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

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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)
- 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)
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

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
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

Welcome Administrator!

Filter Results

You may view individual contact information by clicking on member name

Printable Page

Write Email to Checked Individuals  Get Contact Info for Checked Individuals
Energy Emergency **Response**

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

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

**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

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

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