

## PEES Power Systems

# Grid modernization dili



## Overview

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Our portfolio of work will help integrate all sources of electricity better, improve the security of our nation's grid, solve challenges of energy storage and distributed generation, and provide a critical platform for U.S. competitiveness and innovation in a global energy economy. The Grid Modernization Initiative (GMI) works across the U.S. Department of Energy (DOE) to create the modern grid of the future. What is GMI?

Our extensive, reliable power grid has fueled the U.S. economy. NLR drives affordable, reliable, and secure power grids at all scales by developing and applying innovative technologies, tools, and technical expertise. Powered By is a monthly webinar series featuring an NLR tool that solves real-world power grid challenges. Integrating energy resources into electric power system development and evaluating grid technologies and integrated systems and demonstrations. History: Beginning in 2015, GMI has leveraged the expertise of DOE Offices, National Labs, and partners to conduct over \$300M in cutting-edge R&D on grid modernization topics. Integrated Vision: Focuses on a fully-integrated electricity system from generation to load, including independent. As the US Department of Energy's largest open science and energy laboratory, ORNL researchers are working with DOE and industry to develop new grid modernization technologies that will help build a resilient, modern grid of the future — one of the most critical infrastructure challenges of the 21st. Grid modernization planning starts with the state's principles and objectives and the capabilities needed to achieve them. Integrated distribution system planning can consider all of these things in the context of a holistic assessment of grid.

## Grid modernization dili

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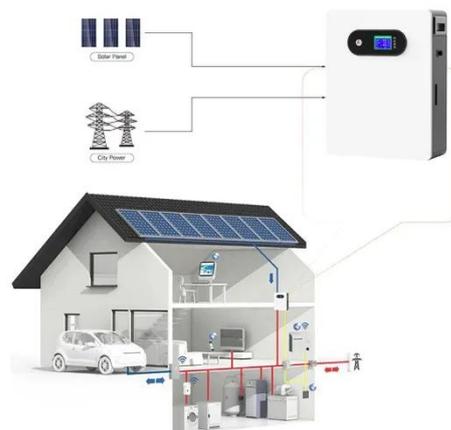
### Modernizing the U.S. Electricity Grid for Resilience, Load Growth, ...

United States is failing to proactively build the wires that allow that new electric generation to reach customers. Investments in manufacturing, data centers, and electrification .

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### Grid expansion and modernization , Deloitte Insights

To help unlock the potential of renewables and ensure a reliable, resilient grid, we consider a tri-phased scaling strategy. This strategy navigates progress in three distinct phases, each building upon the ...



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### Integrated distribution planning and grid modernization

Grid modernization focuses on replacing aging infrastructure and deploying advanced technologies for reliability, resilience, safety, and operational efficiency that also enable integration ...

## Grid Modernization Initiative Overview

The interdependency and interaction across transmission, distribution and communication systems can no longer be ignored, demanding integrated analysis of the end-to-end power grid.



## Grid Research , Grid Modernization , NLR

Energy Security and Resilience NLR develops tools and solutions to enable a more reliable, resilient, and secure electric grid. Get the latest news on our research from the Energy Systems Integration ...

## Grid Modernization Initiative

Learn more about how DOE is addressing the opportunities and challenges facing our electric grid today.



## Grid Modernization & Renewable Integration

Discover grid modernization trends, digital technologies, and renewable

integration. Learn how infrastructure upgrades create a more resilient power grid.



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## Grid Modernization Technologies

The modern grid must enable more choice and convenience for consumers. The modern grid must do all this while achieving higher standards of performance in reliability, efficiency, security, cost of service, ...



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## Grid Modernization , NLR

NLR drives affordable, reliable, and secure power grids at all scales by developing and applying innovative technologies, tools, and technical expertise. Powered By is a monthly webinar ...

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## Modernizing the Grid and Empowering Consumers

Grid modernization will require a suite of policy changes to support advancements

in grid technologies, grid management,  
and utility regulation.



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## Contact Us

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