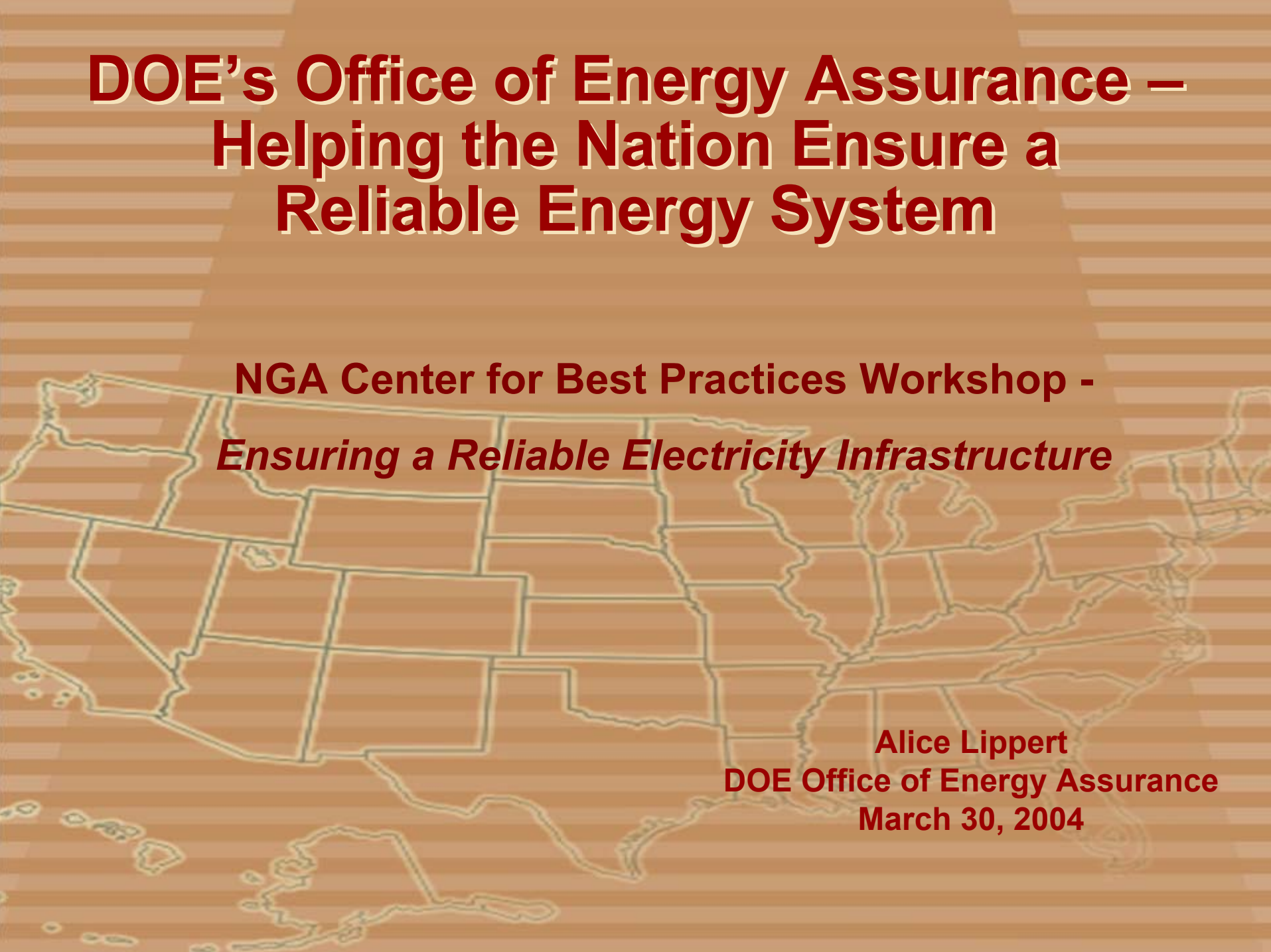


# **DOE's Office of Energy Assurance – Helping the Nation Ensure a Reliable Energy System**

**NGA Center for Best Practices Workshop -  
*Ensuring a Reliable Electricity Infrastructure***



**Alice Lippert  
DOE Office of Energy Assurance  
March 30, 2004**

# Briefing Topics

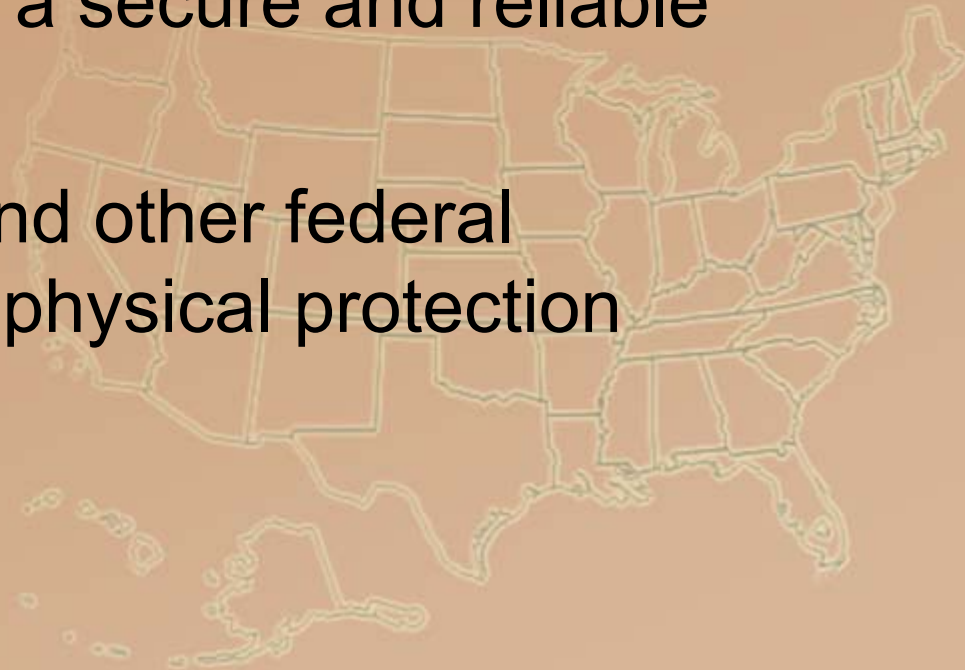
- **OEA's Program**
- Emergency Support and State Support Functions
- Emergency Preparedness & Response Activities
- For More Information...



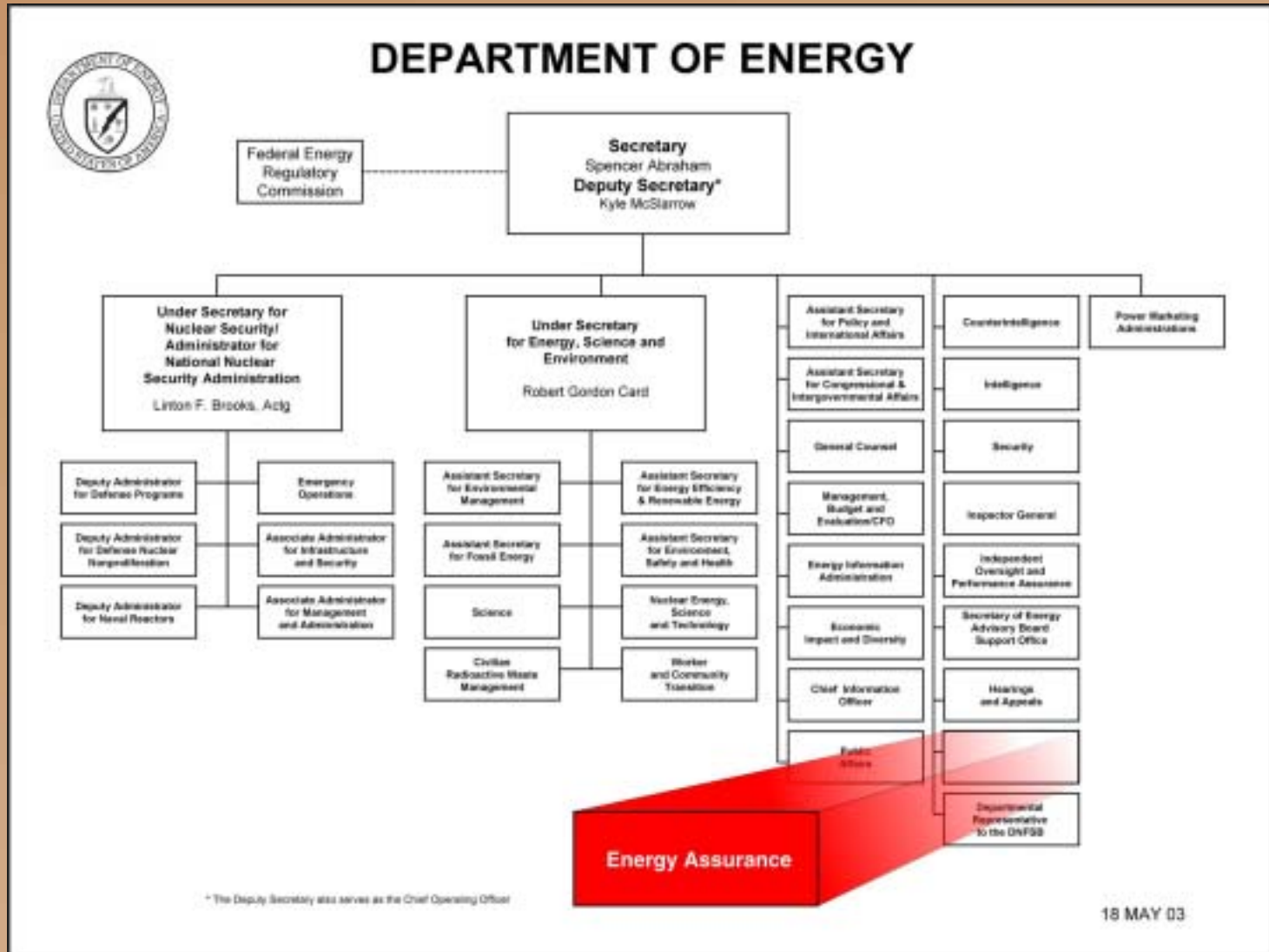
# Office of Energy Assurance

## *- Mission/Roles*

- Lead the federal effort to protect critical infrastructure and key assets in the energy sector
- Work with the private sector and state and local governments to ensure a secure and reliable flow of energy
- Coordinate with DHS and other federal agencies on cyber and physical protection efforts




# OEA's Role within DOE



# Energy Infrastructure Assurance

## — Policy Guidance

- **Homeland Security Presidential Directives 7 and 8** (December 2003)
  - Homeland Security Presidential Directives 5 (February 2003)
  - National Strategy to Secure Cyberspace (February 2003)
  - National Strategy for the Physical Protection of Critical Infrastructures and Key Assets (February 2003)
  - National Response Plan (January 2003)
  - National Strategy for Homeland Security (July 2002)
  - National Energy Policy (2001)
- 

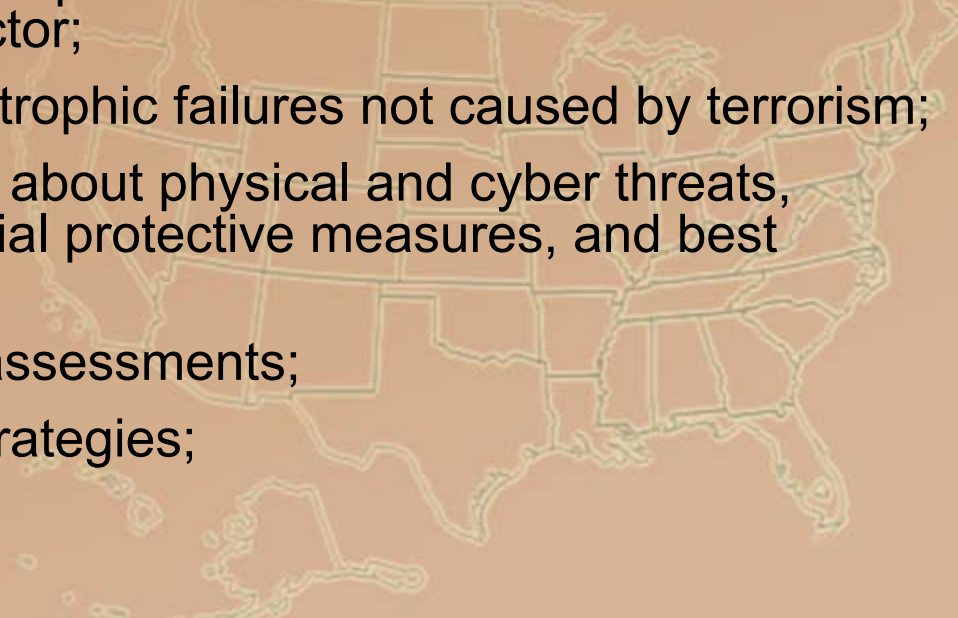
# HSPD-7

## Critical Infrastructure Identification, Prioritization, & Protection

**DOE is the Sector-Specific agency responsible for energy**

*– defined as production, refining, storage, and distribution of oil and gas, and electric power (except for nuclear power facilities)*

### DOE/OEA Roles:

- Collaborate with Federal agencies, state and local governments, and the private sector;**
  - Identify, prioritize, and coordinate protection of critical infrastructure and key resources in the energy sector;
  - Reduce consequences of catastrophic failures not caused by terrorism;
  - Facilitate sharing of information about physical and cyber threats, vulnerabilities, incidents, potential protective measures, and best practices;
  - Conduct/facilitate vulnerability assessments;
  - Encourage risk management strategies;
- 



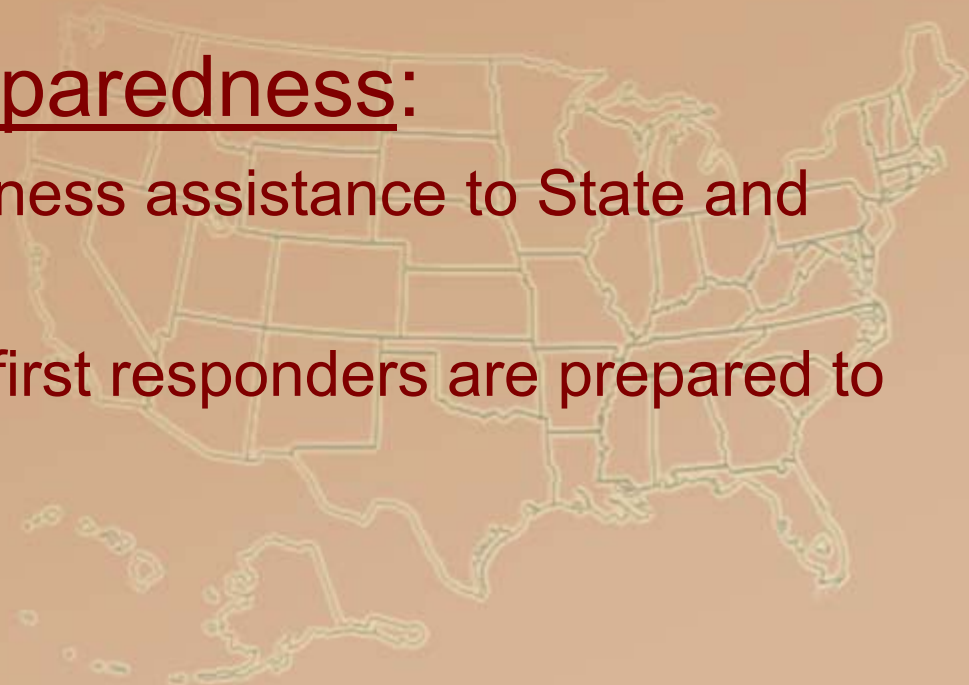
# HSPD-5 and HSPD-8

## HSPD-5 Management of Domestic Incidents:

- Highlights the development and federal participation in the National Response Plan

## HSPD-8 National Preparedness:

- Provide Federal preparedness assistance to State and local governments
- Support efforts to ensure first responders are prepared to respond to major events.



# The OEA Program Contains 6 Program Functions

- Technology Development and Application
- Coordination with the Private Sector
- Policy and Analysis Support
- Criticality of Energy Assets
- **Energy Emergency Support and Management**
- **State and Local Government Support**





# Energy Emergency Support and Management

- Support federal response to energy emergencies
- Track emerging energy problems
- Develop protocols for threats and emergency response operations
- Improve stakeholder preparedness through training
- Inform and engage the public on efforts to safeguard the energy infrastructure
- Integrate infrastructure planning efforts with international partners

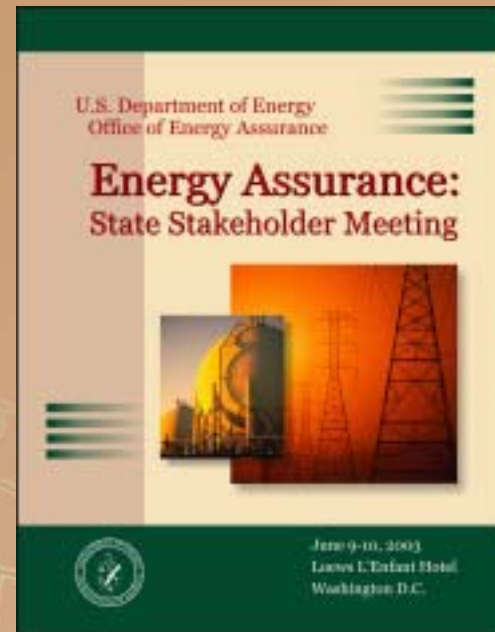


*Ice Storm Causing  
Downed Power Lines*

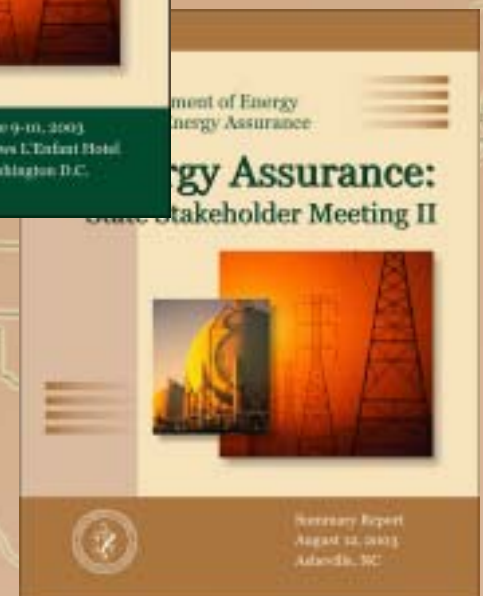
# State and Local Government Support

## *Work with State and local governments to:*

- Monitor major energy systems
- Identify and assess the impacts of energy disruptions
- Identify mitigation measures to improve the energy distribution system and enhance supply reliability
- Promote technology development and emergency response tools
- Elevate public awareness by promoting education and training
- Coordinate federal government emergency preparedness and critical infrastructure protection efforts



## *State Stakeholder Energy Assurance Reports*



# Briefing Topics

- Introduction to OEA
- OEA's Program
- **Emergency Preparedness & Response Activities**
- For More Information...

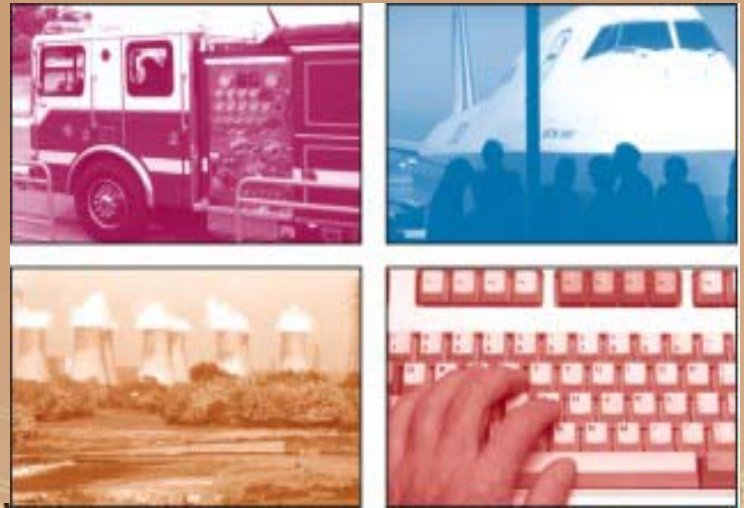


# Today's Energy Infrastructure

**Increased threats against critical infrastructure.**



**An aging infrastructure facing increasing demand and operating in new ways.**



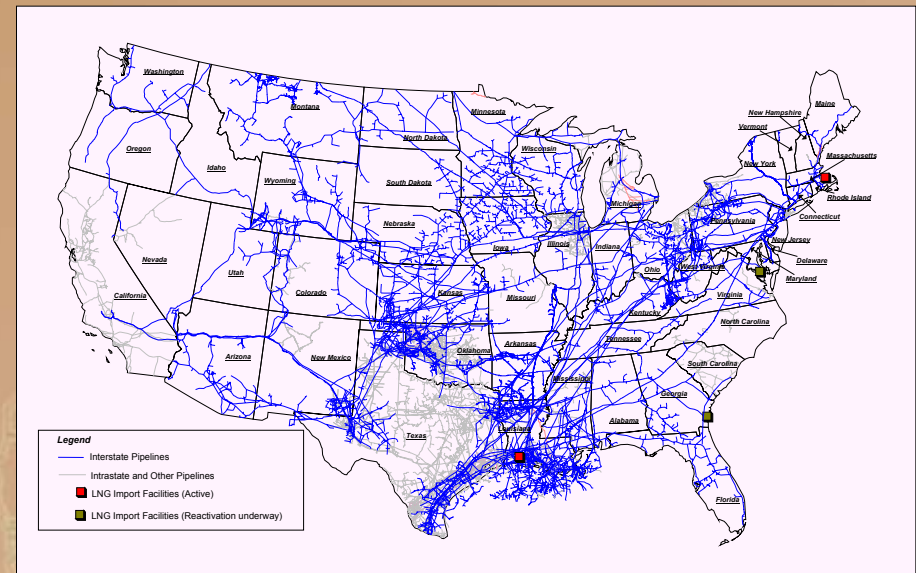
**An ever-increasing degree of “interconnectedness” between critical infrastructures.**



# The Scale and Complexity of the US Energy Infrastructure

- 157,810 Miles of Electrical Transmission lines
- 5,000 Power Plants; 800,000 Megawatts
- 2,000,000 Miles of Oil Pipelines
- 1,300,000 Miles of Gas Pipelines
- 2,000 Petroleum Terminals
- ~1,000,000 Wells
- Extensive Ports, Refineries, Transportation, and LNG Facilities

## Active Refinery Locations, Crude and Product Pipelines



Source: Energy Information Administration, Office of Oil & Gas

# OEA Emergency Preparedness & Response Activities

## Preparedness

- Monitoring
- Preparedness Planning
- Stakeholder Training
- Communications and Coordination

## Response

- Event-driven
  - “Hard” and “soft” emergencies
- Assessment & Analysis
- Damage Mitigation
- Restoration

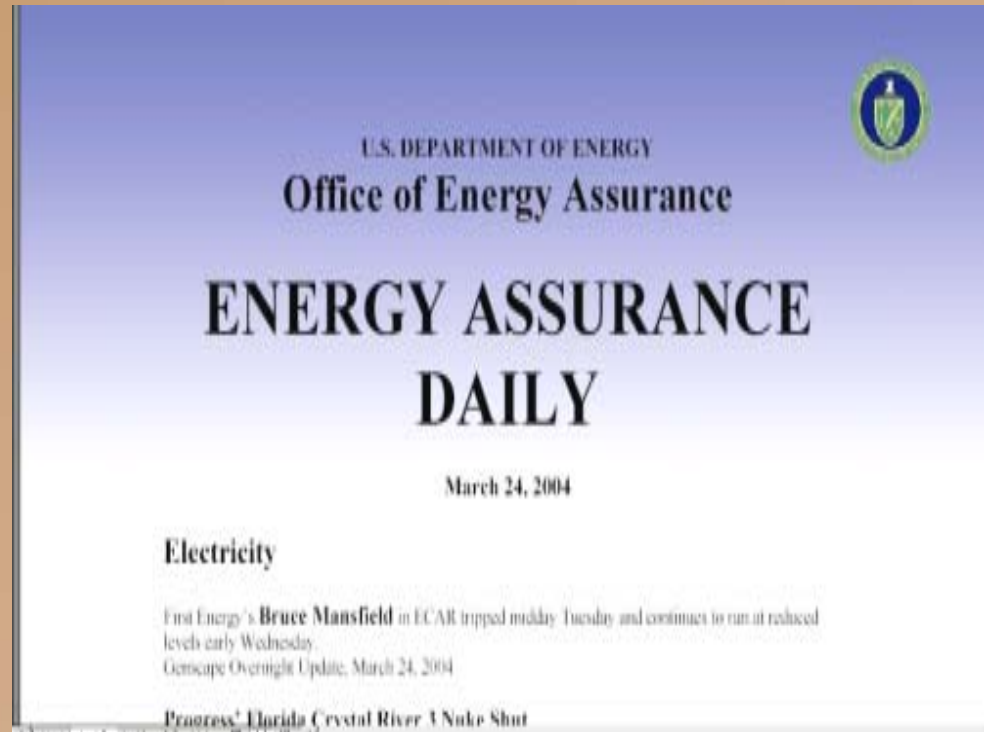




# Energy Emergency Preparedness


## Monitoring

- *Energy Assurance Daily* tracks current developments affecting energy systems, energy flows, and energy markets
  - [www.ea.doe.gov](http://www.ea.doe.gov)
- Industry/State/Regional Conference Calls
- Cooperation with and support of 2 ISACs
- Summer Transportation Fuels and Winter Fuels Outlook Conferences
- EIA-417 Disturbance and Incident Report



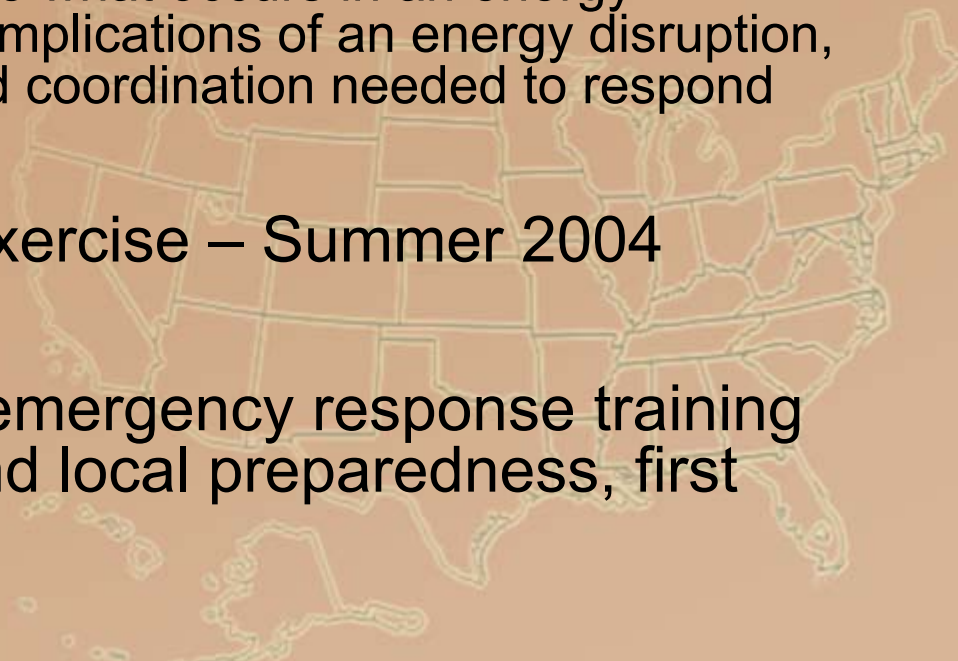
# Energy Emergency Preparedness

## Preparedness Planning

- State Energy Assurance Plans
    - Supporting the development of model plans and guidance by the National Association of State Energy Officials (NASEO)
    - Energy Assurance Plans incorporate:
      - Emergency preparedness
      - Security issues
      - Critical Infrastructure Protection components
  - Natural Gas Authorities/Curtailment Plans
    - Supporting survey of natural gas curtailment plans and authorities at the state level in conjunction with the National Association of Regulatory Utility Commissioners (NARUC)
  - OEA Energy Emergency Management Action Plan
- 

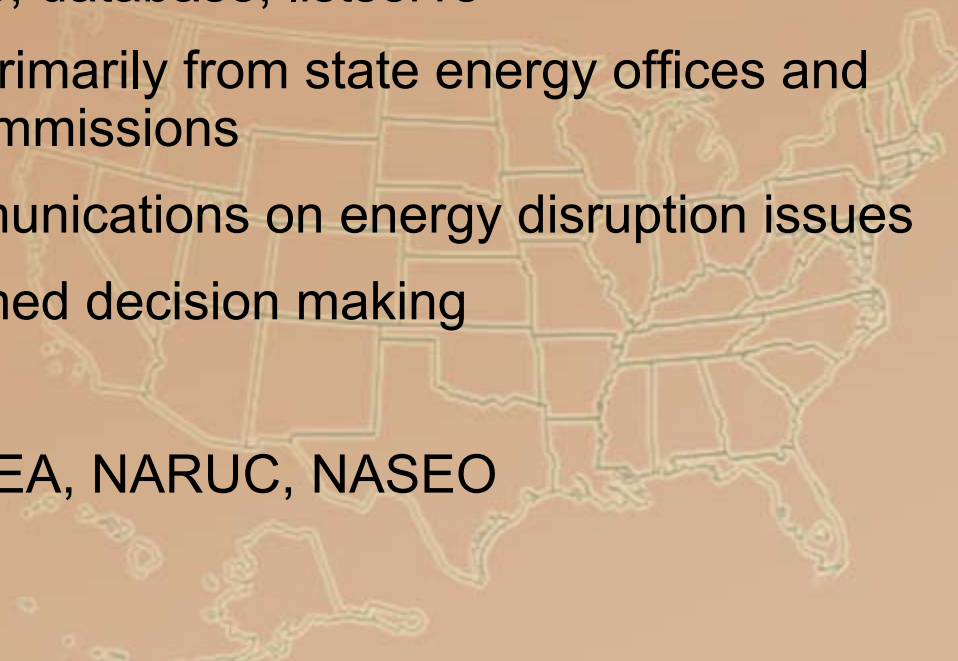
# Energy Emergency Preparedness

## Stakeholder Training

- Energy Emergency Simulation
    - Table Top training seminar for State legislators in cooperation with National Conference of State Legislatures (NCSL) – Nov 2003
    - Allowed legislators to observe what occurs in an energy emergency, understand the implications of an energy disruption, and track the information and coordination needed to respond
  - State Energy Assurance Exercise – Summer 2004
  - Establishing a nationwide emergency response training program (ESF-12, State and local preparedness, first responders)
- 

# Energy Emergency Preparedness

## Communications & Coordination


- **Energy Emergency Assurance Coordinators (EEAC) System**
    - Communications environment for state-level energy personnel to address energy emergencies or energy supply disruptions
      - Restricted access website, database, listservs
    - ~ 150 state-level members, primarily from state energy offices and public utility organizations/commissions
    - Increases federal-state communications on energy disruption issues
    - Allows for coordinated, informed decision making
    - Operational February 2004
    - Collaborative effort among OEA, NARUC, NASEO
- 

# Energy Emergency Preparedness - EEAC

## EEAC Membership Database – Information Fields

U.S. DEPARTMENT OF ENERGY

Office of  
**Energy Assurance**



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Name:     State:     Contact Type:   
          
       

Expertise:     Org Type:     Region:   
          
       

Agency:

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You may view individual contact information by clicking on member name

[Printable Page](#)



# Energy Emergency Response



*Collapsed Transmission Tower from the 1994 Northridge Earthquake in California*

- Event-driven
- DOE-wide response
- Hard & soft emergencies
- OEA Coordinates ESF-12 Actions



# Emergency Responses are DOE-Wide

- Office of Energy Assurance (ESF-12 lead)
- Energy Information Administration
- Office of Security
- Office of Electricity Transmission and Distribution
- Fossil Energy
- Policy
- Energy Efficiency & Renewable Energy
- Power Marketing Administrations



# Emergency Responses – “Hard” & “Soft”



*Flooded Power Plant in North Carolina during Hurricane Floyd, 1999*

## **Hard Emergencies**

- Natural disasters
- Explosions and catastrophic failures
- Terrorism/sabotage
- Weather-related events

## **Soft Emergencies**

- Temporary, planned outages
- Plant closures
- Market and economic issues
- Infrastructure maintenance and operational failure

# “Hard” Emergency Response Actions

- Coordinating within DOE and with federal groups like DHS (FEMA), DOT (OPS), EPA
- Preparing options and guidance for the Secretary
- Conducting assessments in coordination with industry (e.g. refinery status)
- Facilitating communications with stakeholders
- Deploying experts to disaster field offices to aid in assessment and restoration of services



*Utility Repair Trucks in Maryland Preparing to Respond to Hurricane Isabel, 2003*

# Northeast US – Canada Blackout

## OEA's Role

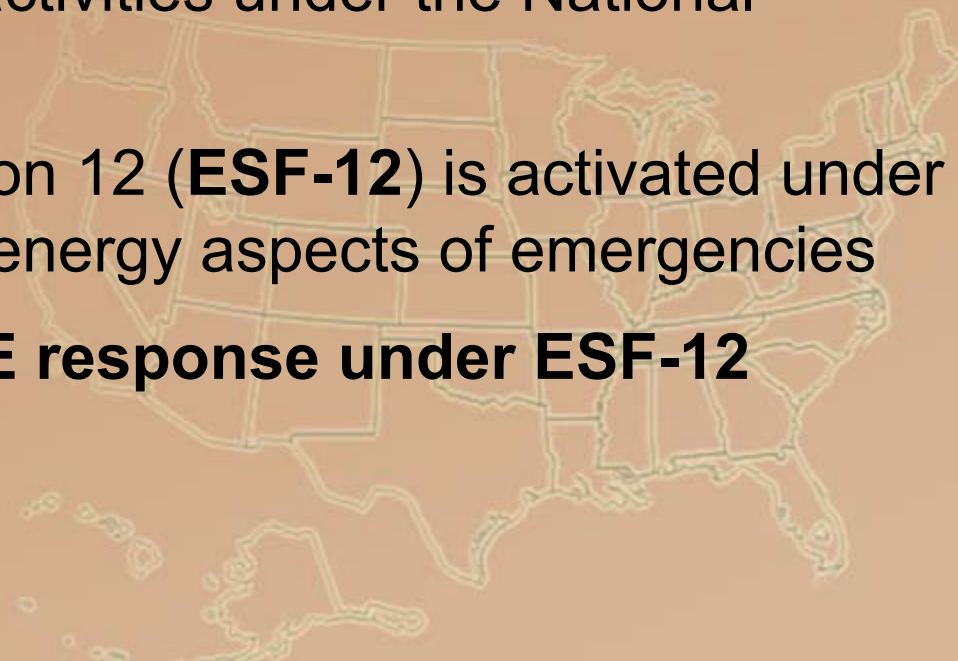
- Coordinated with DHS, FERC, EPA and industry groups like NERC
- Coordinated with states (e.g., MI) to collect data and assess impacts
- Monitored grid activity with NERC
- Coordinated fuel status for backup power supplies
- Tracked refinery/pipeline shutdowns
- Utilized EEIC to communicate with states
- Participated in the Joint Task Force that investigate the incident





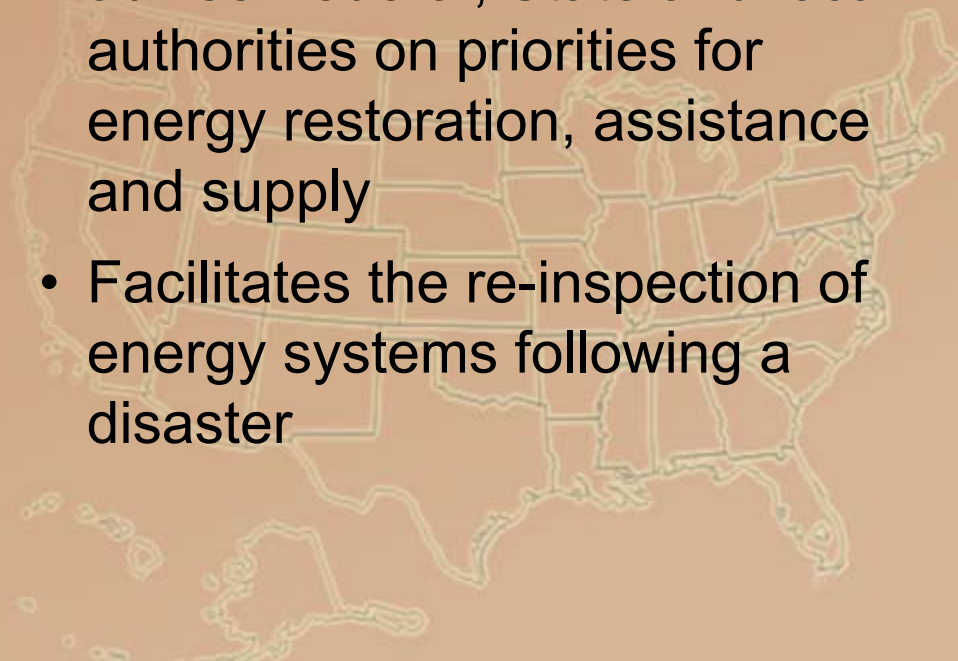
# The National Response Plan and ESF 12

- The National Response Plan (NRP) is designed to assist states with the consequences of significant disasters
- Includes most Federal departments & agencies
- Stafford Act – PL#93-288
- DHS (FEMA) coordinates activities under the National Response Plan (NRP)
- Emergency Support Function 12 (**ESF-12**) is activated under the NRP to respond to the energy aspects of emergencies
- **OEA coordinates the DOE response under ESF-12**



# ESF-12 Functions

- Deployment of technical experts to disaster areas
- Assist in damage assessments of energy infrastructure
- Assist in locating and transporting repair crews, repair equipment and spare parts for energy assets
- Work with ESF#3 in prioritizing the placement of emergency generators and coordinating their removal
- Facilitates essential communications with and within the energy industry
- In consultation with energy industry representatives, advise Federal, State and local authorities on priorities for energy restoration, assistance and supply
- Facilitates the re-inspection of energy systems following a disaster





# Recent ESF-12 Events

**Hurricane Isabel  
– September 2003**



**California Wildfires – October 2003**



# Hurricane Isabel – OEA'S Role

- Coordinated information gathering and responses with DOE'S Emergency Operation Center (EOC), DHS (FEMA)
- Staffed FEMA HQ and the FEMA Disaster Field Office in Richmond, Virginia
- Staffed DOE EOC 24/7 during the event
- Created a list of refinery and major utility contacts in the storm's path in collaboration with EIA
- Conducted an assessment of storm's impact on East Coast refineries
- Contacted State Energy Offices in advisement role
- Created a secure discussion forum that enabled State Energy Officials to share emergency information



- Briefed senior DOE management and DHS/FEMA on outage data and provided them with contacts for electric industry groups
- Posted and updated situation reports on the OEA website throughout the event

# Summary of OEA Emergency Preparedness & Response Activities

## **Emergency Preparedness Activities**

- Identify emerging problems
- Give State stakeholders the understanding and protocols needed to effectively respond to energy emergencies
- Reduce the consequences of energy disruptions by putting stakeholders in a position to respond appropriately

## **Emergency Response Activities**

- Assess the nature and severity of energy disruption events
- Respond and mitigate the impacts of energy emergencies based on coordinated information gathering and assessments
- Facilitate and expedite the restoration of energy supplies



# For More Information...

## DOE/OEA State and Local Support and Energy Emergency Response

Alice Lippert, State Liaison

- (202) 586-9600
- [Alice.Lippert@hq.doe.gov](mailto:Alice.Lippert@hq.doe.gov)

## OEA Online

- <http://www.ea.doe.gov>

## DOE Emergency Operations Center

- (202) 586-8100

