



GDO

GRID DEPLOYMENT OFFICE

Grid Resilience and Innovation Partnerships Program (GRIP)

DE-FOA-0003195 Overview

Colin Meehan, GRIP Program Manager, Grid
Deployment Office

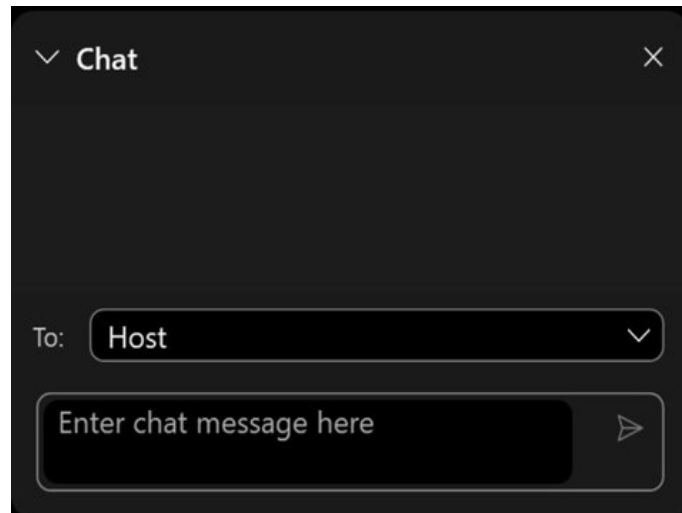
November 20, 2023



Housekeeping

Questions?

If you have technical questions – please put them in the chat box for the host.



A screenshot of a chat interface. At the top left, there is a dropdown arrow and the word "Chat". At the top right, there is a close button (an 'X'). Below this, there is a "To:" label followed by a dropdown menu showing "Host". Below that is a text input field with the placeholder text "Enter chat message here" and a send button (a right-pointing arrow) on the right side.



Webinar Notice

- ▶ None of the information presented herein is legally binding.
- ▶ The content included in this presentation is intended for informational purposes only relating to the Funding Opportunity Announcement (FOA) DE-FOA-0003195.
- ▶ Any content within this presentation that appears discrepant from the FOA language is superseded by the FOA language.





Colin Meehan
Project Manager,
GRIP Program



Anne Egger
Project Manager,
Grid Resilience



Kristen Frick
Project Manager,
Grid Innovation



Isabel Sepulveda
Project Manager,
Smart Grid Grants



KC Fussell
Metrics and Analysis
Lead, GRIP Program



Agenda

1. Q&A Information
2. GRIP Program Overview
3. Updates from prior GRIP FOA
4. GRIP Priority Areas of Investment
5. BIL Funding Available
6. Application Schedule
7. Concept Papers Overview
 - Content and Form of the Concept Paper
 - Community Benefits Planning
8. GRIP Topic Areas
 - Grid Resilience Grants
 - Smart Grid Grants
 - Grid Innovation Program
9. GRIP Contacts



Q&A Feedback

Question submission:

- ▶ Questions regarding this FOA must be submitted to: FOA3195@netl.doe.gov.
- ▶ Questions regarding specific project/concept papers cannot be currently addressed.
- ▶ All questions and answers related to this FOA will be posted on Exchange at: <https://infrastructure-exchange.energy.gov/>.



Grid Resilience and Innovation Partnerships (GRIP) Program Overview

- ▶ These programs will be released as one funding opportunity but provide opportunities for various applications to various entities including states, tribes, utilities, and industry.
 - Topic Area 1- Grid Resilience Grants
 - Topic Area 2- Smart Grid Grants
 - Topic Area 3- Grid Innovation Program
- ▶ DOE Goals for the GRIP Program
 - 1. Transform the U.S. electric grid at the transmission and distribution levels by increasing resilience in the face of extreme disruptions, enabling data-rich and flexible grid performance, and spurring innovation at all stages of project ideation and execution;
 - 2. Prioritize energy justice as an essential component of infrastructure development by dramatically altering the relationship between energy providers and their communities; and
 - 3. Catalyze and leverage private sector and non-federal public capital for impactful technology and infrastructure deployment.
- ▶ Concept papers are a required first step in the application process and due by:
 - January 12, 2024- for all Topic Areas.



Applicant-focused updates to FOA

▶ Streamlined Concept Paper process

- Form-based and shorter page limits to give applicants an easier process with less time commitment

▶ Creating opportunities for a variety of applicants

- Encouraging vendor-driven or consortia applications
- Supporting small utilities and technology vendors to apply for larger projects across multiple service territories

▶ Increased Full Application guidance

- “Elements of a Successful Application” translates lessons learned from the first funding cycle to inform applicants of common application elements among selected projects
- Technical criteria are simplified and re-organized to clarify the review process for applicants
- Additional guidance identifying priority areas of investment for the GRIP 2 funding cycle
- Consistent with the FOA, DOE may coordinate pre-selection interviews with one or more applicants, to allow applicants to provide clarification on the contents of the Full Applications and to provide DOE an opportunity to ask questions regarding the proposed project



GRIP Priority Areas of Investment (1/2)

- ▶ Projects that cover multiple utility service territories share utility best practices that increase resilience against extreme weather and adapt to the changing energy and technology landscapes.
- ▶ Projects that address substation hardening, including the automation and digitization of substations, and/or coordination with upgrades that enable distributed energy resource integration and electrification readiness.
- ▶ Projects that propose to construct new transmission infrastructure to resolve a specific and identified contingency condition that the applicant has been unable to resolve using standard investment and planning approaches.
- ▶ Projects that significantly increase the transmission capacity of existing rights-of-way using
 - advanced conductors,
 - grid-enhancing technologies, or
 - high-voltage direct current



GRIP Priority Areas of Investment (2/2)

- ▶ Projects that will deploy solutions to increasing the processing of interconnection applications and minimize the queue-related delays for clean energy and electrification loads at both the transmission and distribution levels.
- ▶ Projects that have a significant impact on the transmission system, including projects that leverage advanced transmission technologies and can reduce or remove the existing barriers, demonstrate enhanced operational flexibility or capacity, and enhance reliability.
- ▶ Projects that implement novel and replicable approaches to reducing energy burden and increasing resilience for disadvantaged communities, especially projects that increase access to cheaper generation resources and reduce the impact of infrastructure costs.
- ▶ Projects that in combination with priority investments will foster growth of a highly skilled power sector workforce and minimize workforce constraints associated with power sector innovation.



BIL Funding available through this FOA

GRIP Program & BIL Provision:	Anticipated Number of Awards	Anticipated Minimum Award Size	Anticipated Maximum Award Size**	FOA-3195 Approximate Funding (FY24-25)	Total Funding Amount (FY22-26)
Topic Area 1: Grid Resilience Grants 40101(c)	10-20*	Small utilities: \$10 Million All others: \$50 Million	All projects: \$100 Million Exceptions: \$250 Million	\$918 Million	\$2.5 Billion
Topic Area 2: Smart Grid Grants 40107	25-40	\$10 Million	All projects: \$50 Million Exceptions: \$100 million/ \$250 million	\$1,080 Million	\$3 Billion
Topic Area 3: Grid Innovation Program 40103(b)	4-40	N/A	All projects: \$250 Million Exception: \$1 Billion	\$1,820 Million	\$5 Billion

* Approximately 30% of total funding available from this FOA will be set aside for 3-6 of the anticipated number of awards that will be made to small utilities.

** Please see Section II.A. of the FOA for further information on maximum award size exceptions.



Application Submission Timing / Schedule

FOA Released: November 14, 2023

Topic Area 1 Grid Resilience Grants (40101(c))		Topic Area 2 Smart Grid Grants (40107)		Topic Area 3 Grid Innovation Program (40103(b))	
Concept Papers Due:	January 12, 2024	Concept Papers Due:	January 12, 2024	Concept Papers Due:	January 12, 2024
Response to Concept Papers:	February 2024	Response to Concept Papers:	February 2024	Response to Concept Papers:	February 2024
Full Applications Due:	April 17, 2024	Full Applications Due:	May 22, 2024	Full Applications Due:	April 17, 2024

- ▶ An entity may submit more than one Concept Paper and Full Application to this FOA, provided that each application describes a unique, scientifically distinct project and provided that an eligible Concept Paper was submitted for each Full Application.
- ▶ In response to applicant feedback from FOA-2740, additional time has been provided between FOA release and Concept Paper submission.





Concept Paper Overview

Concept Papers

Submission Information*

- ▶ All FOA-3195 Concept Papers will be submitted using the new GRIP Concept Paper Form posted on Exchange (<https://infrastructure-exchange.energy.gov/>)
- ▶ Regardless of Topic Area, all concept papers are evaluated using the same technical review criteria which can be found in section V.A.i of the FOA.
- ▶ Each concept paper will be assessed and receive a notification indicating DOE's encouragement or discouragement toward submitting full applications
 - All compliant Concept Papers may submit a full application, regardless of encourage/discourage notification

Concept Paper Compliance

- ▶ A Concept Paper is deemed compliant if it:
 - Complies with the content and form requirements in Section IV.C. of the FOA;
 - Includes all required documents
 - The Concept Paper Form is successfully uploaded in Exchange by the deadline stated in the FOA. Note: all applicants are strongly encouraged to submit their Concept Papers and Full Applications at least 48 hours in advance of the submission deadline.



Content and Form of the Concept Paper

Section	Description*
Project Overview	<ul style="list-style-type: none"> • Applicant name, project location(s), project name, project partners and GRIP Topic Area • Project budget (federal funds requested & cost share)
Project Details	<ul style="list-style-type: none"> • How the project addresses the topic area’s eligible uses and technical approaches. • The impact that DOE funding would have on the proposed project. • Replicability, readiness, and viability of project • Project management team and key partners
Project Impacts	<ul style="list-style-type: none"> • Grid-benefitting outcomes provided by the project • Impact of the project to reduce innovative technology risk and further deployment at-scale • How the project supports State, local, Tribal, community and regional resilience • Ability to lead to additional private sector investments
Community Benefits Plan (CBP)	<p>Descriptions of the approach to the four core CBP elements:</p> <ul style="list-style-type: none"> • Community and labor engagement leading to negotiated agreements • Investing in job quality and workforce continuity • Advancing diversity, equity, inclusion, and accessibility • Contributing to the Justice40 Initiative
Addendum A	<ul style="list-style-type: none"> • Applicants who are small utilities** applying to Topic Area 1 must submit the EIA Form 861

*Please see Section IV.C of the FOA for further information on Concept Papers.

**Defined as entities that sell no more than 4,000,000 MWh of electricity per year.

Community Benefits Planning

Within the concept paper, applicants must describe succinctly the approach to be taken in the Community Benefits Plan, to be further detailed in the Full Application, which should include the following four elements:

▶ Community and Labor Engagement

- Engagement with labor unions, local governments, Tribal entities, and community-based stakeholders, especially in disadvantaged communities.

▶ Investing in Job Quality and Workforce Continuity

- Creation and retention of high quality, good-paying jobs with employer-sponsored benefits and the ability to organize and bargain collectively for all phases of work.

▶ DEIA

- Incorporating and measuring diversity, equity, inclusion and accessibility goals in the project.

▶ Justice40

- Demonstration of how the project will support the Justice40 initiative, that 40% of the overall benefits of certain climate and clean energy investments must flow to disadvantaged communities.





GRIP Topic Areas

Topic Area 1: Grid Resilience Grants, BIL-40101(c)

Program Details:

- ▶ Supports activities that reduce the likelihood and consequence of impacts to the electric grid due to extreme weather, wildfire, or natural disasters
- ▶ Award maximum is capped at the amount the entity has spent over the last 3 years of resilience investments or \$100 million*, with two exceptions:
 - Projects that construct new transmission infrastructure, >69 kV that either completes a radial loop or solves an N-1 contingency issue: \$250 million
 - Projects that aggregate multiple utility service territories: \$250 million
- ▶ Small utility set aside: 30% of the Topic Area 1 funding will be set aside for small utilities, which are defined as entities that sell no more than 4,000,000 MWh of electricity per year
- ▶ Cost Share*: An eligible entity that receives a grant under this section shall be required to match 100% of the amount of the Federal grant
 - Exception for small utilities: Small utilities shall be required to match 1/3 of the Federal grant
 - Cost share must come from non-federal sources, unless otherwise allowed by law
- ▶ Eligible Entities Include**:
 - Electric grid operators
 - Electric storage operators
 - Electricity generators
 - Transmission owners or operators
 - Distribution providers
 - Fuel suppliers



***Please see Section III.B of the FOA for cost sharing requirements. **Please see Section III.A of the FOA for eligibility information.**

Topic Area 1: Grid Resilience Grants, BIL-40101(c)

Technical approaches of interest and priority investments*:

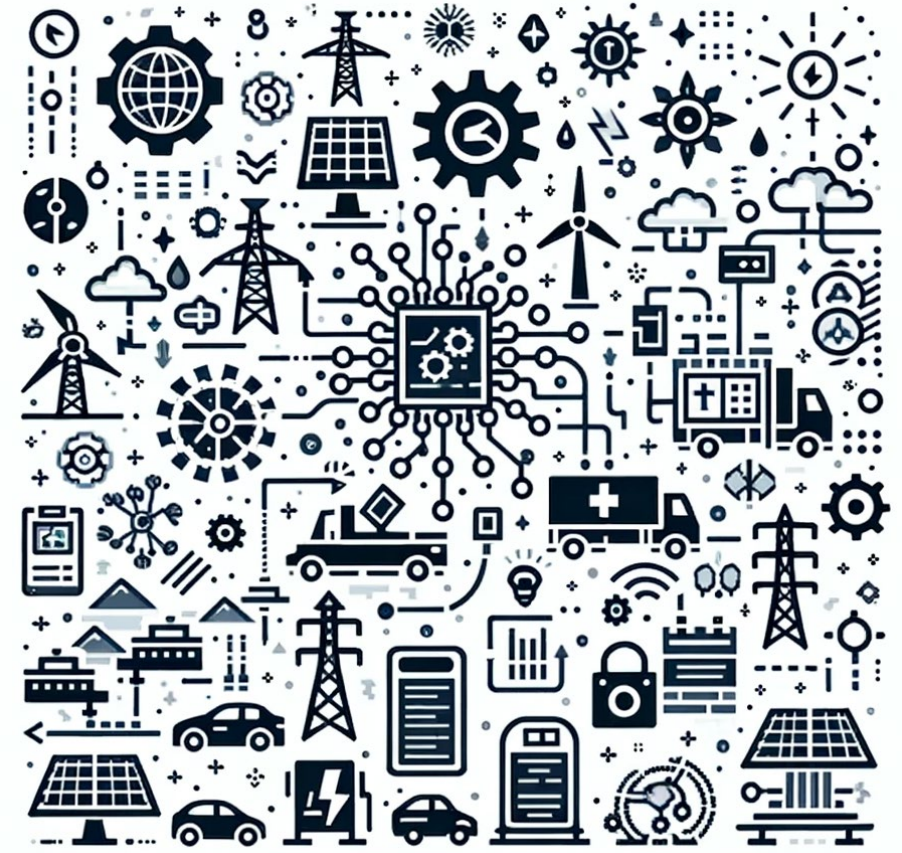
- ▶ **Improvement of system adaptivity**
 - Fault Location, Isolation, and Service Restoration (FLISR), and use of & smart reclosers and similar technologies
 - Substation hardening projects with automation
- ▶ **Projects that cover multiple utility service territories and will evolve and share utility best practices**
 - Vegetation management, pole, and equipment replacement for storm hardening, and undergrounding
 - Reconductoring and incorporating upgrades to the electric system
- ▶ **Approaches to construct new transmission (at or above 69 kV)**
 - Line completes a radial loop or solves an N-1 contingency issue
- ▶ **NOT eligible for funding under Topic Area 1**
 - New electric generating facility
 - A new large-scale battery-storage facility that is not used for enhancing system adaptive capacity during disruptive events
 - Cybersecurity



Topic Area 2: Smart Grid Grants, BIL-40107

Program Details:

- ▶ Supports activities that deploy and catalyze technology solutions that increase the flexibility, efficiency, and reliability of the electric power system, with a particular focus on advanced technologies and data-enabled system capabilities.
- ▶ Award maximum is capped at \$50 million with two exceptions:
 - Projects that aggregate multiple utility service territories: \$100 million
 - Projects that deploy advanced conductors for transmission line capacity improvement at scale: \$250 million
- ▶ Cost Share*: Must be at least 50% of the total project costs
- ▶ Eligible Entities Include**:
 - For-profit entities
 - Non-profit and not-for-profit entities
 - State and local governmental entities
 - Tribal nations
 - Institutions of higher education



***Please see Section III.B of the FOA for Cost Sharing Requirements.**

****Please see Section III.A of the FOA for Eligibility Information.**



Topic Area 2: Smart Grid Grants, BIL-40107

Technical approaches of interest and priority investments*:

- ▶ **Innovative project development on the transmission system**
 - Significantly increasing transfer capacity within existing rights-of-way through advanced conductors or High Voltage Direct Current (HVDC)
 - Fostering coordination between multiple grid operators
 - Grid enhancing technologies such as dynamic line rating, advanced power flow control, congestion management and network topology optimization
- ▶ **Strategic use of data for grid operations and planning; deriving actionable insights from grid data**
- ▶ **Facilitating the processing of interconnection applications to minimize queue-related delays for clean energy**
 - transmission and distribution systems
- ▶ **Substation level innovation that promotes system efficiency and agility given increasing penetration of intermittent generating resources and DERs**

*Please see Section I.B. of the FOA for further priority investment information.



Topic Area 3: Grid Innovation Program, BIL-40103(b)

Program Details:

- ▶ Supports activities that facilitate coordination and collaboration with electric sector owners and operators to demonstrate innovative approaches to transmission, storage, and distribution infrastructure and to harden and enhance resilience and reliability and demonstrate new approaches to enhance regional grid resilience
- ▶ Award sum is capped at \$250 million with one exception:
 - Projects that deploy significant transmission investments: \$1 billion
- ▶ Cost Share*: Must be at least 50% of the total project costs.
- ▶ Eligible Entities Include**:
 - a State
 - a combination of 2 or more States
 - an Indian Tribe
 - a unit of local government
 - a public utility commission



***Please see Section III.B of the FOA for Cost Sharing Requirements. **Please see Section III.A of the FOA for Eligibility Information.**

Topic Area 3: Grid Innovation Program, BIL-40103(b)

Technical approaches of interest and priority investments*:

- ▶ **Innovative project approaches on the transmission system, including those leveraging advanced transmission technologies and those that can reduce or remove the existing technical, economic, and/or regulatory barrier(s) necessary to accelerate wide scale transmission expansion and renewable energy interconnection.**
 - Projects that deploy significant transmission investments are eligible for the increased funding of \$1 billion.
- ▶ **Demonstration of reliable and resilient distribution system operations given high penetrations of distributed renewable generation, energy storage, and flexible customer loads as a percentage of total load, up to and including “full electrification” scenarios, such as:**
 - Electrification of industrial, commercial and other building energy needs through district energy systems
 - Black start capable systems and controls
 - Grid services from distributed, advanced grid-forming inverter-based systems
- ▶ **Behind the meter asset operations, aggregation, and coordination to provide demand response and grid services, including building systems, distributed generation, energy storage, electric vehicle fleets and others.**
- ▶ **Innovative storage projects that deploy renewable energy resources or varied energy storage in innovative and replicable ways to provide specific resilience benefits.**



Reminder: Q&A Feedback

Question submission:

- ▶ Questions regarding this FOA must be submitted to: FOA3195@netl.doe.gov.
- ▶ Questions regarding specific project/concept papers cannot be currently addressed.
- ▶ All questions and answers related to this FOA will be posted on Exchange at: <https://infrastructure-exchange.energy.gov/>.





Contact GRIP:



www.energy.gov/gdo/grid-resilience-and-innovation-partnerships-grip-program



GRIP@hq.doe.gov
FOA3195@netl.doe.gov



GDO
GRID DEPLOYMENT OFFICE

Thank you!

