

## European Solar and Energy Storage Solutions

# Türkiye grid modernization initiative



## Overview

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What does Türkiye's energy minister say about a 'green grid'?

Türkiye to focus on renewables, upgrade of transmission infrastructure and energy efficiency improvements Türkiye's energy minister announced plans on Monday to invest \$10 billion in the electricity grid by 2030 with the aim of establishing a 'Green Grid.'

What is the Grid Modernization Initiative?

The Grid Modernization Initiative is an effort by the U.S. Department of Energy (DOE) to meet the challenges of modernizing and upgrading our electricity infrastructure. It aims to enable a more reliable, resilient, and sustainable system.

How will smart-grid modernisation affect the energy sector?

The modernisation includes strengthening connections and investing in smart-grid upgrades. The technological improvements would include digitalising the distribution grid and increasing battery energy capacity.

How can Turkey improve its power grid?

The technological improvements would include digitalising the distribution grid and increasing battery energy capacity. Taken together, the improvements should allow Turkey's power grid to integrate an additional 60 Gigawatts of wind and solar energy capacity by 2035, CIF said, enough to power around 70 million homes for a year, it added.

Does the energy transition require continuous power grid upgrades?

According to Alparslan Bayraktar, the energy and natural resources minister, during his video speech at COP 28 in Dubai, the country's energy transition requires continuous power grid upgrades to facilitate the utilization of renewables.

## Türkiye grid modernization initiative

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### Grid Modernization Initiative , Department of Energy

The Grid Modernization Initiative (GMI) works across the U.S. Department of Energy (DOE) to create the modern grid of the future. Our extensive, reliable power grid has fueled the nation's growth since the early 1900s.

### Turning the tide: Potential of Türkiye as Europe's ally

Türkiye's advancements in green energy could foster a symbiotic relationship that benefits all parties involved. And as the EU countries, U.K. and Türkiye navigate an unpredictable global energy landscape, shared interests in energy security and sustainability emerge as critical drivers for deeper cooperation.



### Climate Investment Funds backs \$1 billion Türkiye grid upgrade ...

The Climate Investment Funds (CIF), a multilateral lending organization, announced on Thursday its commitment to support a \$1 billion initiative aimed at modernizing Türkiye's electricity grid to enable it accommodate increased renewable energy capacity.

### Turkey prepares USD 100

## billion energy transition program, USD ...

Turkey has pledged to double renewable energy generation capacity by adding 60 GW of solar and wind by 2035 and announced a plan to invest USD 10 billion in the grid. According to the World Bank, the country's entire initiative is ...



## Türkiye's Renewable Energy Grid to Expand with New \$70 Million ...

Türkiye secures \$70 million from Climate Investment Funds to enhance its renewable energy grid, expanding infrastructure, battery storage, and grid flexibility to integrate additional wind and solar capacity.

## Grid Modernization Lab Call 2023

Grid Modernization Initiative Grid Modernization Lab Call 2023 Revision Log: 1. Topic 2: a. Added language and footnote: i. "The White House released the "The United States Government National Standards Strategy for Critical and Emerging Technology" in May 2023. The National Standards Strategy cites "Automated, Connected, and



## Turning the tide: Potential of Türkiye as Europe's ally

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## The Aging US Power Grid: Navigating Toward Modernization

Initiatives like the Grid Resilience and Innovation Partnerships Program under the Bipartisan Infrastructure Law allocate substantial funding--up to \$3.5 billion across 44 states--to enhance grid resilience and modernization efforts. Twenty-five of the 58 Round One GRIP awards for smart grid, resilience, or innovation projects were awarded to



## About the Grid Modernization Initiative

The Grid Modernization Initiative (GMI) works across the U.S. Department of Energy (DOE) to create the modern grid of the future. A modern grid must have: Greater RESILIENCE to hazards of all types. Improved RELIABILITY for ...

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electricity



## FACT SHEET: Biden-Harris Administration Launches Federal-State

Building on the Biden-Harris Administration's legislative accomplishments and executive actions in tackling the grid modernization challenge, the initiative aims to bring together states

## Grid Modernization Initiative

Department of Energy's Grid Modernization Lab Call (2019) 5 o Impact on the Bulk Power System: Proposals must focus on the bulk power system impacts. Any proposals including DER must show impact on the bulk power system. o Demonstrated Near-term Success: To increase likelihood of industry implementation and increase potential impact, it is critical ...



## The United States of Grid Modernization

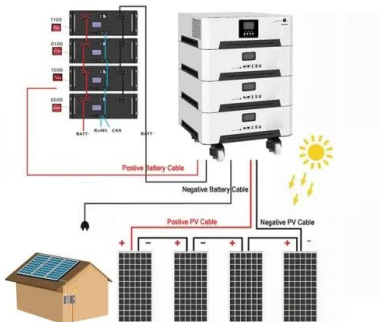
Initiatives such as the Infrastructure Investment and Jobs Act (IIJA), the Inflation Reduction Act (IRA), and the CHIPS and Science Act have ignited new discussions about the future of energy. Grid modernization is the process of making our networks "smarter" and more



resilient through the use of cutting-edge technologies, equipment

## CIF Backs \$1 Billion Upgrade for Turkey's Renewable Energy Grid

The Climate Investment Funds (CIF) has announced a significant commitment to support Turkey's transition to renewable energy by backing a \$1 billion initiative aimed at upgrading the country's electricity grid. This investment is crucial for enhancing Turkey's capacity to integrate renewable energy sources, particularly solar and wind power.



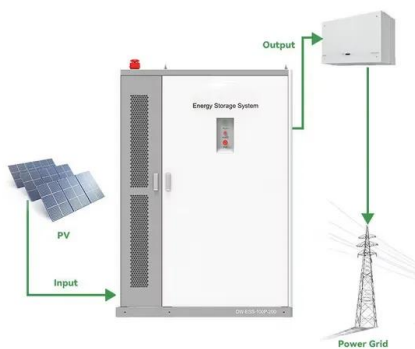
## Grid Modernization Initiative

of a new Grid Modernization Multi -Year Program Plan (MYPP); and o Supporting regional, state, and local groups of stakeholders from industry, academia, communities, and local regulators, that will help translate the tools and knowledge from Grid Modernization R& D into actual deployments of modernized grids. 11

## Grid Modernization Initiative

tools, and frameworks to help enable grid modernization adoption. oThis presentation addresses: oGrid of the Past/Future oGrid Modernization Initiative (GMI) oGrid Modernization Multi -Year Program Plan (MYPP)

oGrid Modernization Laboratory Consortium (GMLC)  
 o\$220M Grid Modernization Lab Call  
 oAccomplishments to date  
 oFuture



## Grid Modernization Initiative

Grid Modernization Initiative Doug Hollett, Office of Energy Efficiency and Renewable Energy . October 14, 2015 . Pioneer Regional Partnerships are early-stage public/private collaborative projects that address specific near-term grid modernization issues important to that region and its stakeholders. The GMLC submitted 11 proposed

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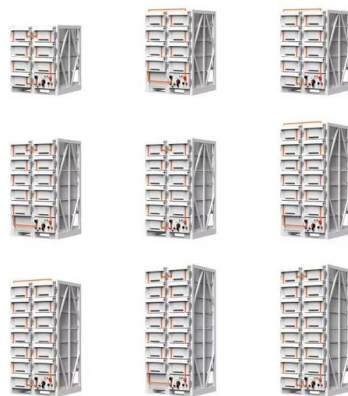
## Turkey seeks World Bank funds to upgrade power grid

Turkey is in talks with the World Bank to access funding to strengthen and extend the country's energy transmission grid, part of broader plans to quadruple renewable energy generation capacity and transition away from fossil fuel dependency.



## GRID MODERNIZATION INITIATIVE PEER REVIEW

GRID MODERNIZATION INITIATIVE PEER REVIEW  
 GMLC 1.4.29 - Future Electric Utility Regulation  
 LISA SCHWARTZ, BERKELEY LAB 5/11/2017 April  
 18-20, 2017 Sheraton Pentagon City - Arlington,  
 VA Institutional Support. Institutional Support  
 5/11/2017 2 Project Description



## Grid Modernization Initiative

oGrid Modernization Initiative (GMI) oGrid  
 Modernization Multi -Year Program Plan (MYPP)  
 oGrid Modernization Laboratory Consortium  
 (GMLC) o\$220M Grid Modernization Lab Call  
 oAccomplishments to date oFuture Direction.  
 12/15/2016 2. The 20. th. Century Grid.

## Four Keys to a Successful Grid Modernization Program

An important and often overlooked aspect of a grid modernization initiative is to define an approach for handling the influx of grid data generated by the investments--consider AMI, which typically replaces the monthly meter readings collected through analog infrastructure with up to 105,000 digital readings per year.



Transmitting and storing



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