U.S. DEPARTMENT OF ENERGY

October 2022

Bipartisan Infrastructure Law and Inflation Reduction Act Program and Opportunities

Grid Deployment Office

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.

Hydroelectric Incentive Programs

Hydroelectric Program	Funding Amount	Next Milestones
Section 242 Hydroelectric Production Incentives Program: Adding power to nonpowered dams and generation to existing facilities	$125 million; capped at $1 million per facility	• Provides funding based on generation from hydropower development at non-powered dams (Annual appropriations since 2014).
Section 243 Hydroelectric Efficiency Improvement Incentives Program: Improving existing hydropower facility efficiency	$75 million; capped at 30% federal funds toward improvement, not more than $5 million to a single facility in a fiscal year	• Improving generation efficiency by at least 3 percent (enacted under the original EPAct2005, but unfunded until now).
Section 247 Maintaining and enhancing existing hydropower through Grid Resiliency, Dam Safety, and Environmental Improvements	$553 million; capped at 30% federal funds of improvement, not more than $5 million to any facility in a fiscal year	• Focuses on improvements in three areas: ○ Improving Grid Resiliency ○ Improving Dam Safety ○ Environmental Improvements

Civil Nuclear Credit Program

Program Goals and Funding

- **Goal**
  - Prevent premature retirements of existing commercial nuclear reactors due to economic factors.
- **Funding:**
  - Bipartisan Infrastructure Law appropriated $6B total over five years, available until spent or FY2031.
  - Move to annual application process starting in first quarter FY23.

Program Eligibility and Requirements

- **Certify reactors for program eligibility**
  - Competes in competitive electricity market
  - Economic factors
  - Emissions impact
  - Domestic fuel content
  - Post-award period operations plan
  - Additional information- workforce, community engagement
  - NRC assurance
- **Allocate credits to certified reactors via an auction**
- **Conduct audits, with possible recapture of credits**

Transmission Facilitation Program (TFP)

TFP is $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:

1. **Capacity Contracts**
   - **Buy up to 50% of planned line rating for up to 40 years**
   - **Sell capacity contract to recover costs**
2. Loans
3. 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

Transmission Facilitation Program (40106): Scope and Priorities

Eligible project:

- **Construction** of a new or replacement transmission line of at least 1000 megawatts;
- **Upgrade** of an existing transmission line or construction of a new transmission line in an existing transmission, transportation, or telecommunication infrastructure corridor of at least 500 megawatts; or
- **Connection** of an isolated microgrid to an existing transmission, transportation, or telecommunications infrastructure corridor located in Alaska, Hawaii, or a U.S. territory.

Project prioritization:

- Use **technology that enhances** the capacity, efficiency, resilience, or reliability of an electric power transmission system, including the use of advanced technology;
- Improve the **resilience and reliability** of an electric power transmission system;
- Facilitate **interregional transfer capacity** that supports strong and equitable economic growth; and
- Contribute to national or subnational goals to **lower electricity sector greenhouse gas emissions.**

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

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, Energy Infrastructure Reinvestment Program 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

Grid Resilience Funding Available through BIL

Formula Grants	Funding Amount	Next Milestones
Grid Resilience Formula Grants Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening (Sec. 40101(d))	$2.5 billion	• Application open until March 31st, 2023
GRIP Program	**Funding Amount**	**Next Milestones**
Grid Resilience Industry Grants Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening (Sec. 40101(c))	$2.5 billion	• RFI/draft FOA for utilities and industry competitive program released in August 2022. Comment deadline was October 14, 2022
Smart Grid Grants Deployment of Technologies to Enhance Grid Flexibility (Sec. 40107)	$3 billion	• RFI/draft FOA released in August 2022. Comment deadline was October 14, 2022
Grid Innovation Program Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (Sec. 40103(b))	$5 billion	• RFI/draft FOA released in August 2022. Comment deadline was October 14, 2022

State, Territory, & Tribal Formula Grid Resilience Grants

$2.5 Billion (approximately $500 million per year for FY 22-26)

- **Formula based on population, area, probability, severity of disruptive events and expenditure on mitigation efforts.**
- **States, Territories, and Tribes funded via annual formula grant**
  - 15% cost match
- **States, Territories, and Tribes may subgrant to eligible entities for projects**
  - 100% cost match for subgrantee
  - Small utility 1/3 cost match
- **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

FY22 applications are open now

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Resilience investments allowed under the Formula Grant

Potential Investments include:

- 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 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, and
- advanced modeling technologies

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

Construction of a 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 Partnerships (GRIP) Program

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. Smart Grid Grants (Competitive)
3. Grid Innovation Program (Competitive)

Request for Information (RFI) and Draft Funding Opportunity Announcement (FOA) comments were due October 14, 2022 and are currently under review.

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

1. Competitive Utility/Industry Grid Resilience Grants

$2.5B Total ($500 million/year FY 22-26)
FY22 and 23: Up to $1 Billion

Eligible Entities

- Grid operators
- Storage operators
- Electricity generators
- Transmission owners or operators
- Distribution providers
- Fuel suppliers

- 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.

Resilience investments allowed under Competitive Grant

Grantees must address at least three of the requirements:

- 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 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, and
- advanced modeling technologies

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

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

2. Smart Grid Grants

$3B total ($600 million/year FY 22-26)
FY22 and 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.
- **Minimum 50% non-federal cost share of total project costs**

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, which awarded $3.5 Billion of grants during FY 2009 & 2010 for activities through FY 2015

2. Smart Grid Grant Priority Investment Areas

- ***Increasing transmission capacity and operational transfer capacity***
  - 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***
  - Help quickly rebalance the electrical system with autonomous controls through data analytics, software, and sensors.
- ***Enhance secure communication and data flow between distribution components:***
  - 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.**
- ***Anticipate and mitigate the impacts of extreme weather or natural disaster on grid resiliency***
  - Investments to increase the ability to redirect or shut of power to minimize blackouts, prevent wildfires, and avoid further damage.

3. Grid Innovation Program

$5B Total ($1 billion/year for FY22–26)
FY22 and 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

Minimum 50% non-federal cost share of total project costs

3. Grid Innovation Program (continued)

Primary Objectives:

- Ensure reliable grid operations
- Improve overall grid resilience
- Enhance collaboration between 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**

Current Status & Timeline of Funding

Grid Resilience Formula Grants

- FY22 applications extended to 3/31/23
- Funds disbursed on a rolling basis

Grid Resilience & Innovation Programs (GRIP)

- RFI open for comment 8/30/22 - 10/14/2022
- FOA plans to be released late Fall ‘22
  - Grid Resilience Utility & Industry Competitive Grants – 40101(c)
  - Smart Grid Grants – 40107
  - Grid Innovation Program – 40103(b)

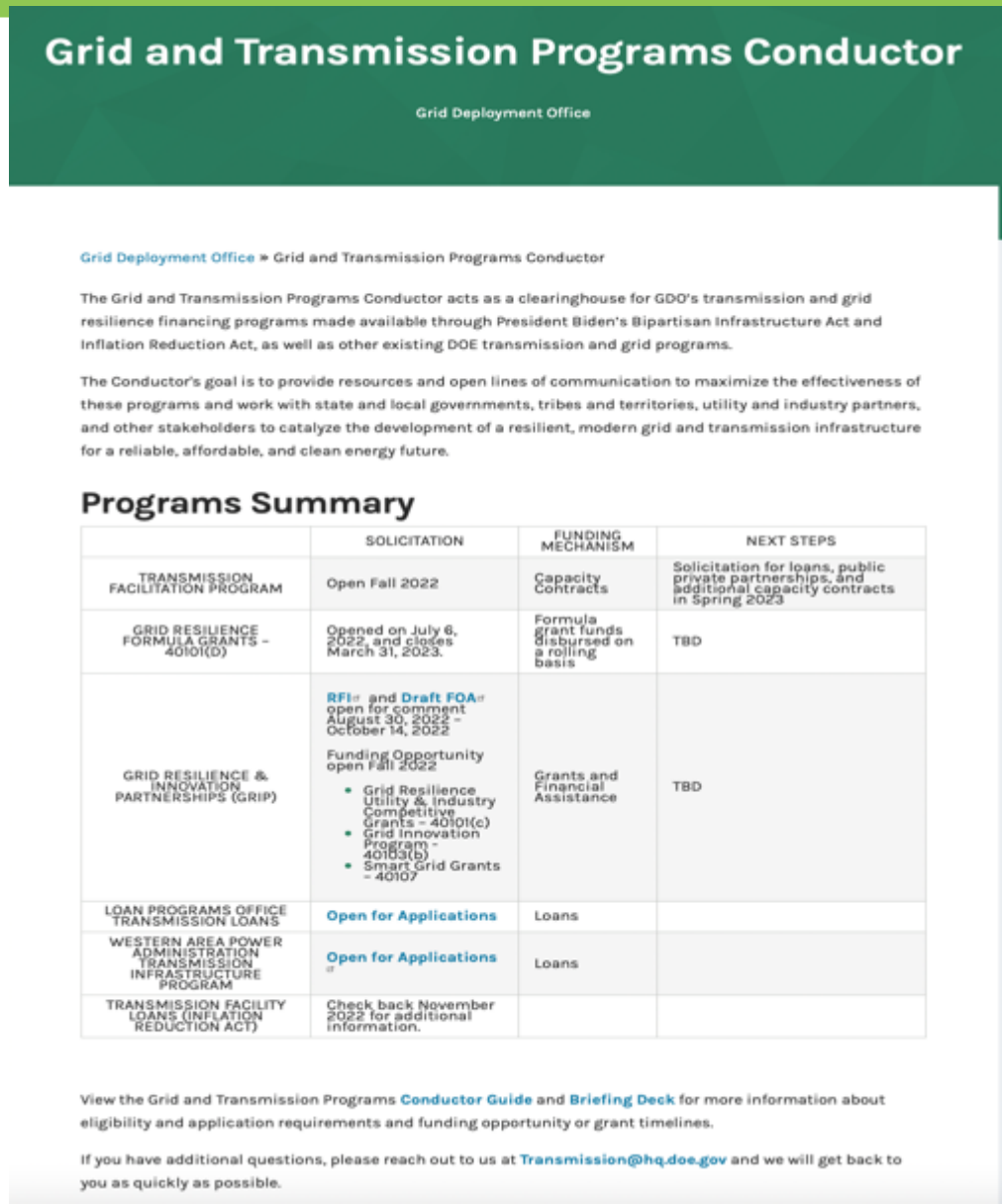
Learn More about the Grid Deployment Office

The Grid and Transmission Programs Conductor acts as a clearinghouse for GDO's transmission and grid resilience financing programs

Find information on Grid and Transmission programs within:

- Bipartisan Infrastructure Law
- Inflation Reduction Act
- And other existing DOE transmission and grid programs

https://www.energy.gov/gdo/conductor



Grid and Transmission Programs Conductor

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The Grid and Transmission Programs Conductor acts as a clearinghouse for GDO's transmission and grid resilience financing programs made available through President Biden's Bipartisan Infrastructure Act and Inflation Reduction Act, as well as other existing DOE transmission and grid programs.

The Conductor's goal is to provide resources and open lines of communication to maximize the effectiveness of these programs and work with state and local governments, tribes and territories, utility and industry partners, and other stakeholders to catalyze the development of a resilient, modern grid and transmission infrastructure for a reliable, affordable, and clean energy future.

Programs Summary

	SOLICITATION	FUNDING MECHANISM	NEXT STEPS
TRANSMISSION FACILITATION PROGRAM	Open Fall 2022	Capacity Contracts	Solicitation for loans, public private partnerships, and additional capacity contracts in Spring 2023
GRID RESILIENCE FORMULA GRANTS – 40101(D)	Opened on July 6, 2022, and closes March 31, 2023.	Formula grant funds disbursed on a rolling basis	TBD
GRID RESILIENCE & INNOVATION PARTNERSHIPS (GRIP)	RFI and Draft FOA open for comment August 30, 2022 – October 14, 2022 Funding Opportunity open Fall 2022 • Grid Resilience Utility & Industry Competitive Grants – 40101(c) • Grid Innovation Program – 40103(b) • Smart Grid Grants – 40107	Grants and Financial Assistance	TBD
LOAN PROGRAMS OFFICE TRANSMISSION LOANS	Open for Applications	Loans	
WESTERN AREA POWER ADMINISTRATION TRANSMISSION INFRASTRUCTURE PROGRAM	Open for Applications	Loans	
TRANSMISSION FACILITY LOANS (INFLATION REDUCTION ACT)	Check back November 2022 for additional information.		

View the Grid and Transmission Programs Conductor Guide and Briefing Deck for more information about eligibility and application requirements and funding opportunity or grant timelines.

If you have additional questions, please reach out to us at Transmission@hq.doe.gov and we will get back to you as quickly as possible.

Questions?