



Biden-Harris Administration Invests \$26 Million to Support a Modern, Reliable, and Resilient American Clean Energy Grid

Selected Projects Across 13 States and Puerto Rico Will Demonstrate How Solar, Wind, and Storage Can Protect and Strengthen America's Power Grid

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WASHINGTON, D.C. — As part of President Biden's [Investing in America](#)^{ca} agenda, the U.S. Department of Energy (DOE) today announced \$26 million for

eight selected projects to demonstrate how solar, wind, storage, and other clean energy resources can support a reliable and efficient U.S. power grid. Funded by the President's Bipartisan Infrastructure Law, the projects will deploy innovative clean energy technologies at 15 sites across the country to build and support a resilient grid that automatically adjusts to changing demands—providing Americans everywhere peace of mind in the event of interruptions to the power grid. The projects announced today support the Biden-Harris Administration's historic efforts to accelerate the development of a decarbonized grid, expand the adoption of affordable clean energy, and strengthen America's energy security while combatting the climate crisis.

"As threats and climate risks to America's energy infrastructure continue to evolve, DOE is laser-focused on ensuring our power grid is strong and reliable as it incorporates a historic level of renewable resources," said **U.S. Secretary of Energy Jennifer M. Granholm**. "Thanks to President Biden's Investing in America agenda, today's announcement will help build a resilient grid that the American people can trust to deliver reliable, affordable, clean electricity to their homes and businesses."

The [Solar and Wind Grid Services and Reliability Demonstration program](#) will fund eight projects at 15 sites in 13 states and Puerto Rico. Research teams consisting of utilities, laboratories, universities, and industry will test how wind and solar plants can more reliably transmit clean energy and protect against disruptions to the network of high-voltage power lines that carry electricity from centralized generation sources, known as the bulk power system. The projects will also monitor and test controls that allow the grid to restore power quickly and efficiently after blackouts so that it can continue to supply energy to communities nationwide.

DOE's National Renewable Energy Laboratory [found](#) that [wind and solar energy could provide as much as 80% of generation](#) on a grid run on 100% clean electricity. By helping build a modern, clean electric grid, these projects support the President's vision of an equitable clean energy future and are critical to achieving the Administration's ambitious goal to reach net-zero carbon emissions by 2050. The selected projects are:

- **Consolidated Edison (New York, NY):** This project will demonstrate transmission protection strategies in New York and Virginia that will result in fewer outages as the grid moves to inverter-based generation. The success of this project will demonstrate to the transmission system

protection, operation, and planning industries that the grid can operate safely and reliably with any mix of energy sources—including up to 100% inverter-based resource generation. (Award Amount: \$3 million)

- **Electric Power Research Institute (Knoxville, TN):** This project will work with multiple balancing authorities and utilities to perform demonstrations of grid services at sites across Michigan, Nebraska, Texas, New Mexico, and California. The team aims to demonstrate the capability of these technologies to provide a collection of [grid services](#) reliably and over a period longer than what has been demonstrated in the past. (Award Amount: \$3.4 million)
- **General Electric Renewable Energy (Schenectady, NY):** This project will demonstrate grid-forming inverters at the Great Pathfinder wind plant in Iowa. This demonstration will encourage confidence in grid operators to consider wind power plants as a more flexible stand-alone resource that can provide grid services over extended periods of time. (Award Amount: \$3.5 million)
- **National Renewable Energy Laboratory (Golden, CO):** This project aims to further the understanding of the transmission grid's behavior in response to faults in scenarios with high levels of inverter-based resource (IBRs). The team will demonstrate strategies to protect the grid in Hawaii from rapid changes in generation, and develop new fault detection methods that will result in more reliable transmission. (Award Amount: \$2 million)
- **Pacific Gas and Electric Company (Oakland, CA):** This project will develop an automated analysis tool for utility engineers to address rapid changes in the electric grid, such as increased solar generation. If successful, the tool can be incorporated in commercial platforms used by transmission utilities and system operators nationwide. (Award Amount: \$2.5 million)
- **Portland General Electric Company (Portland, OR):** This project will demonstrate grid-forming inverters at the Wheatridge Renewable Energy Facility in Oregon, North America's first energy center to combine wind, solar, and energy storage systems in one location. If successful, this will be the first bulk power system-connected grid-forming hybrid power plant in

the United States and will encourage utilities to consider including grid-forming capabilities in their own interconnection requirements. (Award Amount: \$4.5 million)

- **University of Illinois at Chicago (Chicago, IL):** This project uses an innovative modeling, protection, and control framework to ensure reliable operation of a bulk power system with 100% of its generation coming from IBRs, which have much different fault characteristics than traditional synchronous generators. This project will demonstrate protection strategies in Illinois and Puerto Rico that will result in fewer outages. (Award Amount: \$3 million)
- **Veritone, Inc. (Denver, CO):** This project aims to boost confidence in renewable power using Veritone’s artificial intelligence-powered distributed energy resource management system (iDERMS) technology. The AI-powered platform will be used to forecast, optimize, and control IBRs on New Mexico’s power grid in real-time. (Award Amount: \$3.9 million)

[DOE has long invested in research](#) in [grid services](#) and forward-looking technologies like [grid-forming inverters](#) and [generators](#); those new capabilities need to be demonstrated at a broader scale to increase their adoption and build trust as grid operators face growing challenges to ensure reliable electric supply as the power grid incorporates cleaner energy resources. Learn more about the DOE [Solar Energy Technologies Office](#) and [Wind Energy Technologies Office](#).

This announcement is part of President Biden’s [Investing in America agenda](#)²⁷, which is growing the American economy from the bottom up and middle-out – from rebuilding our nation’s infrastructure, to driving over \$435 billion in private sector manufacturing and clean energy investments in the United States, to creating good paying jobs and building a clean-energy economy that will combat climate change and make our communities more resilient.

Selection for award negotiations is not a commitment by DOE to issue an award or provide funding. Before funding is issued, DOE and the applicants will undergo a negotiation process, and DOE may cancel negotiations and rescind the selection for any reason during that time.

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