



Portland General Electric announces ambitious Smart Grid Test Bed

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Accelerating its vision for a clean energy future

PORTLAND, Ore., Oct. 11, 2018 /PRNewswire/ -- Today, Portland General Electric (NYSE: POR) announced plans to file a proposal for a Smart Grid Test Bed that will integrate smart grid technology on a scale never before attempted in the United States. Slated to begin next year, the project aims to accelerate PGE's vision for a clean energy future through partnering with customers to decarbonize the grid.

PGE is building and testing three smart grids within its service area that will enable more than 20,000 customers to take advantage of special demand-response signals and incentives for using smart-home technologies, giving them greater energy efficiency opportunities and increased control over their energy use and carbon footprint. The entire service area will benefit as PGE integrates even more renewable energy resources into its power supply without compromising grid safety, security and reliability.

"PGE is committed to delivering a clean energy future, and we're leaning in to our long history of industry leadership to get there," said Maria Pope, PGE president and CEO. "Together with customers we're making the future a reality with innovative projects like our Smart Grid Test Bed. This first-of-its-kind project will leapfrog over other smart grid efforts, enabling PGE to gain and share learnings that will aid the entire industry."

"The PGE Smart Grid Test Bed represents a leap forward in the relationship between customers and their energy providers," said Jon Wellinghoff, former chairman of the Federal Energy Regulatory Commission and CEO of Grid Policy, Inc. "By providing customers with more control over their energy consumption and carbon footprint with the latest in control technology, PGE is on a path to building a model that energy providers everywhere can learn from and replicate."

PGE will make this a seamless experience for customers by helping them automate their smart devices, such as thermostats, water heaters, electric vehicle chargers and batteries, to work in concert with PGE as it operates the grid. During times when demand for electricity is especially high in the region, customers will be able to decide on an event-by-event basis if they want to participate in reducing their overall energy consumption.

To accomplish this, PGE will leverage advanced communications capabilities and distribution system upgrades in three Oregon cities: Hillsboro, Portland and Milwaukie. Three feeders and substations in these cities will also be equipped with other smart grid technologies such as new remote controls that increase system reliability and enhanced safety and cyber security.

The test bed will accelerate the development of distributed resources, which include customer-hosted renewables like rooftop solar; flexible resources like batteries, thermostats and water heaters; and electric vehicle charging. The project will rely on PGE's unique ability to partner with customers. The two-and-a-half-year project aims to achieve at least 66 percent participation by eligible customers, an ambitious goal considering typical uptake of demand-response programs nationally is less than 7 percent.

The project was conceived and is being overseen by energy regulators in Oregon. To accelerate the concept, PGE developed the pilot with guidance from the Rocky Mountain Institute, one of the nation's top sustainability consultants. The project is being steered by an advisory committee of local and national subject matter experts from the public and private sectors.

Quotes from mayors in support of PGE's Smart Grid Test Bed proposal:

"PGE's leadership in reducing energy consumption aligns perfectly with our community's sustainability goals. This visionary project at the Roseway substation serving the South Hillsboro neighborhood will also aid our Smart City strategy by leveraging innovation and technology for our daily lives. Residents and businesses can make the most of smart thermostats, water heaters and appliances, rooftop solar energy generation, electric vehicles and energy storage." —Steve Callaway, mayor of Hillsboro

"Given the recent UN report, the urgency of rolling out cutting-edge technology that aims for a carbon free near-future is critical. Milwaukie looks forward to exploring how this technology not only moves us toward our goal of being a net zero city by 2040, but creates resiliency in the face of more and more violent storms. We are thrilled with the visionary attitude that our partner PGE has embraced." —Mark Gamba, mayor of Milwaukie

"Partnership and collaboration with Portland General Electric is a critical part of our efforts to combat climate change and to make our electricity grid and neighborhoods more resilient, livable and efficient. The City of Portland is excited to learn about smart grid implementation alongside PGE in this important pilot program." —Ted Wheeler, mayor of Portland

For more information, visit PortlandGeneral.com/SmartTestBed.

About Portland General Electric Company: Portland General Electric (NYSE: POR) is a fully integrated energy company based in Portland, Oregon, serving approximately 883,000 customers in 51 cities. For more than 125 years, PGE has been delivering safe, affordable and reliable energy to Oregonians. Together with its customers, PGE has the No. 1 voluntary renewable energy program in the U.S. With approximately 2,900 employees

across the state, PGE is committed to helping its customers and the communities it serves build a clean energy future. For more information, visit PortlandGeneral.com/CleanVision.

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