



U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Cybersecurity, Energy Security,  
and Emergency Response

# Assuring Critical Function Resilience Through Innovative Fuels and Advanced Emergency Planning

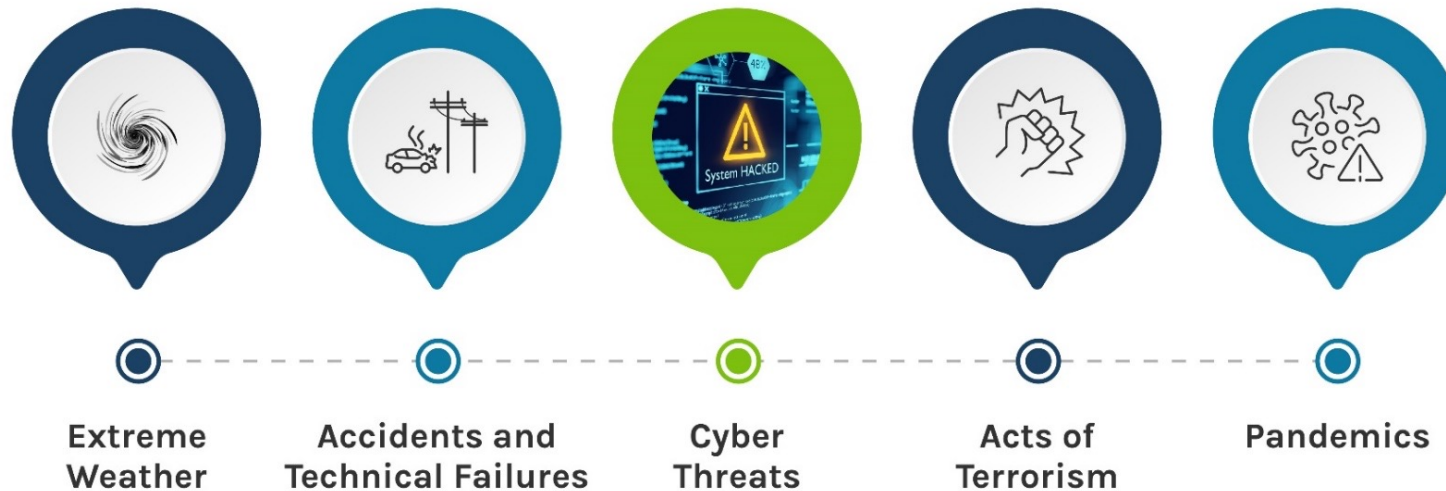
Megan Levy, SLTT Project Manager

October 12, 2022

# CESER Overview and Threat Landscape

**Mission:** To enhance the security of U.S. critical energy infrastructure to all hazards, mitigate the impacts of disruptive events and risk to the sector overall through preparedness and innovation, and respond to and facilitate recovery from energy disruptions in collaboration with other Federal agencies, the private sector, and State, local, tribal, and territory governments.

## Evolving Threats to Critical Infrastructure





# Collaboration and Coordination is Essential

State, Local, Tribal, and Territorial (SLTT) Governments



Energy Government Coordinating Council (EGCC)



NASEO NGA NARUC

Industry Councils



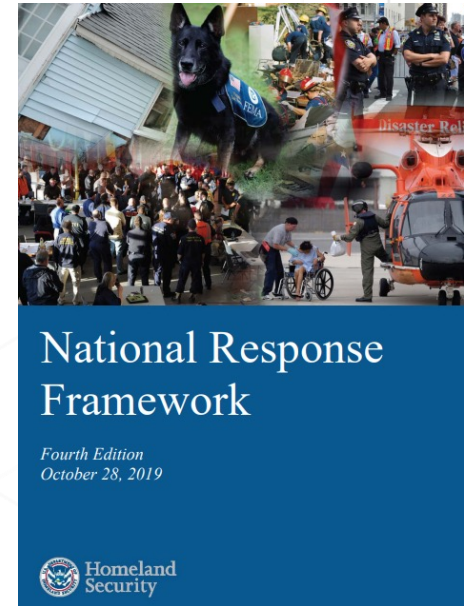
Electricity Subsector Coordinating Council



# 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                      | ▪ ESF9                | Urban Search & Rescue                  |
| ▪ ESF2 | Communications                      | ▪ ESF10               | Oil & Hazardous Materials Response     |
| ▪ ESF3 | Public Works & Engineering          | ▪ ESF11               | Agriculture & Natural Resources        |
| ▪ ESF4 | Firefighting                        | ▪ <b>ESF12 Energy</b> |  |
| ▪ ESF5 | Emergency Management                | ▪ ESF13               | Public Safety & Security               |
| ▪ ESF6 | Mass Care, Housing & Human Services | ▪ ESF14               | Cross-Sector Business & Infrastructure |
| ▪ ESF7 | Resources Support                   | ▪ ESF15               | External Affairs                       |
| ▪ ESF8 | Public Health & Medical Services    |                       |  |

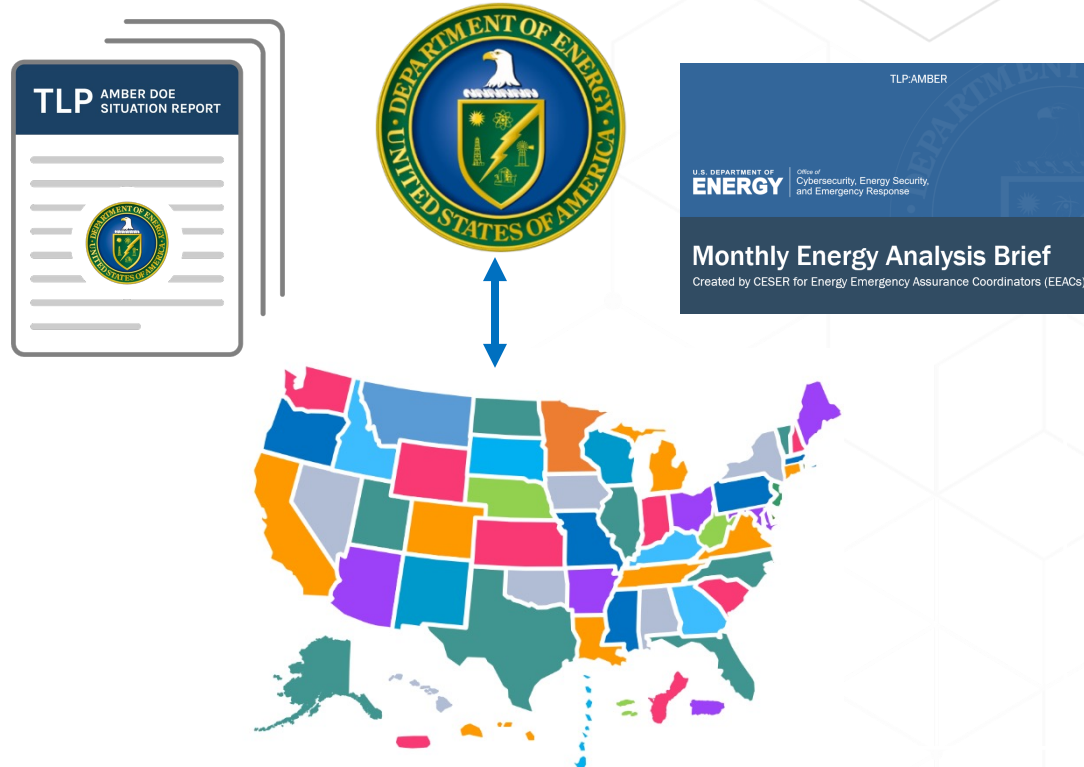


# Information Sharing Across the Energy Sector

## Information Sharing and Analysis Centers (ISAC)



**Energy Emergency Assurance Coordinator (EEAC) Program** facilitates 2-way information sharing between DOE and states leading up to and during an energy disruption or emergency




## Call to Action

- Ask fusion center for briefings (class or unclass.)
- Build well-defined, trusted information-sharing processes and implement exchange mechanisms that meet the needs of federal, state, and private sector partners.
- Exercise information sharing protocols and channels.




# Innovative Mitigation Measures By States

## Oregon Fuel Action Plan



Plan, Prepare, Respond, & Recover  
From Severe Fuel Shortages

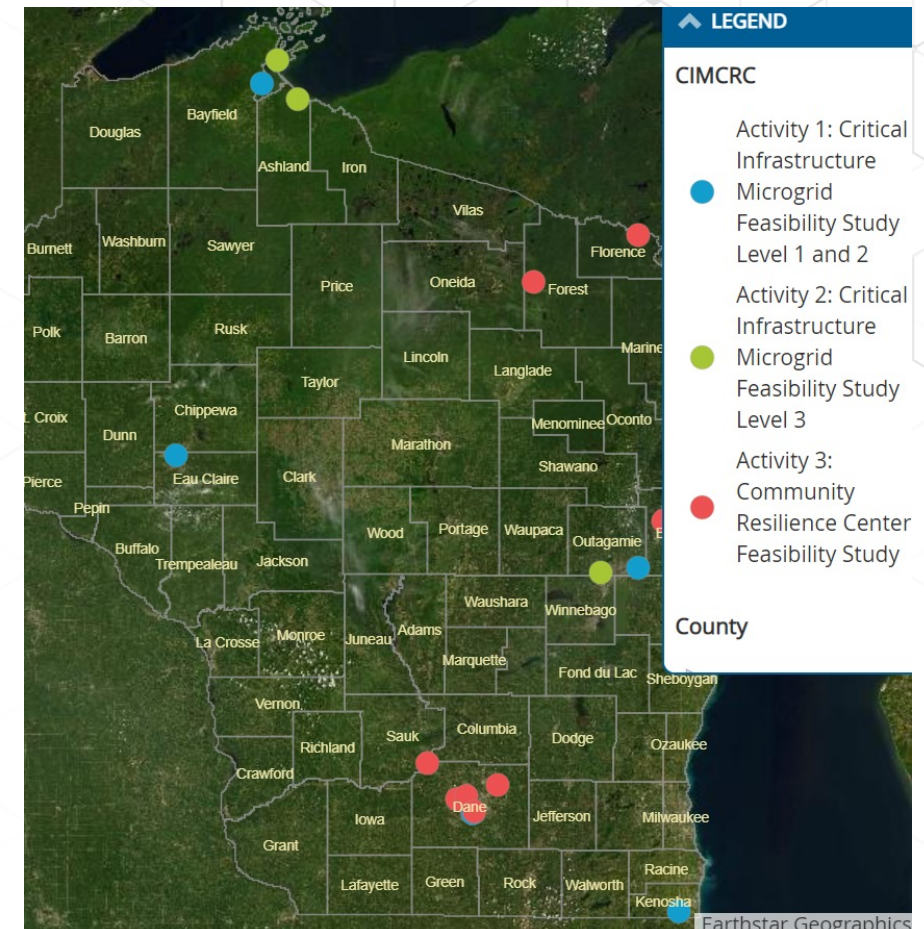


OREGON  
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- Oregon Fuel Action Plan outlines Fueling points of distribution concept in response to risk posed by Cascadia Subduction Zone.
- Identifies authority and responsibilities to control and direct the state's overall response to petroleum emergencies
- Provides coordination structure for federal, state, county, tribal, and petroleum industry partners
- Provides structure for fuel allocation that identifies preapproved priority users of fuel and user responsibilities
- Identifies state and county priority lifeline routes to support fuel deliveries
- Pre-designates Fuel Points of Distribution (FPOD) for receiving emergency fuel

# Innovative Mitigation Measures By States

- Wisconsin: Critical Infrastructure Microgrid and Community Resilience Center Feasibility Studies ([map](#))
- Modeled on programs from New Jersey BPU, NYSEERDA, MASS DOER, Maryland, Connecticut, and California.
- WI's Refueling Readiness grant program- modeled on Oregon's program. Read more [here](#)
- Statewide Assistance For Energy Resilience and Reliability SAFER2 Local fuel and ESF-12 planning program, templates, guidance, exercise in-a-box, HSEEP compliant: [PSC Statewide Assistance for Energy Resilience and Reliability](#)



# Innovative Mitigation Measures By States

- MPSC provides data to public and decision makers to determine risk, biannually.
- Report delivered by MPSC's dedicated Energy Security Section.
- MI Propane Security Plan- preparing for future potential product delivery disruptions.



## Michigan Energy Appraisal Summer Outlook 2022

[2022 Summer Energy Appraisal.pdf \(michigan.gov\)](#)



# Innovative Mitigation Measures By States

- Dedicated Energy Emergency Management Section within WA Department of Commerce
- Update/ maintain/exercise Energy Security Plan
- Provides Local Fuel Planning Toolkit with Guidance, templates, step-by-step guide to create, exercise, and finalize plans [Fuel Planning Toolkit - Washington State Department of Commerce](#)



**ENERGY EMERGENCY MANAGEMENT OFFICE**

LOCAL EMERGENCY FUEL PLANNING

## Fuel Planning Project Guide

**Summary**

**Fuel is critical to maintaining mission essential functions during an emergency.**

The Washington State Fuel Action Plan is implemented by the Energy Emergency Management Office (EEMO) and describes the state's response to fuel shortages including priorities for emergency fuel allocation, if needed. It depends on a clear understanding of the quantity and types of fuels needed by the state, locals, Tribes and territories (SLTT) to maintain their mission essential functions. Therefore, we are inviting SLTT entities to conduct their own fuel assessments. Our goal is to help life safety and critical infrastructure entities to become more resilient and to recover quickly.

**Getting started**

**We want fuel planning to be easy and effective**, so we are introducing several ways to get started:

1. Take a look at our [Fuel Planning Toolkit](#). This includes several documents and templates to guide planners through the fuel planning process—no experience with fuel necessary!
2. Attend a "Local Fuel Planning Office Hour" meeting. This is a casual forum to ask questions, give and receive feedback, hear from others working on the same things, and share best practices. ([Email us for an invite!](#))
3. Contact us at any time at [wa.energym@commerce.wa.gov](mailto:wa.energym@commerce.wa.gov). We'd be happy to answer questions by email or schedule a meeting.

**Fuel Planning Toolkit**


- Fuel Needs Assessment Tool
- Plan Template
- Plan Evaluation Checklist
- Planning Guidance
- Fuel Point of Distribution (FPOD) Site Selection Guide

Designed to align with:

- State Fuel Action Plan
- Your neighboring jurisdictions (even in Oregon and Idaho)
- Your Continuity of Operations Plan (COOP) and Comprehensive Emergency Management Plan (CEMP)

Agency contact

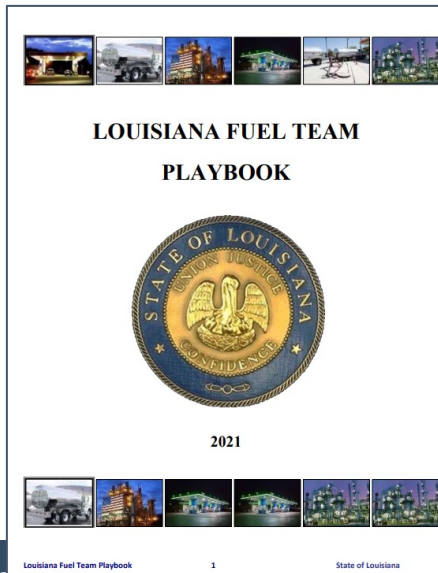
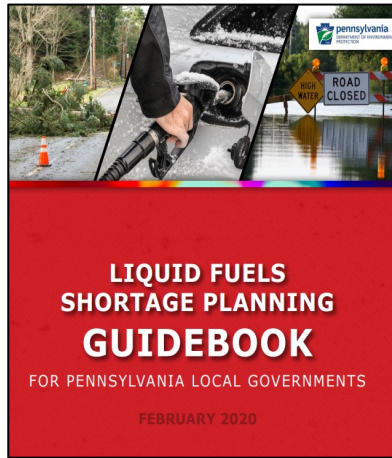
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 Washington State  
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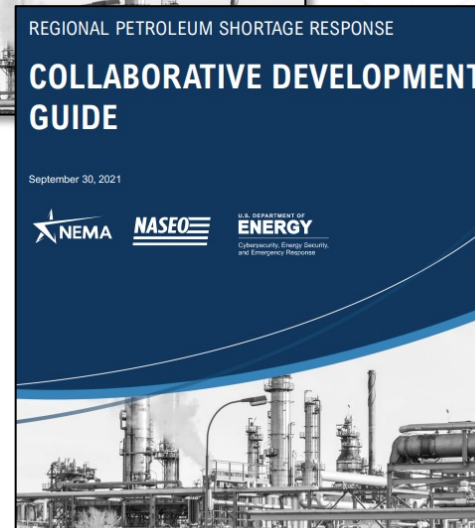
**We strengthen communities**

# Call to Action

## Develop or update state plan



## Form a Regional Collaborative

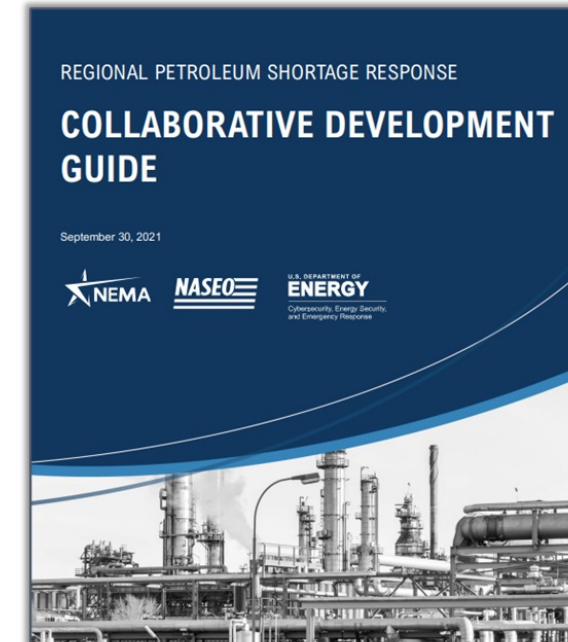
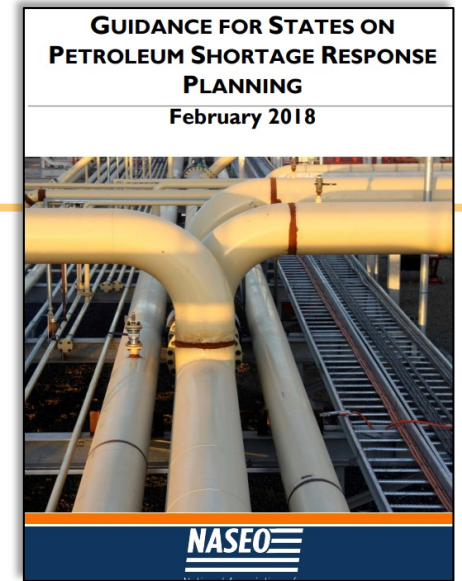


## Know your Information Sources

- DOE Energy Risk [Profiles](#)
- Energy Information Administration (EIA) [Energy Atlas](#)
- EIA Petroleum [Reports](#) and Energy [Outlooks](#)
- GasBuddy
- Energy Emergency Assurance Coordinators (EEAC)
- Information Sharing and Analysis Centers (ISACs)

# State Considerations to Address Risks

- Engage with industry to ensure adequate, affordable supply and maintain safe operations
- Include fuel contingency measures in energy emergency plans
- Evaluate state authorities for action and future prevention (are there other fuels/sources that can be developed? NREL Renewable Propane Study [FinalReport\\_V26-23-22FINAL-1.pdf \(propane.com\)](#))
- Develop a communications strategy (i.e., infographic to explain key factors to the public)
- Expand regional coordination





# Resources

Updated  
7/18/22!

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Office of Cybersecurity, Energy Security, and Emergency Response

NASEO  
National Association of State Energy Officials

## Energy Emergency Response Playbook for States and Territories


May 2022

REGIONAL PETROLEUM SHORTAGE RESPONSE

## COLLABORATIVE DEVELOPMENT GUIDE

September 30, 2021

NEMA NASEO U.S. DEPARTMENT OF ENERGY  
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## State of Tennessee ENERGY SECTOR RISK PROFILE



**Tennessee State Facts**

POPULATION: 6.77 M  
HOUSING UNITS: 2.99 M  
BUSINESS ESTABLISHMENTS: 0.14 M

ENERGY EMPLOYMENT: 8,453 jobs  
PUBLIC UTILITY COMMISSION: Tennessee Public Utility Commission  
STATE ENERGY OFFICE: Tennessee Department of Environment and Conservation  
EMERGENCY MANAGEMENT AGENCY: Tennessee Emergency Management Agency  
AVERAGE ELECTRICITY TARIFF: 9.58 cents/kWh  
ENERGY EXPENDITURES: \$3,591/capita  
ENERGY CONSUMPTION PER CAPITA: 323 MMBtu (27th highest out of 50 states and Washington, D.C.)  
GDP: \$564.1 billion

ANNUAL ENERGY CONSUMPTION: 102,910 GWh  
ELECTRIC POWER: 102,910 GWh

PRODUCTION CAPACITY: 82.3 TWh  
NATURAL GAS: 17.0 TWh, 7.7 GW total capacity  
WIND: 6.6 GW total capacity  
HYDRO: 2.1 GW total capacity  
SOLAR: 1.7 TWh, 5.0 GW total capacity  
BIOMASS: 0.6 GW total capacity  
OTHER: 0.4 TWh, 0.2 GW total capacity  
TOTAL: 0.3 TWh, 1.9 GW total capacity

**Tennessee Risks and Hazards Overview**

- The natural hazard that caused the greatest overall property loss between 2009 and 2019 was **Flooding** at \$481 million per year (leading cause nationwide at \$22 billion per year).
- Tennessee had 163 Major Disaster Declarations, 0 Emergency Declarations, and 6 Fire Management Assistance Declarations for 11 events between 2013 and 2019.
- Tennessee registered 15% fewer Heating Degree Days and 22% greater Cooling Degree Days than average in 2019.
- There is 1 Fusion Center located in Nashville.

**Annualized Frequency of and Property Damage Due to Natural Hazards, 2009 - 2019**

Hazard	Frequency - Annualized	Property Damage - Annualized (\$Billion per year)
Drought	6	\$0
Earthquake (≥ 3.5 M)	<1	\$0
Extreme Heat	5	\$0
Flood	42	\$481
Hurricane	0	\$0
Landslide	<1	\$2
Thunderstorm & Lightning	123	\$13
Tornado	15	\$32
Wildfire	<1	\$0
Winter Storm & Extreme Cold	27	\$7

Data Source: NCEM and USFC

## Energy Waivers Library

OVERVIEW OF WAIVER-GRANTING DEPARTMENTS AND AGENCIES	+
I. PRODUCTION AND SUPPLY	+
II. TRANSPORTATION AND DISTRIBUTION	+
III. FUEL USE	+
IV. CLEAN UP AND EVENT RECOVERY	+



Department of Energy  
**Emergency Response Hub**

Access Situation Reports and Resources for Disasters

Coming soon:

- NGA/NASEO Crisis Communications Playbook

# CESER Contact Information



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