



Program Narrative

GRID Enhancement Formula Grant Program for Arkansas

The Grid Enhancement Grant Program (GRID)¹, or *Preventing Outages and Enhancing the Resilience of the Electric Grid/ Hazard Hardening*, is funded through section 40101(d) of the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL).

The United States Department of Energy (DOE) will provide \$2.5 billion in formula grants for the purpose of enhancing the all-hazards hardening of America's electrical grid. Arkansas is projected to receive \$5.16 million for FY2022 and \$5.14 million for FY2023 for a total of \$10.3 Million, with additional funds anticipated, but not yet announced, for years 2024-2026. It will be administered through the Arkansas Department of Finance and Administration, per designation from the Governor of Arkansas.

This program² narrative describes Arkansas's initial program implementation plan, including 1) Grid Program Goals, 2) Objectives and Metrics, 3) Eligible Enhancement Measures, 4) Methods and Criteria Used for Selecting and Determining Subawards, 5) Distribution of Funding, and 6) Notice of Public Hearing.

GRID PROGRAM GOALS:

Program goals align with goals established by DOE as they relate to Arkansas citizens:

- To enhance and modernize America's power grid against, wildfires, extreme weather, and other natural disasters.³
- To enhance the electrical grid against disruptive events, defined as "event[s] in which operations of the electrical grid are disruptive, preventively shut off, or cannot operate safely due to extreme weather, wildfire or natural disaster".

OBJECTIVES AND METRICS:

Objective 1: Increase the Reliability of the Arkansas Electric Grid by reducing the frequency with which the grid experiences sustained interruptions and decrease the number of customers impacted by all-hazard events, especially those customers that experience higher-than-average frequency and duration of outages.

Draft Metrics for Objective 1:

1. Number of customers anticipated to be impacted by the proposed project (both overall number of customers and the percentage of the utilities' total customer base);

¹ See Definitions

² See Definitions

³ See Definitions



2. The System Average Interruption Frequency Index (SAIFI), which equates to how often the average Arkansas electricity customer experiences an interruption. To calculate:
 - a. $SAIFI = \text{total number of customers interrupted} / \text{total number of customers served (extreme weather events removed)}$;
3. The System Average Interruption Duration Index (SAIDI), which equates to the total number of minutes (or hours) the average Arkansas electricity customer experiences an interruption. To calculate:
 - a. $SAIDI = \text{sum of customer interruption durations} / \text{total number of customers serve (extreme weather events removed)}$; and
4. The Customer Average Interruption Duration Index (CAIDI), which equals the average time required to restore service to Arkansas electricity customers. To calculate:
 - a. $CAIDI = \text{sum of customer interruption durations} / \text{total number of customers interrupted (extreme weather events removed)}$.

Objective 2: Achieve Whole Community Impact – Ensure that these GRID funds benefit Arkansans, specifically those who reside in communities that are more susceptible or vulnerable to electric power outages and those defined under certain⁴ eligibility criteria that are generally satisfied by the rural characteristics of the state.

Draft Metrics for Objective 2:

1. Description of how enhancement measures of a project will / did benefit Arkansas in vulnerable or disadvantaged communities in the service area;
2. A description of strategies deployed to ensure all customers in service areas are positively impacted by grid enhancements, especially those in vulnerable or disadvantaged areas;
3. Percentage of total funding provided to subrecipients serving vulnerable or disadvantaged communities⁵ in Arkansas;
 - o **Vulnerable SAIFI** = total number of vulnerable customers interrupted/total number of customers served (extreme weather events removed);
 - o **Vulnerable SAIDI** = sum of vulnerable customer interruption durations/total number of customers serve (extreme weather events removed); and
 - o **Vulnerable CAIDI** = sum of vulnerable customer interruption durations/total number of customers interrupted (extreme weather events removed).

⁴ <https://www.whitehouse.gov/environmentaljustice/justice40/>

⁵ See Definitions



Objective 3: Support the Development of the State's Grid Workforce - Support the development of the State's workforce that is responsible for grid enhancement projects, potentially via offering additional professional development and/or workforce development opportunities. Consider additional efforts to help Arkansas train, attract, and retain a skilled workforce.

Draft Metrics for Objective 3:

1. Number of trained and credentialed workers able to undertake grid enhancement projects;
2. Of all workers employed to execute awarded projects, percentage of workers that come from vulnerable populations;
3. Number of local businesses or vendors employed to execute projects through the funding of this program;
4. Of all local businesses or vendors awarded projects, percentage of businesses that are from vulnerable communities;⁶
5. Number and description of the labor standards used for direct employees, contractors, and subcontractors (e.g., project labor agreements, local hire agreements, etc.);
6. Average hourly wage or rate, by worker type, employed on the proposed project; and
7. A description of engagement of potential training partners to support utility-related workforce development, including any efforts to support those displaced by shifts in the workforce and those in economically distressed areas.

Eligible Enhancement Measures:

To meet the program objectives outlined above, and in accordance with DOE's program goals, the Department of Finance and Administration will make grant awards to eligible entities⁷ (described below), at amounts not to exceed projected funding. Partial projects will also be considered for award if the highest-scored application's request is less than the maximum award allowed for their eligibility type.

- Weatherization technologies and equipment
- Fire-resistant technologies and fire prevention systems
- Monitoring and control technologies
- The undergrounding of electrical equipment
- Utility pole management
- The relocation of power lines or the reconductoring of power lines with low-sag, advanced conductors
- Vegetation and fuel-load management
- The use or construction of distributed energy resources for enhancing system adaptive capacity during disruptive events, including microgrids and battery-storage subcomponents
- The location of the project (the project must be located within the State of Arkansas)
- Strength and thoroughness of the proposed plan for reporting on the required metrics

⁶ See Definitions

⁷ See Definitions



The Department of Finance and Administration, with the State Infrastructure Coordinator, will convene an advisory committee with the Arkansas Public Service Commission and the Arkansas Department of Energy and Environment. This advisory committee will guide the development of key program design decisions, including the potential prioritization of eligible enhancement measures to be funded under the program. Furthermore, the advisory committee will utilize data, metrics, and existing tools to develop a framework and methodology for determining and/or evaluating community benefit of grid enhancement projects in a measurable way, where possible.

Methods and Criteria Used for Selecting and Determining Subawards:

As mentioned in the previous section, the Department of Finance and Administration, through the State Infrastructure Coordinator's office, is planning to release a competitive Request for Applications (RFA) to solicit applications for subrecipient funding. The following types of Eligible Entities will be allowed to apply:

- an electric grid operator;
- an electricity storage operator;
- an electricity generator;
- a transmission owner or operator;
- a distribution provider; and
- a fuel supplier.

In addition to Eligible Entities, there will also be eligible types. Entities may fall into the small utility company type of subaward⁸ or into the general award type subaward. While all who may be eligible under section 40101(d) can apply, the Department of Finance and Administration will give preference to Eligible Entities that directly provide electricity to the public and are considered a public utility or independent electric cooperative. Priority will also be given to those entities serving rural populations within the State. A definition of what is considered rural within the State will be provided later.

Once applications have been submitted, the State Infrastructure Coordinator and the advisory committee will conduct a comprehensive review of all completed and eligible grant applications. In accordance with the objectives outlined in this document, selection of awards to Eligible Entities will be informed by the following criteria:

- Potential of the project to minimize the frequency and duration of power outages;
- Potential benefits that would impact communities identified as vulnerable and/or disadvantaged;
- Potential benefits to the community to be achieved because of the project (e.g., reducing the likelihood and consequences of disruptive events), with priority given to projects that will generate the greatest community benefit (whether rural or urban); and
- Potential for the project to further develop and strengthen the workforce responsible for project implementation.

⁸ See Definitions



Distribution of Funding:

The Department of Finance and Administration, through the Office of the State Infrastructure Coordinator, will ensure that all projects take place within the State of Arkansas. The Department plans to use five percent (5%) of the grant funds for administrative costs. In accordance with the GRID grant guidance, not less than a certain amount of the total federal formula funds to the state each year must be allocated to small utilities, based on the number of customers in Arkansas served by small utilities (those who sell not more than 4,000,000 MWh of electricity per year). This percentage has not yet been determined by the Department of Energy. To determine these numbers, the advisory committee will confirm the definition of "customer", the percentage of all customers in Arkansas that are served by smaller utilities, and the number of small utilities in the State.

Cost Matching Requirements:

- **LARGE:** 115⁹ percent match is required for large entities selling more than 4 million Megawatt Hours (MWh) of electricity per year.
 - Example: a utility receiving a \$1,000,000 federal award shall provide \$1,150,000 in cost match, for a total project cost of \$2,150,000.00
- **SMALL:** 48¹⁰ percent match is required for small entities selling less than 4 million Megawatt Hours (MWh) of electricity per year
 - Example: a small utility receiving a federal award of \$750,000 shall provide \$360,000 in cost match, for a total project cost of \$1,110,000.00

Public Notice and Hearing:

The Department of Finance and Administration is committed to taking a proactive approach to public engagement and stakeholder management regarding this program. The goal of the public hearing is to provide detail on the Grid Enhancement Formula Grant and answer questions the public may have. This occurred virtually, via Zoom, on **May 11, 2023, at 10:00 AM**. The Department encourages the public to provide feedback on the program throughout the initial planning phase, and comments can be mailed to **Department of Finance and Administration, Office of the State Infrastructure Coordinator, 1509 W 7th Street, Little Rock, Arkansas, 72201** or emailed to Infrastructure@dfa.arkansas.gov.

Public comments on the attached program narrative were taken until May 19, 2023, at 5:00 PM CST.

There were 5 attendees at the public hearing and they included representatives from Arkansas State Entities (Public Service Commission & Department of Energy and Environment), local utility companies, and journalists. The public hearing resulted in a broader understanding of the Grid Enhancement Formula Grant.

A copy of the public notice can be found at: <https://www.dfa.arkansas.gov/news/details/dfa-to-host-public-hearing-for-grid-enhancement-grant-funding>

⁹ This match amount is 100% plus 15% excess match to satisfy the State's portion, as allowed under IJJA 40101(d)

¹⁰ This match amount is a third plus 15% excess match to satisfy the State's portion, as allowed under IJJA 40101(d)



Appendix of Definitions for GRID Public Hearing Program Narrative:

- **Disadvantaged Community:** DOE's working definition of Disadvantaged is based on the cumulative burden and includes data for thirty-six burden indicators collected at the Census tract level. These Burden indicators are grouped across four categories including energy, environment, and socio-economic status.
- **Disruptive Events:** means an event in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster.
- **Eligible Entity:** is defined as, an electric grid operator, an electricity storage operator, an electricity generator, a transmission owner or operator, a distribution provider, a fuel supplier
- **Grid Enhancement:** For purposes of this program, DFA will use the term Grid Enhancement. Grid enhancement is the ability to withstand grid stress events without suffering operational compromise or to adapt to the strain to minimize compromise via graceful degradation. It is in large part about what does not happen to the grid or electricity consumers.
- **Natural Disaster:** is any hurricane, tornado, storm, flood, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought, fire, or other catastrophe in any part of the United States which causes, or which may cause, substantial damage or injury to civilian property or persons.
- **Program:** shall mean the Grid Formula Grant Program established under the Infrastructure Investment and Jobs Act Section 40101 on Preventing Outages and Enhancing the Resilience of the Electric Grid.
- **Small Utility Company:** 15 - Small utility means a public utility and all affiliates of the public utility that collectively serve fewer than 20,000 customers. For purposes of this definition, a customer means the party responsible for payment of the utility services.
- **Vulnerable Community:** For purposes of the program, DFA is defining vulnerable communities as those who fall into at least one of the following categories:
 - An area designated as a disadvantaged community (DAC) by the White House Council on Environmental Quality (CEQ) via its Climate and Economic Justice Screening Tool (CEJST)¹¹
 - An area that is evaluated as high risk for natural hazards, as determined by the Federal Emergency Management Agency (FEMA) Multiple Hazard Index for United States Counties¹²
 - An area that houses high populations of electricity-dependent Arkansans, particularly those who require electricity to operate medical devices and/or keep medications and treatments at prescribed temperatures¹³

¹¹ [Explore the map - Climate & Economic Justice Screening Tool \(geoplatform.gov\)](https://www.geoplatform.gov/)

¹² <https://hazards.fema.gov/nri/map>

¹³ <https://hazards.fema.gov/nri/map>