

U.S. DEPARTMENT OF
ENERGY

OFFICE OF
Cybersecurity, Energy Security,
and Emergency Response

Online Training Overview Energy Security and Data Analysis Workshop

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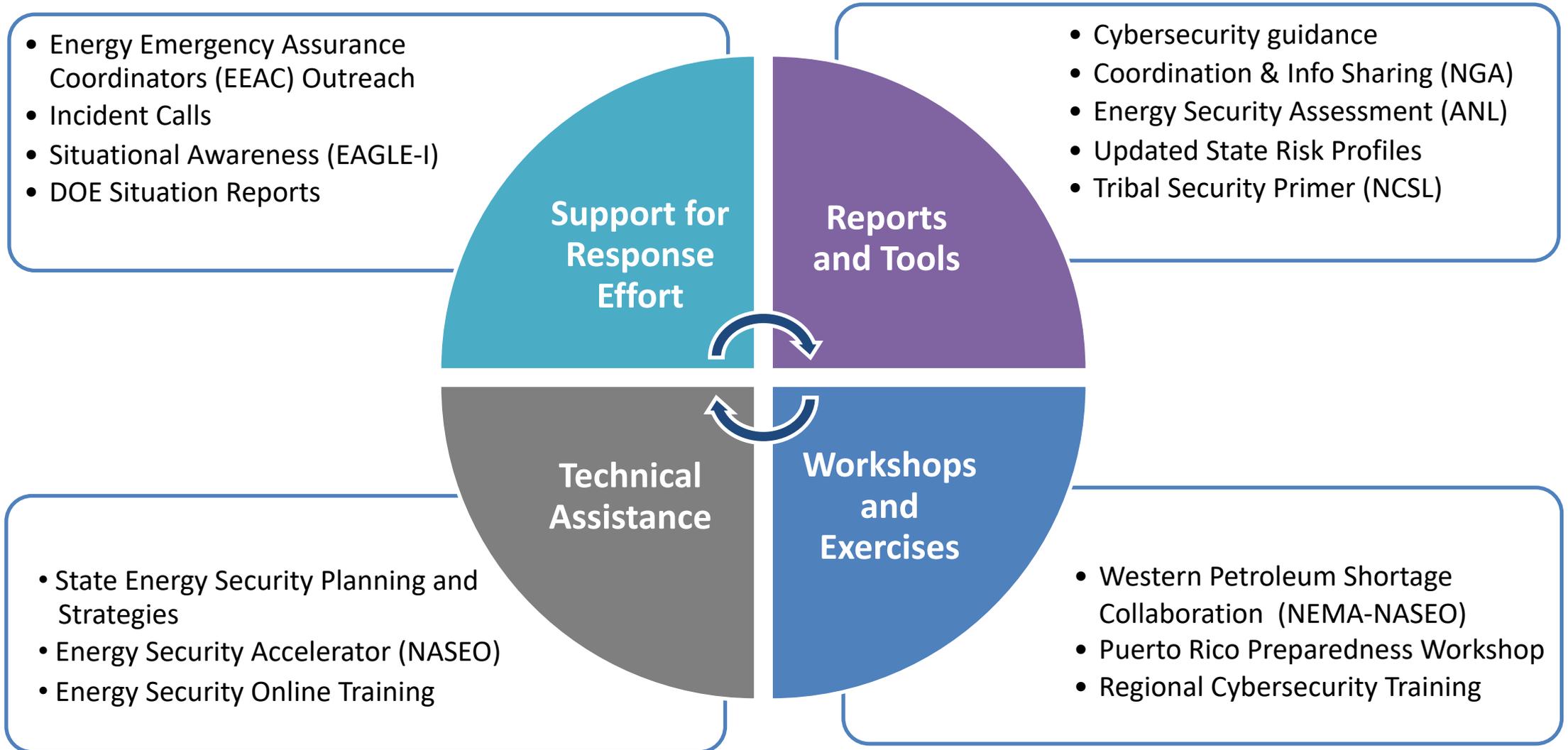


CESER's Mission

Cybersecurity, Energy Security, and Emergency Response (CESER) leads the Department of Energy's emergency preparedness and coordinated response to disruptions to the energy sector, including physical and cyber-attacks, natural disasters, and man-made events.



State Energy Security Preparedness and Response



State Energy Security Online Training

New Project

Goal: Develop online training modules focused on the foundational components of energy security planning



Objectives

- Build upon existing materials for Energy Assurance partners
- Institutionalize the fundamentals of energy security planning with a readily available and accessible online training platform

Introduction Video

Energy Security Online Training

Target Audiences

Primary

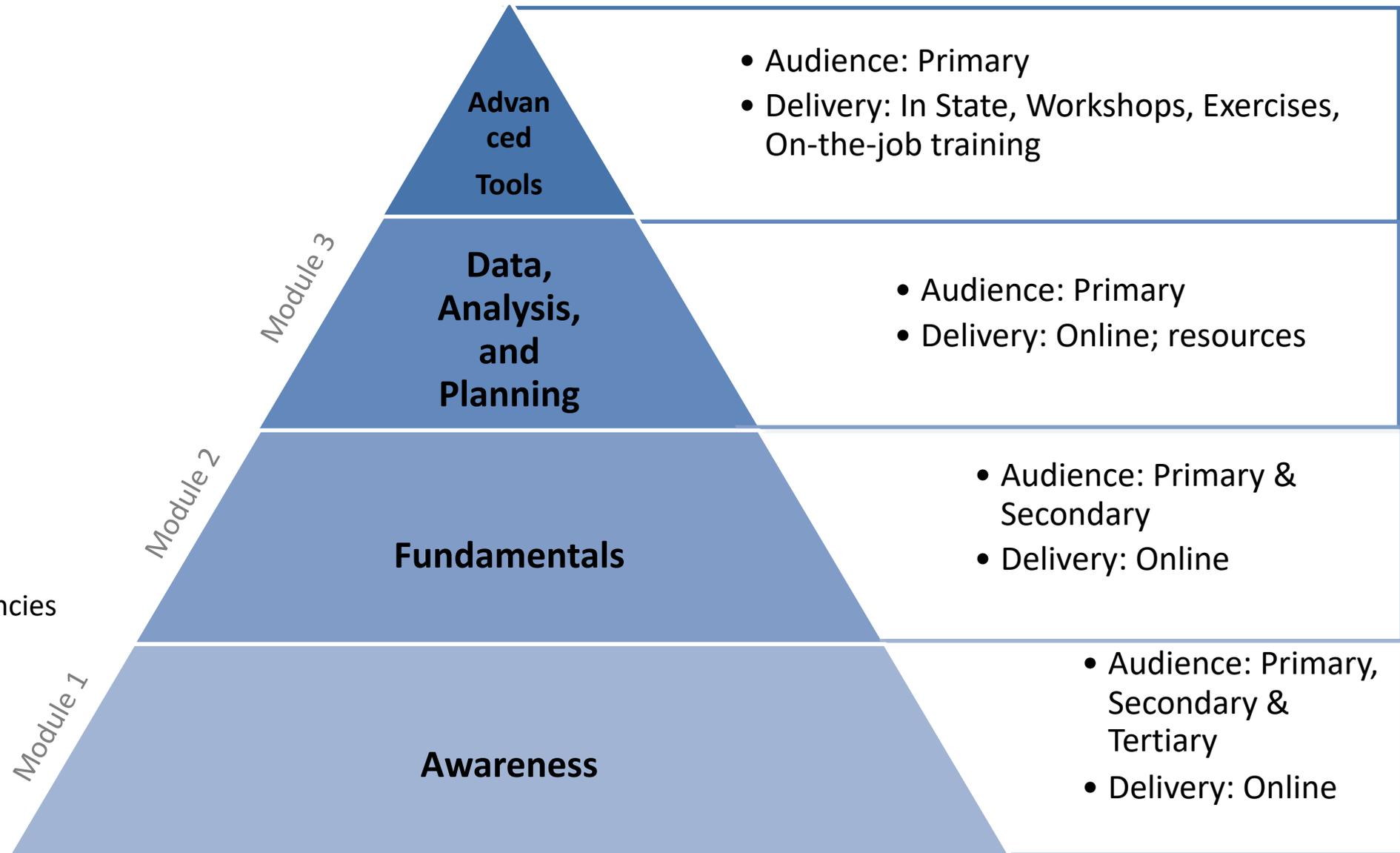
- State Energy Offices
- Public Utility Commissions

Secondary

- Governor's Energy Advisor
- State Legislative Staff (Energy)
- Emergency Manager

Tertiary

- State Legislator
- Governor
- Cyber Security Advisor
- State ESF-12 Responder
- Federal Partners/ Support Agencies
- Local Government (Energy or Emergency Management)
- Energy Private Sector



Module Overview

1) Energy Security Awareness (Why)

- Energy Security Planning, Response, and Preparedness Activities
- Roles and Responsibilities
- Overview of Typical Energy Security Planning Activities (Job Elements, KSAs – Knowledge, Skillsets and Abilities)

2) Energy Security Fundamentals (What)

- Roles, Responsibilities and Authorities Specific to the Energy Security Planning
- Understanding the Preparedness Cycle
- Energy Security Framework
 - Engage the Community
 - Assess the Energy Security Landscape
 - Analyze Risk and Resilience
 - Develop the Energy Security Strategy
 - Strategy Implementation
 - Evaluate Progress
 - Adapt and Enhance
- Stages of an Energy Emergency

3) Energy Security Data, Analysis, & Planning (How)

- Data Analysis – Data sources, monitoring, and interpretation methods and tools
- Preparing and Updating an Energy Assurance/Security Plan (“How to”)
- Fuel Contingency Planning
- Cyber Security Planning and Preparedness

4) Advanced Energy Security Tools (State Specific)

- Understanding State’s Energy Profile and Risks
- Preparing and Updating an Energy Assurance/Security Plan (“In your state”)
- Preparing and Updating a Fuel Plan in your State
- Reporting and Exercises
- Event Mitigation
- Public Assistance

How Can You Help?

We want to hear from you! Please share with us:

- Good practices in energy security planning
- Examples and/or case studies that support energy security

We are conducting informal interviews during the workshop and via phone later this week.

If you would like to contribute, contact Brandi Martin or Nicole Zawadzki



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Energy Security Capabilities Framework

New
Project

Goal: Create a repeatable process for conducting holistic, all-hazards State, Local, Tribal, Territorial (SLTT) energy security planning

Objectives:

- Identify specific capabilities required for achieving a secure energy system
- Outline common metrics for evaluating progress
- Identify and disseminate resources, tools and expertise needed to support successful completion of complex tasks and advance energy security planning

Energy Security Capabilities

Phases

Team Building & Assessment

- Engage the Community
- Assess the Energy Security Landscape
- Analyze Risk and Resilience

Planning and Implementation

- Develop the Energy Security Strategy
- Strategy Implementation

Evaluation & Enhancement

- Evaluate Progress
- Adapt and Enhance

18 Capabilities: Skills or tasks required to effectively complete the strategic process

Capabilities Self-Assessment

Phase 3: Analyze Risk and Security

Conduct analysis of the threats and hazards facing energy infrastructure, the ability of existing energy systems to withstand potential stresses, and the potential consequences of system disruptions

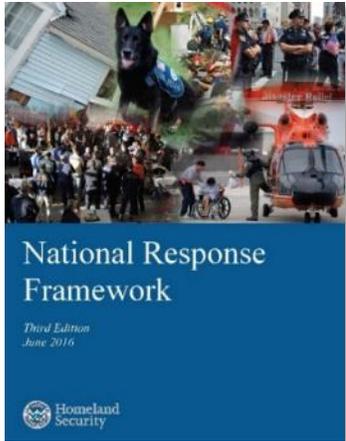
Capability	Capability Definition	Target Area	Capability Maturity Objective	Self Assessment Categories			Assessment Results		
				Assessment Score <i>0 - No progress</i> <i>1 - Limited progress</i> <i>2 - Moderate progress</i> <i>3 - Objective achieved</i>	Responsible Person / Entity <i>Identify individual or entity responsible for leading capability development</i>	Key Observations <i>Enter summary of key observations supporting assessment score</i>	Areas for Programmatic Improvements <i>Select areas for resource allocation to improve capability</i>	Capability Score	Tools or Resources to Improve Capability
Threat and hazard identification	Identify and analyze threats and hazards facing energy infrastructure	Energy Disruption Data	Most or all historic data on energy disruptions identified and catalogued by threat or hazard	2	State Energy Office	Most disruption data is collected and catalogued in a protected database	<input checked="" type="checkbox"/> Planning <input checked="" type="checkbox"/> Organization <input type="checkbox"/> Equipment <input type="checkbox"/> Training <input type="checkbox"/> Exercises	2	CYBERSECURITY Public Power Cybersecurity Scorecard [APPA] Cybersecurity Capability Maturity Model [DOE]
		Risk Assessment	Risk assessment conducted for most or all energy infrastructure that evaluates all natural, technological, and human-caused threats and hazards to energy infrastructure and prioritizes assets, systems, networks, and functions	2	State Energy Office	Individual risk assessments conducted by companies. No private-public sharing of risk assessments and no assessment conducted across all providers	<input type="checkbox"/> Planning <input type="checkbox"/> Organization <input type="checkbox"/> Equipment <input type="checkbox"/> Training <input type="checkbox"/> Exercises		
Interdependency analysis	Analyze energy sector reliability and resilience risks posed by interdependent infrastructure systems, including the potential for disruptions to cascade between infrastructure systems	Identify Interdependencies	Identify most or all interdependencies for critical energy infrastructure	3	State Homeland Security Office	Interdependency analysis used for all homeland security/emergency management plans	<input type="checkbox"/> Planning <input type="checkbox"/> Organization <input type="checkbox"/> Equipment <input type="checkbox"/> Training <input type="checkbox"/> Exercises	2.5	GRID-M [ANL] FEWSION [N. Arizona U.] Energy Assurance Guidelines [NASEO] Resilience Roadmap [NREL] ETI Islands Playbook [DOE]
		Stakeholder Engagement	Establish coordination mechanisms for cross-sector risk engagement between critical infrastructure owners and operators as well as government officials	2	State Homeland Security Office	Critical infrastructure advisory committee established with representatives from multiple lifeline sectors	<input type="checkbox"/> Planning <input type="checkbox"/> Organization <input type="checkbox"/> Equipment <input type="checkbox"/> Training <input type="checkbox"/> Exercises		

Pre-defined capabilities

User entered

Model generated

What is Emergency Support Function (ESF) #12?



ESFs are part of FEMA's National Response Framework

- How the Nation responds to disasters and emergencies
- Built on the National Incident Management System
- Scalable, flexible, and adaptable coordination structures



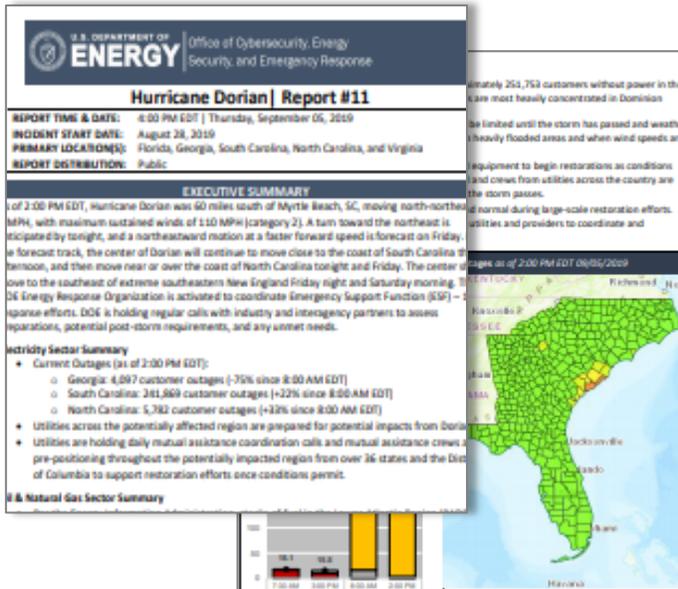
Emergency Support Functions

- ESF1 Transportation
- ESF2 Communications
- ESF3 Public Works & Engineering
- ESF4 Firefighting
- ESF5 Emergency Management
- ESF6 Mass Care, Housing & Human Services
- ESF7 Resources Support
- ESF8 Public Health & Medical Services
- ESF9 Urban Search & Rescue
- ESF10 Oil & Hazardous Materials Response
- ESF11 Agriculture & Natural Resources
- **ESF12 Energy**
- ESF13 Public Safety & Security
- ESF14 Long-term Community Recovery & Mitigation
- ESF15 External Affairs

ESF #12 DOE Functions

Activities

- Situational Awareness
- Damage Assessments
- Restoration Priorities
- Mutual Aid Support
- Unity of Message
- Regulatory Relief Assistance
- Interdependency Analysis
- Cascading Impact Analysis



Coordination



Energy 101 Online Training

New Project

Goal: Develop online training modules for the ESF#12 and State, Local, Tribal and Territorial community covering the basic principles that govern the energy sectors

Objectives:

- Fundamentals of electricity and the interdependent infrastructure it supports
- Understand the oil and natural gas energy systems including basic fuel supply chain information
- Interdependencies among electricity, oil, natural gas and fuel and the infrastructure energy supports



Questions

