

OUR VISION for a clean and reliable energy future



At Portland General Electric, we are committed to helping our customers and the communities we serve achieve a clean energy future. The benefits of such a future are real: we must do our part to reduce the threat of climate change, improve air and water quality and live a more sustainable way of life.

Oregonians are at the forefront of a dramatic transformation. Several cities have proclaimed resolutions to move to 100 percent clean and renewable energy, and over 178,000 PGE customers voluntarily participate in the nation's top renewable power program. Additionally, more than 10,000 customers are early adopters of electric vehicles. Oregonians have a pioneering spirit and our customers are taking clear steps to create a clean energy future by making choices and assuming responsibility for their energy consumption.

## COMBATING CLIMATE CHANGE

Climate change is having a very real, immediate impact, here and around the globe. It's essential that greenhouse gases are systematically driven out of the energy economy. The Intergovernmental Panel on Climate Change, which includes the world's foremost collection of climate scientists, estimates that limiting global temperature rise to 2 degrees Celsius

**OUR GOAL:** A REDUCTION IN GREENHOUSE GAS EMISSIONS OF MORE THAN 80% BY 2050

above pre-industrial levels will help avert the most destructive impacts of climate change. This global goal was the central aim of the 2015 Paris Climate Agreement. It is a challenging goal that will require the global community work together to dramatically reduce greenhouse gas emissions.

In the spring of 2017, PGE joined over 2,500 businesses and universities, along with state and local governments, to say #WeAreStillIn by promising to continue to do our part to meet the United States' commitments in the Paris agreement. In addition to driving down greenhouse gas emissions in our resource portfolio, our commitment includes evolving the

smart grid platform to help our customers and Oregon reach our shared emission reduction and sustainability goals. To do this, we will build upon our history of promoting and integrating renewable energy, energy efficiency and rapidly emerging clean technologies such as energy storage and energy flexibility, and by weaving together technology and information through a modern and more resilient energy grid.

#### Setting our emission reduction goal

We are proud to partner with our state, municipalities and customers to advance a clean energy future. In pursuit of this future, and consistent with our #WeAreStillIn pledge, we are committed to reducing greenhouse gas emissions on our system by more than 80 percent by 2050, consistent with our proportionate share of the state's 2050 greenhouse gas reduction goal.1 By continuing to drive down our emissions using a diverse portfolio of clean and renewable energy resources, and at the same time promoting economy-wide emission reductions through electrification and smart energy use, we can help the state meet its greenhouse gas reduction goals. A clean energy future that includes transportation electrification has the added benefit of reducing conventional air pollutants, which will greatly improve local air quality.

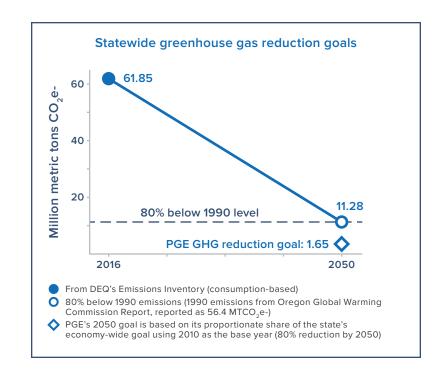
<sup>1</sup>PGE's 2050 goal is based on its proportionate share of Oregon's economy-wide goal using 2010 as the base year.

#### Taking action today and planning for tomorrow

In 2016, we collaborated with environmental groups and customer advocates to pass one of the most progressive clean energy laws in the nation. The resulting landmark legislation the Oregon Clean Electricity and Coal Transition Plan — sets a target of 50 percent renewable energy by 2040

and also transitions Oregon off of coal-fired electricity by 2035. As a result, Oregon's electricity sector will substantially reduce greenhouse gas emissions; PGE will be 70 percent carbon-free by 2040. And we can't stop there. We have more to do to achieve our new 2050 greenhouse gas reduction goal.

In the near term, we are continuing to pursue renewable resources to meet our customers' needs and decarbonize our portfolio. With the additional 100 MWa



of renewables approved by the Oregon Public Utility Commission in December 2017, we will be on track to serve approximately 50 percent of our customers' energy needs with clean and renewable energy by the end of 2020. Simultaneously, we are deliberately pursuing new renewable product offerings for our customers who want to decarbonize even faster.

WE ARE PLANNING FOR NEW, COST-EFFECTIVE AND MORE SUSTAINABLE WAYS TO GENERATE **ELECTRICITY USING** RENEWABLE RESOURCES

As our region's population and industries grow, we are planning for new, cost-effective and more sustainable ways to generate electricity using renewable resources. We are also developing new capabilities to more efficiently integrate these renewable resources into our portfolio to lower costs and enhance reliability. This includes entering the Western Energy Imbalance Market and embarking on new initiatives to support the development of flexible distributed resources, such as energy storage and smart technologies.

## TRANSFORMING FOR A CLEAN ENERGY FUTURE

For more than 125 years, PGE has been powering our customers' lives, delivering energy that is safe, reliable and affordable. Today's customers expect more. They also want their energy to be clean and secure. Our commitment to equitable access and dedication to the communities we serve puts us in a unique position to help lead this energy transformation while also protecting the affordability and reliability of electric service. Success will depend on thoughtful planning, community partnerships, empowering customers and embracing new technologies. Our vision for a clean energy future relies on three interrelated and overarching strategies: decarbonize through investing in clean and reliable energy; modernize through a smarter more resilient grid; and empower our customers in their energy technology choices.

# Decarbonize through investing in clean and reliable energy

Through investments in clean and reliable energy resources — on top of our legacy carbon-free hydroelectric and renewable resources — we will dramatically reduce emissions on our system, consistent with our proportionate share of Oregon's 2050 greenhouse gas reduction goal and help others achieve their emissions goals. As the state's largest electric utility, we are positioned to enable the development and integration of clean and reliable resources on behalf of all our customers, serving their needs for both today's energy services and tomorrow's smart, clean technologies.

**SUCCESS WILL DEPEND ON** THOUGHTFUL PLANNING. COMMUNITY PARTNERSHIPS, **EMPOWERING CUSTOMERS AND EMBRACING NEW TECHNOLOGIES** 

## Modernize through a smarter, more resilient grid

We will build and operate a smarter, more flexible and resilient grid to improve operations and enable seamless integration of new technologies. The efficient integration of devices and information will require innovation and development of new grid capabilities. We are committed to providing customers with a platform capable of interconnecting and leveraging these technologies to benefit the communities we serve and support the transition to our clean energy future.

# **Empower our customers** in their energy technology choices

Our customers' expectations are changing as new energy technologies, like solar panels, smart technologies and battery storage, are finally available to suit their desires. We will partner with our customers to integrate their own technologies, provide them with real-time information and maximize usage of clean energy through a modern, enhanced grid.

The world is changing. To lessen the impacts unleashed by climate change, actions to reduce greenhouse gas emissions must be taken at a global level. We all have a role to play in addressing climate change, and we are determined to be part of the solution. Achieving a clean energy future will be challenging; we believe it is attainable and vital to Oregon's future. We also believe the transition should not compromise reliability or affordability for our customers. We welcome the opportunity to work together with our customers, stakeholders and regional partners to make real progress in this transformation.

