



U.S. DEPARTMENT OF
ENERGY

Grid Deployment Office Programs Conductor



Grid Deployment Office

Mission Statement: The Grid Deployment Office (GDO) works to provide electricity to everyone, everywhere by maintaining and investing in critical generation facilities to ensure resource adequacy and improving and expanding transmission and distribution systems to ensure all communities have access to reliable, affordable electricity.

Power Generation Assistance Division

- The Power Generation Assistance Division works with existing generation facilities to ensure resilience and reliability.

Transmission Division

- The Transmission Division supports innovative efforts in transmission reliability and clean energy analysis and programs, and energy infrastructure and risk analysis in support of the Administration's priorities to enhance grid resilience.

Grid Modernization Division

- The Grid Modernization Division oversees activities that prevent outages and enhance the resilience of the electric grid.

GDO BIL Programs

Program Name (DOE)	Program Goal
Transmission Facilitation Program	<ul style="list-style-type: none">• Transmission deployment of new and upgrading high-capacity transmission lines; first solicitation on anchor customer/capacity contracts for projects near term
Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening (40101 "Grid Resilience Grants")	<ul style="list-style-type: none">• Grid Resilience and Hardening Investments tied to state & tribal led objectives, criteria and methods for resilience investments
Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (40103(b) "Grid Innovation Program")	<ul style="list-style-type: none">• Large infrastructure projects, including transmission, distribution and storage. Partnership between eligible entities and project/infrastructure developers
Deployment of Technologies to Enhance Grid Flexibility (40107 "Smart Grid Grants")	<ul style="list-style-type: none">• Deployment of technology at scale, prioritization of technologies that increase transmission capacity, mitigate wildfires, manage load /electrification of “edge devices”, and incorporate secure communications / cybersecurity

Transmission Facilitation Program (TFP)

\$2.5 Billion in revolving fund borrowing authority

- The TFP is a **revolving** fund program that will provide Federal support to overcome the financial hurdles in the development of large-scale new transmission lines, upgrading of existing transmission, and the connection of microgrids in select States and U.S. territories.
 - First RFP will focus on projects that can **begin construction by year-end 2027**
 - Best fit for projects that are nearly "shovel ready" and are in regions that rely on firm point-to-point transmission
 - TFP designed for projects that would otherwise not be constructed without support
 - Will NOT include projects that already are fully subscribed or have a fully allocated source of revenue

Financing Tools

- Capacity Contracts
 - Buy up to 50% of planned line rating for up to 40 years
 - Sell capacity contract to recover costs
- Loans
- Public Private Partnerships
 - Within a national interest electric transmission corridor (NIETC)
 - Necessary to accommodate an increase in electricity demand across more than one state or transmission planning region

TFP (continued)

- Eligible Projects
 - New corridor: 1,000 MW or more
 - Existing corridor: Upgrade or new line -- 500 MW or more
 - Microgrid: Project connects an isolated microgrid to an existing transmission, transportation, or telecommunications infrastructure corridor located in Alaska, Hawaii, or a territory of the United States

State, Territory, and Tribal Formula Grants

\$2.3 Billion (approximately \$459 million per year for FY 22-26) – FY22 applications open now

- Formula based on population, area, probability, severity of disruptive events and expenditure on mitigation efforts.
- States, Territories, and Tribes via annual formula grant
 - 15% cost match
- State, Territories, and Tribes may subgrant to eligible entities for projects
 - 100% cost match for subgrantee
- States, Territories, and Tribes may subgrant to eligible entities for projects
 - 100% cost match for subgrantee
- FY22 Grants range:
 - States: \$1.5M - \$33.8M
 - Territories: \$700K - \$3.7M
 - Tribes: \$30K - \$2.1M

Goals & Objectives

- Demonstrate measurable improvements in **energy resilience** to all hazards in the United States and mitigate climate-related risk,
- Invest in **modernized grid infrastructure** that can enable consumer access to lower-cost energy and accommodate increased electrification, increased penetrations of variable renewable electricity and distributed energy resources, and other evolving system needs over the coming decades,
- Invest in **clean energy** and **decarbonization solutions** to achieve a carbon-free power sector by 2035 and net-zero greenhouse gas emissions economy-wide by 2050, and
- Create **good-paying jobs with the free and fair choice to join a union.**

Eligible Investments

- Utility pole management
- Hardening of power lines, facilities, substations, of other systems
- Undergrounding of electrical equipment
- Replacement of old overhead conductors and underground cables
- Relocation of power lines or the reconductoring of power lines with low-sag, advanced conductors
- Vegetation and fuel-load management
- Weatherization technologies and equipment
- Fire-resistant technologies and fire prevention systems
- Monitoring and control technologies
- Use or construction of distributed energy resources for enhancing system adaptive capacity during disruptive events, including microgrids and battery-storage subcomponents
- Adaptive protection technologies
- Advanced modeling technologies

Resilience measures that are **NOT** allowed under this provision includes:

Construction of new electric generating facility; or large-scale battery storage facility that is not used for enhancing system adaptive capacity during disruptive events; or cybersecurity

Grid Resilience and Innovation Program (GRIP)

- These programs will be released as one funding opportunity but provide opportunities for various applications to various entities including states, tribes, utilities, and industry.
 1. Utility & Industry Grid Resilience Grants (Competitive)
 2. Grid Innovation Program (Competitive)
 3. Smart Grid Demonstration Grants (Competitive)

Request for Information (RFI) and Draft Funding Opportunity Announcement (FOA) are out now for comment.

FOA release expected mid-November for FY22 and FY23 funding (~\$4.2 billion).

1. Competitive Industry/Utility Grants

**\$2.5 Billion Total (\$500 million/yr FY 22-26)
FY 22&23 – Up to \$1B**

- Eligible Entities
 - Grid operators,
 - Storage operators
 - Electricity generators
 - Transmission owners or operators
 - Distribution providers
 - Fuel suppliers
 - Others deemed eligible by the Secretary
- Capped at the amount the eligible entity has spent in the previous 3 years on hardening efforts
- Small Utility Set Aside (for those selling no more than 4 million MWh of electricity per year)
 - Must match 1/3 of grant amounts received
 - At least 30% must go to small utilities
- Cost Match = 100%

Prioritize projects generating the greatest community benefit in reducing the likelihood and consequences of disruptive events.

2. Grid Innovation Program

**\$5 Billion (\$1B/year for FY 22–26)
FY 22&23 – Up to \$2 billion**

- Demonstrate innovative approaches to transmission, distribution, and storage to harden and enhance resilience and reliability; and
- Demonstrate new approaches to enhance regional grid resilience implemented through States by public and rural electric cooperative entities on a cost-shared basis
- Eligible Entities
 - a State;
 - a combination of 2 or more States;
 - an Indian Tribe;
 - a unit of local government;
 - a public utility commission

Cost Share: 50% Minimum

Grid Innovation Program (continued)

- **Primary Objectives:**

- Ensure reliable grid operations
- Improve overall grid resilience
- Enhance collaboration between and coming eligible entities and private and public sector owners and operators on grid resilience
- Contribute to the decarbonization of the electricity and broader energy system
- Provide enhanced system value, improve current and future system cost-effectiveness and deliver economic benefits

- **Areas of Interest for Applications:**

- Transmission capacity enhancements
- Advanced distribution grid assets and functionality
- Combined systems demonstrating innovative approaches

3. Smart Grid Grants

**\$3 Billion Total (\$600 million/yr FY 22-26)
FY 22&23 - Up to \$1.2 billion**

- Grants to support the deployment of technologies to enhance grid flexibility
- Open Eligibility
 - Institutions of higher education
 - For-profit entities
 - Non-profit entities
 - State and local governmental entities, and tribal nations
- Cost Share
 - At least 50% of grant

Goals & Objectives

- **Increase Transmission Capacity**
 - Grid Enhancing Technologies
- **Mitigate Wildfires**
 - Asset Management Technologies
- **Load Management/Electrification of “edge devices”**
 - Managed Charging/Grid Infrastructure and autonomous control
- Incorporate **Secure Communications/Cybersecurity**

The Smart Grid Investment Grant (SGIG) program was previously funded under the Recovery Act 2009, which awarded \$3.5 Billion of grants during FY 2009 & 2010 for activities through FY 2015.

Smart Grid Grants (continued)

- Eligible Projects

- **Increasing transmission capacity** and operational transfer capacity through grid enhancing technologies such as **dynamic line rating, flow control devices, advanced conductors, and network topology optimization**, to improve system efficiency and reliability.
- **Improving the visibility of the electrical system to grid operators**, to help quickly rebalance the electrical system with autonomous controls, through **data analytics, software, and sensors**.
- Enhancing **secure communication and data flow** between distribution components, through investments in **optical ground wire, dark fiber, operational fiber, and wireless broadband communications networks**.
- **Aggregation and integration of distributed energy resources** and other “grid-edge” devices to provide system benefits, such as renewable energy resources, electric vehicle charging infrastructure, vehicle-to-grid technologies and capabilities, and smart building technologies.
- Enhancing interoperability and data architecture of systems that **support two-way flow of both electric power and localized analytics** to provide information between electricity system operators and consumers.
- **Anticipating and mitigating the impacts of extreme weather or natural disasters** on grid resilience, including investments to increase the ability to redirect or shut of power to minimize blackouts, prevent wildfires, and avoid further damage.

Additional DOE transmission funding available

IRA: Transmission Facility Financing within the Grid Deployment Office

- Provides \$2 billion in direct loan authority for facility financing.
- For projects designated by the Secretary to be necessary in the national interest under section 216(a) of the Federal Power Act

IRA Transmission Siting Grants within the Grid Deployment Office

- Grants to siting authorities and other governmental bodies to facilitate and accelerate the siting and permitting of high voltage interstate and offshore transmission projects.

Loan Programs Office

- Through Title 17 LPO has \$40 Billion in loan authority, for which innovative transmission expansion projects and emerging technologies (including HVDC deployment) are eligible.
- Through Sec. 1706 LPO has \$250 Billion in loan authority to retool, repower, repurpose or replace energy infrastructure (including transmission) that has ceased operations or enable operating energy infrastructure to avoid air pollutants.

Western Area Power Administration Transmission Infrastructure Program

- \$3.25 Billion in debt financing/development assistance for qualifying transmission projects with at least one terminus in WAPA's 15 state footprint and that facilitate delivery of renewable energy

Current Status & Timeline

- Transmission Facilitation Program
 - First round solicitation available Fall '22
- Grid Resilience Formula Grants
 - RFI closes 3/31/23
 - Funds disbursed on a rolling basis
- Grid Resilience & Innovation Programs (GRIP)
 - RFI open for comment 8/30/22 - 10/14/2022
 - RFP open Fall '22
 - Grid Resilience Utility & Industry Competitive Grants – 40101(c)
 - Grid Innovation Program - 40103(b)
 - Smart Grid Grants - 40107
- Loan Programs Office Transmission Loans
 - Open for Applications
- WAPA Transmission Infrastructure Program (TIP)
 - Open for Applications
- Transmission Facility Loans (Inflation Reduction Act)
 - TBD
- Transmission Siting Grants (Inflation Reduction Act)
 - TBD