

Grid Resilience Exchange: Strengthening Tribal Communities Workshop

Grid Resilience State and Tribal Formula Grant State Tribal Assistance Program

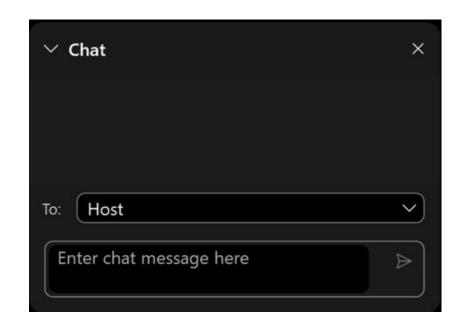
February 7, 2024



Housekeeping

Technical Issues?

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







Maria Robinson



Director,
Grid Deployment Office,
U.S. Department of Energy



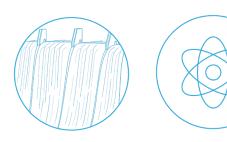
Grid Deployment Office Mission

Invest in electric infrastructure by...

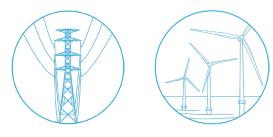
- Maintaining and investing in critical generation facilities
- Improving and expanding transmission and distribution system
- Developing high-capacity electric transmission lines nationwide
- Providing access to technical assistance and national laboratory expertise, modeling, and analytical capabilities



DOE's Grid Deployment Office



The **Generation Credits Division** works with existing generation facilities to ensure resilience and reliability and works to improve electricity markets at the wholesale and distribution level.



The **Transmission Division** fully utilizes DOE's unique tools and authorities for coordination, planning, financing, and permitting to drive transmission investment.



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



Angelena Bohman, Ph.D.



Technical Analyst, State and Tribal Assistance Programs,
Grid Deployment Office,
U.S. Department of Energy



Objectives

- Enhance grant applicants/recipients' understanding of grid resilience
- Share additional technical and other resources available relevant to this program
- Facilitate discussion among grant applicants/recipients on potential grid resilience projects
- Gain insight that will drive the development of additional technical and other assistance programs







Grid Resilience Overview

What is Grid Resilience?

Section 40101 of the Bipartisan Infrastructure Law **defines a disruption** as "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."

Anticipating and
Preparing for
Disruption

Mitigating the
Impacts of
Disruption

Recovering from
and Learning
after Disruption

Resilience Definition from the National Academies of Sciences, Engineering, and Medicine. 2017. Enhancing the Resilience of the Nation's Electricity System. Washington, DC: The National Academies Press. https://doi.org/10.17226/24836.



www.augustachronicle.com/story/news/local/columbia-countynews-times/2014/02/13/officials-emergency-crews-struggle-to-deal-witheffects-of-ice-storm/14185274007/





Why Does Grid Resilience Matter?

As society sees:

- Increases in magnitude and frequency of weather-related outage events
- Increases in costs to operate, maintain and upgrade aging electric infrastructure





There is greater risk of experiencing large outages of long duration, which are:

- Detrimental to society mortality and morbidity of vulnerable populations due to shutdown of critical services (food, water, energy, etc.)
- Costly to recover from
- Difficult to predict



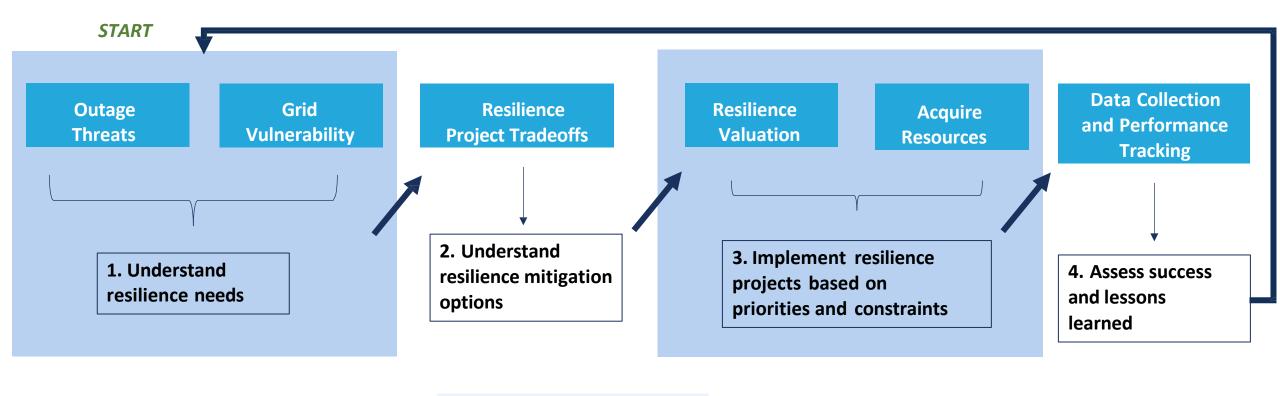


Therefore, investing in grid resilience is important to anticipate, mitigate and withstand the impacts of these outage events.





An approach to resilience investment planning



Stages of resilience planning

Outcome of each stage









Assistance Requests

Requests can be submitted to this link:

www.energy.gov/gdo/request-grid-resilience-assistance

Resilience Planning Stages

1. Outage Threats

2. Grid Vulnerability

3. Resilience Project Tradeoffs

4. Acquire Resources

5. Resilience Valuation

6. Data Collection and Performance
Tracking

Assistance Type

Program and Planning Assistance

Capacity Building

Training

Technical Analysis

Stakeholder Engagement & Coordination



Support Documents Available

- Microgrid Overview
- <u>Low-Cost Grid</u> <u>Resilience Projects</u>



To register and for more details, visit: bit.ly/TCES2024



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Q&A

Thank You!

GDOtribalassistance@hq.doe.gov

