



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.

MODERNIZING INFRASTRUCTURE TO SUPPORT GRID MANAGEMENT AND DECARBONIZATION

As clean and distributed energy resources (DERs) are deployed, grid operators will need new tools for planning, managing, and controlling them. The Analytics and Control for Driving Capital Efficiency (ACDC) project will expand the critical grid management capabilities needed to responsibly and effectively steward the energy transition. By boosting Dominion Energy Virginia's DER management capabilities, this project will increase control and improve strategic asset planning and deployment through more coordinated interconnection.

Anticipated Outcomes and Benefits

Dominion Energy Virginia anticipates a substantial investment in decarbonization infrastructure, including an approximately \$10 billion investment in offshore wind. This project will adapt infrastructure to interact with technology and customers at the grid edge, enabling real-time grid visualization and advanced grid management while ensuring a variety of community benefits, including:

- › Dynamic performance monitoring will reduce approximately 500 outages per year across the grid, including in **disadvantaged communities** (DACs), and enable up to \$70 million of clean generation to reach the grid that would otherwise be curtailed and replaced with more costly generation.
- › Deploying the world's largest dynamic line ratings project to allow Dominion Energy Virginia's operators to more effectively manage some of the growing transmission capacity constraints in PJM's service territory (which has seen a 200% to 500% load increase on certain circuits in less than three years).
- › Deploying an open-source grid-forming inverter and a 2 to 4 MW BESS (Battery Energy Storage System) for a rural community. These deployments will lay the groundwork for similar projects across the utility's service territory, as well as provide insights for the PJM and Federal Energy Regulatory Commission rulemaking processes.
- › Improving grid planning by collecting real-time electrical grid data.
- › Increasing network capacity to account for substantial increases in electric loads.
- › Controlling and preparing for voltage and frequency fluctuations caused by renewable energy resources being added to the electrical grid.
- › Deploying devices and control capabilities to the remaining three-phase 34.5 kV distribution network, enabling the integration of renewable energy sources at rural customer sites in Virginia and North Carolina while equipping operators with intelligent grid devices.
- › Engaging communities in the earliest stages of project development, including DACs, environmental justice communities, tribal governments, local municipalities, and local residents.
- › Committing to work with academic institutions to increase the clean energy jobs pipeline and provide job training for individuals, including a deeper focus on military talent.

PROJECT DETAILS

- › **Project:**
Analytics and Control for Driving Capital Efficiency Project
- › **Applicant/Selectee:**
Virginia Electric and Power Co. (Dominion Energy Virginia)
- › **GRIP Program:**
Smart Grid Grants (Bipartisan Infrastructure Law, Section 40107)
- › **Federal cost share:**
\$33,654,095
- › **Recipient cost share:**
\$33,654,095
- › **Project Location:**
Virginia and North Carolina
- › **Project type:**
Grid Capacity and Renewables Integration

HELPFUL LINKS

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

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