



FACT SHEET

GRID RESILIENCE AND INNOVATION PARTNERSHIPS PROGRAM

Established by the Bipartisan Infrastructure Law, the U.S. Department of Energy's Grid Deployment Office is administering a historic \$10.5 billion investment via the Grid Resilience and Innovation Partnerships (GRIP) program to enhance grid flexibility, improve the resilience of the power system against growing threats of extreme weather and climate change, and ensure American communities have access to affordable, reliable, clean electricity when and where they need it.

ACCELERATING AND DEPLOYING GRID-EDGE COMPUTING

This project will accelerate the transformation of electric utility infrastructure by deploying smart grid chips (SGCs) capable of enabling grid-edge computing for approximately 10% of Portland General Electric Company's (PGE) distribution system. The SGC solution includes field grid devices incorporating a high-end computing processor and a suite of software platforms. The project supports PGE's ambitious clean energy targets by deploying an innovative technical approach that helps to optimize and integrate distributed energy resources (DERs), all while supporting the delivery of community benefits to historically underserved communities by enhancing and enabling programs that utilize grid-edge data.

Anticipated Outcomes and Benefits

- › Approximately 90,000 SGCs deployed by the end of 2025 while targeting areas with high DER penetration.
- › Real-time data and modeling to accelerate interconnection for even more DERs, including renewable energy resources.
- › Enhanced grid resiliency by training artificial intelligence models to predict pre-outage conditions.
- › Edge computing and advanced algorithms that PGE will leverage to make real-time decisions to help accelerate and transform the ability of PGE's distribution system to meet its clean energy targets.
- › Software development use cases that mine all the rich data delivered by SGCs.
- › More reliable and resilient power with greater clean energy deployment for **disadvantaged communities** (DACs), which currently face challenges including legacy pollution, workforce development barriers, poor health outcomes, low-to-moderate incomes, and climate change risks.
- › Commitment to install at least 40% of SGCs in DACs.
- › Reductions in air pollution associated with fossil fuels and peaker plants by enabling PGE to utilize DERs to source a greater percentage of its peak load.
- › Builds on long history of working with unions, with the first collective bargaining agreement dating back to 1913. The project also supports union jobs with nearly one-quarter of employees covered under collective bargaining agreements with the International Brotherhood of Electrical Workers (IBEW) Local 125.
- › Commitment to prioritizing minority-owned IBEW Local 125 signatories from DACs for project work, investing in diversifying STEM pipeline, and increasing supplier diversity.
- › Updating pre-apprenticeship and apprenticeship training courses, in partnership with union members, to incorporate training for new technology to manage the grid more efficiently.

PROJECT DETAILS

- › **Project:**
Accelerating and Deploying Grid-Edge Computing
- › **Applicant/Selectee:**
Portland General Electric Company
- › **GRIP Program:**
Smart Grid Grants (Bipartisan Infrastructure Law, Section 40107)
- › **Federal cost share:**
\$50,000,000
- › **Recipient cost share:**
\$58,402,842
- › **Project location:**
Oregon
- › **Project type:**
Grid Capacity and Renewable Integration

HELPFUL LINKS

- › [Grid Resilience and Innovation Partnerships Program](#)
- › [About the Grid Deployment Office](#)