company: Portland General Electric

Business type(s): Vertically integrated

State(s) of operation: Oregon

State(s) with RPS programs: Yes

Regulatory environment: Regulated

Report date: 3.08.22

The metrics reported within this template are unaudited.

PORTFOLIO

Ref. No.	Metric	2019	2020	2021	Comments, links, additional information and notes
1	Owned Nameplate Generation Capacity at end of year (MW)	3,861	3,444	3,453	Source: SEC Form 10-K. Please note that the figures included within the 10-K do not include solar energy, as the amount is immaterial for financial reporting purposes.
1.1	Coal	814	296	296	On October 15, 2020, PGE shuttered the 585 MW Boardman Generating Station, ending operations at the coal plant 20 years ahead of schedule.
1.2	Natural Gas	1,830	1,831	1,842	
1.3	Nuclear	0	0	0	
1.4	Petroleum	0	0	0	
1.5	Total Renewable Energy Resources	1,217	1,317	1,315	
1.5.1	Biomass/Biogas	0	0	0	
1.5.2	Geothermal	0	0	0	
1.5.3	Hydroelectric	495	495	495	
1.5.4	Solar	5	5	3	
1.5.5	Wind	717	817	817	
1.6	Other	0	0	0	

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PORTFOLIO

Ref. No.	Metric	2019	2020(A)	2021(B)	Comments, links, additional information and notes
2	Net Generation for the data year (MWh) ¹	18,131,565	18,502,229	19,367,876	Source: PGE reporting to Oregon Department of Environmental Quality Investor-Owned Utilities greenhouse gas reporting
2.1	Coal	3,441,514	2,172,086	1,379,971	
2.2	Natural Gas	7,656,846	6,661,801	7,736,162	
2.3	Nuclear	21	0	0	
2.4	Petroleum	8,240	8,516	3,068	
2.5	Total Renewable Energy Resources	4,534,557	5,637,173	6,823,143	
2.5.1	Biomass/Biogas	55,964	78,303	85,388	
2.5.2	Geothermal	0	0	0	
2.5.3	Hydroelectric	3,155,983	3,495,426	3,882,622	
2.5.4	Solar	48,903	351,017	419,345	
2.5.5	Wind	1,273,707	1,712,427	2,435,788	
2.6	Other (includes non-listed fuel types and unknown sources)	2,490,387	4,022,653	3,425,532	

PORTFOLIO

Ref. No.	Metric	2019	2020(A)	2021(B)	Comments, links, additional information and notes
2.i	Owned Net Generation for the data year (MWh) ¹	12,943,382	10,872,870	11,190,015	Source: PGE reporting to Oregon Department of Environmental Quality Investor-Owned Utilities greenhouse gas reporting
2.1.i	Coal	3,302,906	2,172,086	1,379,971	
2.2.i	Natural Gas	7,028,482	6,630,211	7,683,654	
2.3.i	Nuclear	0	0	0	
2.4.i	Petroleum	8,240	8,516	3,068	
2.5.i	Total Renewable Energy Resources	2,603,754	2,062,057	2,123,322	
2.5.1.i	Biomass/Biogas	0	0	0	
2.5.2.i	Geothermal	0	0	0	
2.5.3.i	Hydroelectric	1,581,581	703,315	501,104	
2.5.4.i	Solar	2,812	3,793	2,375	
2.5.5.i	Wind	1,019,361	1,354,949	1,619,843	
2.6.i	Other (includes non-listed fuel types and unknown sources)	0	0	0	

PORTFOLIO

Ref. No.	Metric	2019	2020(A)	2021(B)	Comments, links, additional information and notes
2.ii	Purchased Net Generation for the data year (MWh) ¹	5,188,183	7,629,359	8,177,861	
2.1.ii	Coal	138,608	0	0	
2.2.ii	Natural Gas	628,364	31,590	52,508	
2.3.ii	Nuclear	21	0	0	
2.4.ii	Petroleum	0	0	0	
2.5.ii	Total Renewable Energy Resources	1,930,803	3,575,116	4,699,821	
2.5.1.ii	Biomass/Biogas	55,964	78,303	85,388	
2.5.2.ii	Geothermal	0	0	0	
2.5.3.ii	Hydroelectric	1,574,402	2,792,111	3,381,518	
2.5.4.ii	Solar	46,091	347,224	416,970	
2.5.5.ii	Wind	254,346	357,478	815,945	
2.6.ii	Other (includes non-listed fuel types and unknown sources)	2,490,387	4,022,653	3,425,532	

PORTFOLIO

Ref. No.	Metric	2019	2020	2021	Comments, links, additional information and notes
3	Capital Expenditures and Energy Efficiency (EE)				
3.1	Total Annual Capital Expenditures (nominal dollars)	\$606,000,000	\$784,000,000	\$636,000,000	Source: SEC Form 10-K
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)	287,503	224,256	211,992*	Energy Trust of Oregon 2021 Preliminary Annual Results *Preliminary number subject to change
3.3	Incremental Annual Investment in Electric EE Programs (nominal dollars)	\$52,164,521	\$47,563,599	\$50,784,946	
4	Retail Electric Customer Count				Source: SEC Form 10-K, Average 2021 Customers
4.1	Commercial	110,084	110,851	111,569	
4.2	Industrial	262	267	268	
4.3	Residential	779,673	791,119	800,372	
EMISSIONS²

Ref. No.	Metric	2019	2020(A)	2021(B)	Comments, links, additional information and notes		
5	GHG Emissions: Carbon Dioxide (CO ₂) and Carbon Dioxide Equivalent (CO ₂ e)						
5.1	Owned Generation ³						
5.1.1	Carbon Dioxide (CO ₂) ²						
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT) ²						
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh) ²						
5.1.2	Carbon Dioxide Equivale	nt (CO ₂ e)					
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT) ¹	5,940,851	4,827,715	4,603,749	To calculate 2021 emissions associated with power deliveries to retail customers in Oregon, PGE used ODEQ 2020 emission factors for purchased power and estimated emission factors for generated power as ODEQ 2021 emission factors are not yet available.		
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh) ¹	0.46	0.44	0.41			
5.2	Purchased Power⁴						
5.2.1	Carbon Dioxide (CO ₂) ²						
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT) ²						
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/ Net MWh) ²						
5.2.2	Carbon Dioxide Equivalent (CO ₂ e)						
5.2.2.1	Total Purchased Generation CO2e Emissions (MT) ¹	1,508,277	1,928,397	1,655,429	To calculate 2021 emissions associated with power deliveries to retail customers in Oregon, PGE used ODEQ 2020 emission factors for purchased power and estimated emission factors for generated power as ODEQ 2021 emission factors are not yet available.		
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh) ¹	0.29	0.25	0.20			

EMISSIONS²

Ref. No.	Metric	2019	2020(A)	2021(B)	Comments, links, additional information and notes		
5.3	Owned Generation + Purchased Power						
5.3.1	Carbon Dioxide $(CO_2)^2$						
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT) ²						
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh) ²						
5.3.2	Carbon Dioxide Equivalent (CO ₂ e)						
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT) ¹	7,449,128	6,756,112	6,259,178			
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh) ¹	0.41	0.37	0.32			
5.4	Non-Generation CO ₂ e Emissions						
5.4.1	Total CO₂e emissions of SF6 (MT)⁵	15,367	5,538	See comment	Data collection and analysis in progress for reporting to Environmental Protection Agency (EPA). This data will be available after submitting to EPA (regulatory due date March 31, 2022).		
5.4.2	Leak rate of CO ₂ e emissions of SF6 (MT/Net MWh)	0.00119	0.000509	See comment	Data collection and analysis in progress for reporting to Environmental Protection Agency (EPA). This data will be available after submitting to EPA (regulatory due date March 31, 2022).		

EMISSIONS²

Ref. No.	Metric	2019	2020(A)	2021(B)	Comments, links, additional information and notes		
6	Nitrogen Oxide (NOx), Sulfur Dioxide (SO ₂), Mercury (Hg)						
6.1	Generation basis for calculation ⁶				See footnote.		
6.2	Nitrogen Oxide (NOx)						
6.2.1	Total NOx Emissions (MT)	2,966	2,172	1,745			
6.2.2	Total NOx Emissions Intensity (MT/Net MWh)	0.000229	0.000200	0.000156			
6.3	Sulfur Dioxide (SO ₂)						
6.3.1	Total SO ₂ Emissions (MT)	3,232	2,121	560			
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000250	0.000195	0.000050			
6.4	Mercury (Hg)						
6.4.1	Total Hg Emissions (kg)	9.3	4.2	3.9			
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.0000072	0.0000039	0.0000035			

RESOURCES

Ref. No.	Metric	2019	2020	2021	Comments, links, additional information and notes		
	Human Resources						
7.1	Total Number of Employees	2,956	2,802	2,839			
7.2	Percentage of Women in Total Workforce	32%	32%	33%			
7.3	Percentage of Minorities in Total Workforce	22%	22%	25%			
7.4	Total Number on Board of Directors/Trustees	12	12	12			
7.5	Percentage of Women on Board of Directors/ Trustees	31%	33%	33%			
7.6	Percentage of Minorities on Board of Directors/ Trustees	23%	25%	33%			
7.7	Employee Safety Metrics						
7.7.1	Recordable Incident Rate	2.16	1.60	1.34			
7.7.2	Lost-time Case Rate	0.77	0.85	0.62			
7.7.3	Days Away, Restricted, and Transfer (DART) Rate	1.23	1.13	0.82			
7.7.4	Work-related Fatalities	0	0	0			
8	Fresh Water Resources (cooling water; does not include nominal water use (e.g., drinking water) for which data were not readily available)						
8.1	Water Withdrawals — Consumptive (Millions of Gallons)	4,708	5,082	5,844	Water use data generally limited to consumptive cooling water use, non-consumptive estimates included where available.		
8.2	Water Withdrawals — Non-Consumptive (Millions of Gallons)	137	129	150	Water use data generally limited to consumptive cooling water use, non-consumptive estimates included where available.		
8.3	Water Withdrawals — Consumptive Rate (Millions of Gallons/Net MWh)	0.00036	0.00045	0.00051			
8.4	Water Withdrawals — Non-Consumptive Rate (Millions of Gallons/Net MWh)	0.000011	0.000011	0.000013			

RESOURCES

Ref. No.	Metric	2019	2020	2021	Comments, links, additional information and notes
9	Waste Products				
9.1	Amount of Hazardous Waste Manifested for Disposal (MT)	3.7	54.7	63.3	Note: 48.5 MT (or 106,842 lbs) of hazardous waste was manifested at Beaver Plant, most of which was due to a one-time acid spill and response. A total of 13.1 MT (or 28,899 lbs) of hazardous waste was manifested due to Boardman Decommissioning activities in 2021 (reflects PGE 90% ownership).
9.2	Percent of Coal Combustion Products Beneficially Used	9.3%	13%	0.05%	Note: 2021 value reflects the closure of the Boardman Coal Plant at the end of 2020, and is based solely on Colstrip plant data.

KEY

MT = metric tons 1 lb. = 453.59 grams 1 metric ton = 1.1023 short tons

NOTES

- (1) Generation MWhs, purchased MWhs, and greenhouse gas emissions data are reported based on the Oregon Department of Environmental Quality (ODEQ) Investor Owned Utility GHG report (<u>oregon.gov/deq/FilterDocs/</u><u>IOUProtocols.pdf</u>). This report shows greenhouse gas emissions and MWhs in terms of power provided to PGE retail customers; it does not account for generation, purchases, or emissions associated with power delivered outside of PGE service territory. In 2021, MWhs associated with power delivered outside of PGE service territory was approximately 6 million.
- (2) Greenhouse gas emissions are reported in terms of CO₂e only and are based on the ODEQ Investor Owned Utility GHG report. The ODEQ report shows greenhouse gas emissions associated with power provided to PGE customers and does not account for emissions associated with power delivered outside of PGE service territory.
- (3) As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D) and adjusted per ODEQ IOU Reporting Protocols.
- (4) Per the ODEQ IOU Report, greenhouse gas emissions associated with purchased power are based on fuel specific emission factors. Emissions from purchases of undetermined origin are calculated based on the Northwest Power Pool (NWPP) emission factor; emissions from Bonneville Power Administration (BPA) purchases are calculated using a BPA specific emission factor provided by ODEQ.
- (5) As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart DD).
- (6) To keep reporting consistent, total plant emissions were adjusted based on power delivered to customers, and does not include emissions associated with PGE generation delivered outside of the service territory. DEQ IOU Report adjusted generation was used to calculate the intensities, and is based on PGE-generated power delivered to customers. Emissions associated with purchased power are not represented in the reported values.
- (A) These amounts have been restated from the prior year as a result of re-filing these numbers with the Oregon Department of Environmental Quality.
- (B These amounts are preliminary and could vary from those filed with ODEQ.

Blank cells indicate that the company has not measured, is unable to track, or has not provided this data point. Cell values of zero indicate that the company has measured the requested metric and has resulted in a measurement of zero.

TOTAL CO₂e IS CALCULATED USING THE FOLLOWING GLOBAL WARMING POTENTIALS FROM THE IPCC FOURTH ASSESSMENT REPORT:

 $CO_2 = 1$ CH4 = 25 $N_2O = 298$ SF6 = 22,800

2021 ESG Report Key Metrics

Data in this report is from our 2021 fiscal year (January 1, 2021, to December 31, 2021), unless otherwise noted.

Environmental	2019	2020	2021
Intensity: Retail load (metric tons CO ₂ e/megawatt-hours) ¹	0.41	0.37 ^A	0.32 ^в
Percent of fleet with plug-in or additional electric technology ²	8.35%	9.07%	10.02%
Sources of Energy Power generated by PGE ⁴	2019	2020 ^A	2021 ^B
Natural gas	38.8%	35.8%	39.7%
Coal	18.2%	11.7%	7.1%
Hydro ⁵	8.7%	3.8%	2.6%
Wind and Solar	5.6%	7.3%	8.4%
Total power generated by PGE ⁴	71.3%	58.6%	57.8%
Purchased Power			-
Hydro ^{5,7}	8.7%	15.1%	17.5%
Natural gas	3.5%	0.2%	0.3%
Wind and Solar⁵	1.7%	3.8%	6.4%
Coal	0.8%	0%	0%
Other ⁶	14%	22.2%	18.1%
Total purchased power ⁴	28.7%	41.3%	42.3%
Green power program			
Residential/small business participants	224,739	229,679	235,610
Commercial/industrial participants	226	223	208

Social (dollars in thousands)	2019	2020	2021
Women in workforce	32%	32%	33%
Racial/ethnic group representation ⁷	22%	22%	25%
Women in management	29%	31%	34%
Racial/ethnic group management representation	19%	19%	23%
Total PGE and PGE Foundation investments	\$3,259	\$3,956	\$3,569
Employee and retiree volunteer hours	32,911	18,195	15,760
Scholarships awarded	55	55	43
OSHA recordable incidents rate ⁸	2.16	1.6	1.34
Community Investment as a percentage of Net Income	1.5%	2.6%	1.5%

Refer to our Sustainability webpage for preliminary EEO-1 data.

Governance and Business Performance data is available in our 10-K and Proxy statement.

NOTES

- (1) Value calculated using data provided by PGE per Oregon Department of Environmental Quality, Investor-owned Utility GHG protocols. Value cannot be used directly with Generation Fleet emissions as it is based on total energy deliveries to retail customers, including power purchased from other sources.
- (2) Electric vehicles as defined by the Edison Electric Institute.
- (3) Information presented is based on data reported to Oregon DEQ in PGE's Investor Owned Utility GHG Report. Percentages represent the portion of power delivered to PGE customers in Oregon.
- (4) Represents total power generated or purchased by PGE as a % of total power provided to customers in Oregon. Due to rounding, the sum of listed percentages may not equal 100%.
- (5) Hydro includes power purchased from Bonneville Power Administration (BPA).
- (6) "Other" fuels may include biomass, biomass gases, landfill gas or other fuel types, including certain carbon-free sources that do not meet DEQ requirements to qualify as "specified purchases." PGE presumes the resources are not carbon-free.
- (7) Data based on voluntary employee reporting.
- (8) Number of incidents per 100 employees and contingent workers who report to PGE management (assuming 2,000 hours per employee per year).
- (A) These amounts have been restated from the prior year as a result of re-filing these numbers with the Oregon Department of Environmental Quality.
- (B) These amounts are preliminary and could vary from those filed with ODEQ.

Forward-looking statements

Statements in this report that relate to future plans, objectives, expectations, performance, events and the like may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements represent our estimates and assumptions as of the date of this report. The Company assumes no obligation to update or revise any forward-looking statement as a result of new information, future events or other factors.

Forward-looking statements include statements containing words such as "anticipates," "believes," "intends," "estimates," "promises," "expects," "should," "conditioned upon," and similar expressions.

Investors are cautioned that any such forward-looking statements are subject to risks and uncertainties, including, without limitation: the outcome of various legal and regulatory actions; demand for electricity; the sale of excess energy during periods of low demand or low wholesale market prices; operational risks relating to the Company's generation and battery storage facilities, including hydro conditions, wind conditions, disruption of transmission and distribution, disruption of fuel supply, and unscheduled plant outages, which may result in unanticipated operating, maintenance and repair costs, as well as replacement power costs; delays in the supply chain and increased supply costs, failure to complete capital projects on schedule or within budget, or the abandonment of capital projects, which could result in the Company's inability to recover project costs; the costs of compliance with environmental laws and regulations, including those that govern emissions from thermal power plants; changes in weather, hydroelectric and energy market conditions, which could affect the availability and cost of purchased power and fuel; the development of alternative technologies; changes in capital and credit market conditions, including interest rates, which could affect the access to and availability of

cost of capital and result in delay or cancellation of capital projects or execution of the Company's strategic plan as currently envisioned; general economic and financial market conditions, including inflation; severe weather conditions, wildfires, and other natural phenomena and natural disasters that could result in operational disruptions, unanticipated restoration costs, or third party liability; cyber security breaches of the Company's customer information system or operating systems, data security breaches, or acts of terrorism, which could disrupt operations, require significant expenditures, or result in claims against the Company; employee workforce factors, including potential strikes, work stoppages, transitions in senior management, and the ability to recruit and retain key employees and other talent due to COVID-19 mandates and turnover due to macroeconomic trends: PGE business activities are concentrated in one region and future performance may be affected by events and factors unique to Oregon; and widespread health emergencies or outbreaks of infectious diseases such as the novel coronavirus disease (COVID-19), including potential vaccination mandates, which may affect our financial position, results of operations and cash flows. As a result, actual results may differ materially from those projected in the forward-looking statements.

These risks and uncertainties are further discussed in the reports that the Company has filed with the United States Securities and Exchange Commission (SEC). These reports are available through the EDGAR system free-of-charge on the SEC's website, <u>www.sec.gov</u> and on the Company's website, <u>investors.portlandgeneral.com</u>. Investors should not rely unduly on any forward-looking statements.

Metrics calculated using the Greenhouse Gas Reporting Protocol's Corporate Standard within this report are subject to change if changes in methodology occur, either as a result of a change in interpretation and application of the protocol or formal changes made to the protocol's guidance.

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