



U.S. DEPARTMENT OF ENERGY

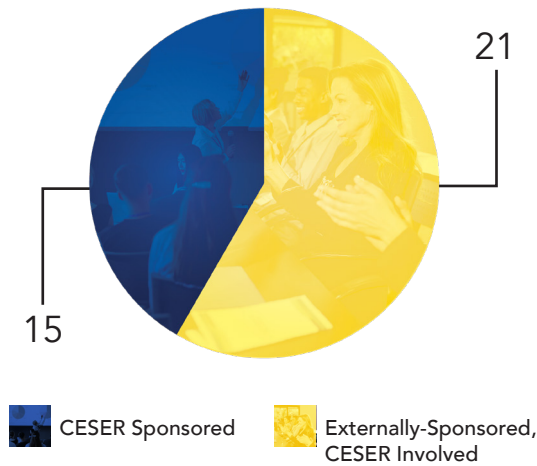
OFFICE OF CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE

# ENERGY SECTOR EXERCISES PROGRAM 2023 END-OF-YEAR REPORT

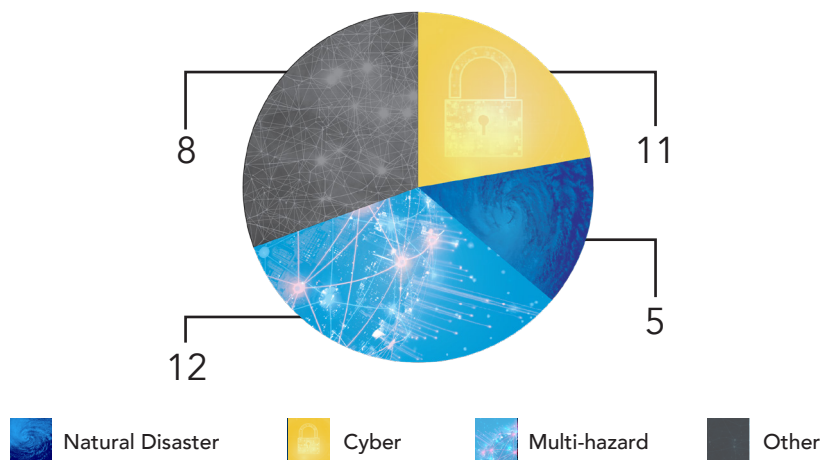
The U.S. Department of Energy’s (DOE) Office of Cybersecurity, Energy Security, and Emergency Response (CESER) addresses the emerging threats of tomorrow while protecting the reliable flow of energy to Americans today by improving energy infrastructure security and supporting DOE’s national security mission. CESER’s Energy Sector Exercises (ESE) program (“the Program”) sponsored, conducted, supported, and/or participated in 36 exercises during 2023.

Addressing a variety of threats and hazards ranging from cyber incidents to natural disasters to terrorist threats, exercise activities in 2023 built upon the existing collaboration and engagement efforts and established new partnerships with the energy sector. The Program’s activities contributed to CESER’s mission to “[s]trengthen the security and resilience of the U.S. energy sector from cyber, physical, and climate-based risks and disruptions.”

### TOTAL EXERCISES FOR 2023: 36



### THREAT & HAZARD BREAKDOWN



# HIGHLIGHTS FROM CESER-SPONSORED EXERCISES

## CLEAR PATH XI EXERCISE SERIES

The 11th iteration of the Clear Path series included an Information Sharing Environment Analysis Workshop, a two-day Continuity Communications Drill, and a one-day Social Media Drill, all successfully conducted in 2023. The planned three-day tabletop exercise (TTX) took place in January 2024, having been postponed due to the wildfires in Maui in August 2023.

The scenario for Clear Path XI focused on a complex set of issues requiring participants to address a cyberattack impacting energy infrastructure across Hawaii while simultaneously preparing for and responding to landfall of a major hurricane. [Click here](#) to read more.



### Information Sharing Environment Analysis (ISEA) Workshop | April 17, 2023:

ISEA is a process tool that identifies the organizations, personnel, activities, programs, networks, and data that compose and support a robust intelligence and information sharing capability across key partners and stakeholders. The workshop was conducted in April 2023 and produced an information sharing flow chart for an incident response to a cyberattack on electric utilities in Hawaii.

### Continuity Communications Drill | July 25-26, 2023:

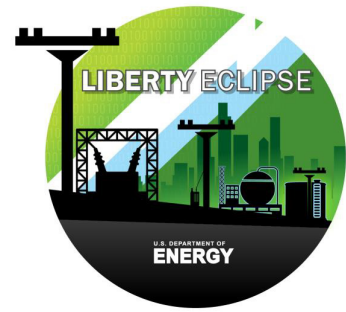
The Continuity Communications Drill examined the use of alternative communication systems to share incident information with industry and government partners during a simulated incident. Participation in the exercise was open to emergency management stakeholders across the energy sector community. Participants reported successfully using multiple contingency communications systems such as satellite phones and Starlink Wi-Fi, with one organization providing “no notice” to team members in order to test actual response times and employee knowledge of communications systems. Several participants demonstrated their ability to contact Federal Emergency Support Function (ESF) #12 personnel. One new feature of this year’s drill was education and emphasis on best practices, including knowledge and use of primary, alternate, contingency, and emergency (PACE) communications practices.

### Social Media Drill | August 1, 2023:

The Social Media Drill engaged various industry and government public affairs offices to improve energy sector preparedness in listening for and responding to concerns, questions, and information on social media during a multi-hazard incident impacting multiple islands across Hawaii. Participants practiced procedures and shared strategies in developing and relaying critical public information messaging. This year’s drill featured several new elements to support exercise play, including simulated televised newscasts and multiple injects focusing on misinformation and disinformation.

# LIBERTY ECLIPSE 2023 FULL-SCALE EXERCISE

Serving as DOE's cybersecurity-focused exercise series, Liberty Eclipse contributes to advancing the federal government's goal of strengthening overall cyber preparedness within and among the energy sector's public and private partners. The Liberty Eclipse 2023 Full-Scale Exercise (FSE) was conducted on October 9-12, 2023, on Plum Island, New York. [Click here](#) to read more.



## HIGHLIGHTS FROM EXTERNAL STAKEHOLDER-SPONSORED EXERCISES

### Florida Power and Light Storm Drill | April 20, 2023

This drill was conducted over a one-week period simulating 72-, 48-, and 24-hour preparation activities leading up to post-landfall restoration activities. The entire NextEra organization participated in the drill with more than 250 personnel in person at the Command Center. In addition to internal engagement, Florida Power and Light (FPL) also partnered with its external contractors, vendors, and others to drill through their processes.

### GridEx VII Distributed Play | November 14-15, 2023

Hosted by the North American Electric Reliability Corporation (NERC) and Electricity Information Sharing and Analysis Center (E-ISAC), this two-day decentralized exercise was conducted on November 14-15, 2023. Electricity partners, government agencies, and other relevant organizations exercised emergency response and recovery plans in the event of simulated cyber and physical security attacks and other contingencies that would impact North America's electricity system. Objectives included, among others, to exercise response to IT communications systems failures; to exercise incident, operating, communications mutual assistance, and crisis management response plans; and to manage interdependencies with the natural gas sector, telecommunications sector, and other critical infrastructure sectors.

### GridEx VII Executive TTX | November 16, 2023

On November 16, 2023, NERC conducted an Executive TTX for invited electric industry executives, senior government officials, and other key stakeholders. The goal of the TTX was to engage senior industry and government leaders in a comprehensive discussion of the U.S. and Canadian security issues involved in a simulated real-world response to a coordinated attack on the electric grid. Discussed topics included data and voice communication resiliency, restoration prioritization and understanding subsequent cascading impacts, and use of unique government authorities. [Click here](#) to read more.

## DMV Disruption TTX | December 6, 2023

Building upon the discussions and outcomes of previous exercises, CESER, in coordination with the National Security Council Staff and the Metropolitan Washington Council of Governments (MWCOG), conducted the DMV Disruption TTX. The exercise focused on governmental and industry coordination processes and integration mechanisms to respond to threats to and attacks on substations within the National Capital Region (NCR) while preparing for a severe winter storm event, with a focus on authorities, resources, and capabilities to address the impacts of the incident.

## CONCLUSION

The exercises conducted in 2023 were a critical reminder that the line between “blue sky” and “grey sky” days is very slim. The threats and subsequent impacts exercised this year were both realistic and demonstrated the devastating impacts that could be felt across the energy sector. As such, there is a continued need for exercises to push, test, and challenge established protocols and assumptions to ensure we make advances in resiliency capabilities.

The CESER team increased their attention to non-traditional topics such as the use of social media in incident response and addressed unique emerging situations such as the resiliency of emerging renewable energy platforms. Studying these issues allowed the team to think strategically about capabilities and future planning requirements. This trend will be continued in 2024 and beyond.

With new bilateral exercise engagements with Canada, as well as deeper engagements with states in the upper Midwest, CESER will continue addressing critical topics such as cyber incidents that result in physical impacts and the increased adoption of renewable and distributed energy resource (DER) infrastructure in the U.S. energy system.

# 2024 ESE PROGRAM STRATEGIC VISION

## OVERVIEW AND CESER-SPONSORED EXERCISES

In 2024, the Program plans to increase the total number of CESER-sponsored and supported exercises. These exercises will address leadership priorities, maintain the focus on cyber incidents with physical impacts, and consider the tactical and strategic implications of the increasing adoption of renewables and DERs across the nation. We will:

- Engage with the state of Michigan and petroleum and propane partners to conduct Clear Path XII in August 2024.
- Continue to foster bilateral relationships with Canada through multiple exercise opportunities.
- Design a dynamic Liberty Eclipse FSE to be conducted on a closed-loop, cyber-physical testbed environment, providing government and industry operators and leadership an opportunity to address emerging threats and hazards.
- Ensure all CESER exercises and activities will address identified corrective actions from real-world response and previous all-hazards and cybersecurity-focused exercises.
- Garner internal support and participation by DOE in identified industry, international, state, local, tribal, territorial, and federally sponsored exercises.