

The National Association of State Energy Officials (NASEO)
Guidelines for State Energy Assurance and Emergency Preparedness
Discussion Draft #2 Outline – January 28, 2004

Overview

NASEO has worked with the State and Territory Energy Offices to respond to energy emergencies since its inception in 1986. NASEO assists states in coordinating with energy industry representatives, works with the Department of Energy to train state officials in both energy emergency response and understanding energy markets, assists states in coordination with the Energy Information Administration to obtain and evaluate state-level energy data and helps states to develop their energy emergency plans.

For many years, energy emergency preparedness concentrated on how states react to energy shortages. The events of September 11, 2001 focused attention on what must be done to assure energy security as well as mitigate shortages. This outline endeavors to coordinate the concept of Energy Assurance by introducing new plan elements such as the vulnerability of key energy assets and a broad perspective of key federal agency interaction.

It is important to remember that no two states have the same energy use profile and the risk of supply disruption is very dependant on the specifics of the energy distribution network serving the state. While there are many similarities and sharing of energy resources on regional bases, each state has its own unique set of needs, response mechanisms, laws and experience. Based on this, the manual distills what might best be called “essential” elements that are likely, but not guaranteed, to fit into most state energy plans in one form or another.

Energy Assurance and Emergency Planning Guidelines

- I. Executive Summary
 - A. Define audience for the document
 - B. Interdependency aspects of assembling an Energy Assurance Plan
 - a. Highlight the importance of communication and coordination
 - C. Major plan items

- II. Introduction
 - A. What is Energy Assurance and what constitutes emergency preparedness?
 - B. Organization of the document
 - C. Directions for using the manual
 - D. Purpose statement (why planning is needed)
 - a. Protect the public
 - b. Mitigate fuel shortages
 - i. Limitations of state set aside programs

- c. Meet state and federal requirements
 - E. What type of energy disruptions and shortages a state might experience
 - F. What are the key elements of a good Energy Assurance Plan?
 - a. What is involved in creating a plan?
 - b. Time, resource requirements
 - G. Revision check list
- III. Energy Assurance Considerations (how to strengthen supply network, including key energy assets to make them less vulnerable to disruptions)
 - A. State's role in critical infrastructure preparedness
 - B. Interdependency characteristics to assembling an Energy Assurance Plan
 - C. Interface with state critical infrastructure protection/ Homeland Security agencies
 - D. Energy generation facilities
 - a. Classification by energy source provided
 - b. Identification by amount of energy delivered
 - c. Location
 - E. Energy transmission facilities
 - a. Electric transmission (transmission, distribution infrastructure)
 - b. Gas transmission (e.g. pipelines)
 - c. Petroleum product pipelines and transport facilities
 - F. Handling critical infrastructure information
 - a. FOIA
 - G. Energy efficiency considerations
 - H. Alternate sources of energy
 - a. Renewable energy
 - b. Distributed generation issues
 - c. Supply diversification
- IV. Define and Clarify Organizational Relationships and Responsibilities
 - A. Legal authority identified and explained as needed
 - B. Explain relationship to state's emergency plan (e.g., ESF12 or equivalent)
 - C. Outline ESF12 responsibilities assigned to any of the following:
 - a. State Energy Office
 - b. Public Utility Commission
 - c. State emergency management agency
 - d. Governor's Office
 - e. Department of Transportation
 - f. Law enforcement
 - g. Homeland Security function
 - h. Local government
 - i. Others

- D. Discuss relationship with relevant federal and regional authorities
 - a. U.S. Department of Energy (OEA, EIA, EERE, FERC, Fuels, NRC, others)
 - b. Federal Emergency Management Agency (FEMA)
 - c. Federal Motor Carrier Safety Administration
 - d. U.S. Department of Agriculture
 - e. U.S. Department of Commerce
 - f. Environmental Protection Agency
 - g. U.S. Department of Homeland Security
 - i. Including coordination with law enforcement and intelligence
 - h. U.S. Department of Transportation
 - i. Federal Highway Administration
 - ii. Federal Maritime Administration
 - iii. Office of Pipeline Safety
 - iv. Federal Motor Carrier Safety Administration
 - i. Federal Aviation Administration (including airport infrastructure)
 - j. Regional Agencies
 - i. Regional governmental coordinating compacts and agencies (e.g. Bonneville Power Administration, RTO's, TVA)
 - ii. Regional energy organizations/councils (SSEB, WEB, etc)

- V. Outline of the plan's principal strategies for energy shortages (e.g., how to use the plan)
 - A. Ten things states can do to make a difference
 - B. Description of what to read first and where to look for answers
 - C. Describe "stages" of energy emergencies
 - D. List emergency measures by energy emergency stages (e.g., an energy response matrix that associates suggested responses with stages of shortage)
 - E. List primary state guidelines for allocating limited resources (e.g., end user priority lists)
 - F. Discuss order of response
 - a. Understanding state's energy profile and vulnerabilities
 - b. Basic role of the state's energy providers
 - c. What state officials can do (e.g., summary of detailed response suggestions to follow)
 - i. Define what response means
 - ii. Understand the matrix of responses contained in the plan
 - iii. Guidelines for choosing the appropriate response
 - iv. Identifying and coordinating stakeholders
 - v. Suggesting, implementing, managing response measures

- vi. Coordination
 - 1. Public and private sectors
 - 2. Regional
 - 3. Neighboring states
 - vii. Information management
 - viii. Monitoring
 - ix. Follow-up
- VI. Vulnerability Assessment Overview
- A. Vulnerability of population
 - a. Fuel related
 - b. Geographical impacts
 - c. Commerce
 - B. Asset Criticality
 - a. Relative vulnerability of key assets (non-specific to avoid classified information)
 - b. Interdependency of critical assets
 - c. Interstate and state downstream effects of challenges to critical assets
 - d. Application of technology and its limits - assets
 - C. Understanding Interdependencies (suggestive examples – “what happens if”)
 - a. Natural gas used for power generation is lost?
 - b. Electricity used for pumping petroleum product pipelines is blacked out?
 - c. Water and waste water systems cannot operate?
 - d. Essential social services are interrupted?
- VII. Essential Information for State Energy Emergency Responders
(Some states may prefer to place this information in an Appendix)
- A. Energy Profile and Assurance Basics
 - a. Basics of the state electricity industry
 - i. Investor owned
 - ii. Electric Membership Cooperatives
 - iii. Municipal Utilities
 - iv. Generation
 - v. Transmission
 - vi. Reliability councils Market dynamics
 - 1. Restructuring
 - b. Basics of the state natural gas industry
 - i. Local Distribution Companies
 - ii. Pipelines (inter and intra-state)
 - iii. Market dynamics
 - 1. Restructuring
 - 2. Merchant Plants

- c. Basics of the state petroleum industry (include LPG)
 - i. Major providers
 - ii. Wholesalers and jobbers
 - 1. Terminals and racks
 - iii. Retail
 - iv. Pipelines (inter and intra-state)
 - v. Transport
 - vi. Market dynamics
 - 1. International
 - 2. National
 - 3. Regional and local
 - 4. Delivery practices
 - 5. Pricing
 - 6. Other
 - B. State demographics
 - a. Population profile
 - b. Housing facts
 - c. Employment profiles
 - d. Sector energy use
 - i. Residential
 - ii. Commercial
 - iii. Industrial
 - iv. Transportation
 - C. Energy Emergency Stakeholders
 - a. Principal state energy providers (companies) described
 - b. Energy associations and related organizations
 - c. County and municipal government organizations
 - d. Out-of-state stakeholders
 - i. Interstate holding companies
 - ii. Federal agencies
 - iii. Regional entities
- VIII. Response Measures (*Should this section be organized by electricity, natural gas and petroleum? Measures could also be grouped by winter heating needs, summer cooling and peak electric load and transportation fuels?*)
 - A. Voluntary Responses (Short and Long Term)
 - a. Educational, media activities
 - b. What can consumer do as short-term action to reduce consumption?
 - c. Inform the public on the nature and severity of the problem
 - i. Ascertain state media response protocols
 - ii. Prepare and/or delivery information as needed
 - iii. Include generic explanations of electric and natural gas recovery efforts

- d. Low Income Home Energy Assistance Programs
 - e. Encourage energy efficiency measures for specific fuels, areas, or needs, e.g.
 - i. Telecommuting
 - ii. Mass transit subsidy
 - iii. 4 day work week
 - f. Fuel rule waivers where needed for regional and local
 - i. Driver hours pertaining to fuel transport and delivery
 - ii. Waiver for RFG requirements
 - iii. Environmental waivers for other fuels
 - iv. Assisting with tax consequences of on and off highway diesel for emergency use
 - g. Facilitate movement of petroleum products to disaster areas.
 - h. Act as liaison with energy industries and state emergency management staff
 - i. Assist curtailed and interruptible natural gas customers as needed
 - j. Assist LPG customers in obtaining delivery from non-contract providers as needed
- B. Mandatory Response (Long Term)
- a. Identify or establish priority needs essential services
 - b. For Petroleum Shortages Introduce mandatory curtailment/rationing measures
 - i. Odd-even gasoline purchase plans
 - ii. Minimum gasoline purchase plans
 - iii. Transportation plans
 - 1. Employer parking plans
 - 2. Mass transit supplement plans
 - 3. Combined ridership plans
 - iv. Public sector building temperature curtailment
 - v. Private sector building energy measures
 - vi. Petroleum product set asides
 - 1. State perspective on use of a state set aside, including existing or required authorities, parameters of anticipated use and potential limitations
 - e. Explain utility and LDC mandatory curtailment, capacity reductions, load shedding and other measures likely to be implemented
 - f. Coordinate (preferably through emergency management operations center)
 - i. Shelters (Red Cross, social service agencies)
 - ii. Energy company allocation of supply
 - iii. Explain curtailment of deliveries
 - iv. Encourage fuel switching

- IX. Federal response measures and legal and regulatory authorities (Seems like this should be addressed in a separate section for reference)

- X. Public Information
 - A. Public information programs and objectives
 - B. Program description and implementation
 - C. Operational considerations
 - a. Coordinating with other agencies and energy providers
 - i. Communication mechanisms between states and relevant federal agencies
 - b. Governor's participation
 - c. Regional and federal media response coordination
 - D. Equipment requirements
 - E. Data and information acquisition and dissemination
 - F. Working with legislative committees and other groups
 - G. Use of web sites, E-mail and Automated Mailing Lists

- XI. Energy Supply Monitoring
 - A. Energy supply monitoring activities (Communications with industry contacts and associations)
 - B. Monitoring electricity supplies
 - C. Monitoring natural gas supplies
 - D. Monitoring petroleum supplies
 - E. Other data sources
 - a. Weather
 - b. Heating degree days,
 - c. State and regional long range profiles for rain fall, storm temperature
 - d. Hydro
 - e. Economic factors
 - i. Demand
 - ii. Demographics
 - iii. Market dynamics

- XII. Appendices
 - A. Energy Profile and related factors above as state chooses
 - B. State contacts list
 - a. State agencies
 - b. In- and out-of-state energy providers
 - c. Other stakeholders
 - C. Detail listings of energy provider companies and organization units
 - a. IOUs
 - b. EMCs
 - c. Municipal utilities

- d. Terminals
- e. Other
- D. Communications protocols (Energy Emergency Assurance Coordinators EEAC)
 - a. Inter-jurisdictional agreements
 - b. Federal-state agreements
 - c. In state: state and local government protocols
 - d. NASEO – EIA
 - e. NASEO – NARUC

XIII. References

Central U.S. Earthquake Consortium, <u>A Framework for Action</u> , Annual Meeting, December 15-17, 1993.
Federal Emergency Management Agency, Partnerships in Preparedness, Washington, DC, December 1995.
NASEO, Guidance for State Energy Emergency Information Coordinators, www.naseo.org . March 2003.
NASEO, Various Summer and Winter Fuels Conferences, www.naseo.org . Semi-Annually.
NCSL, Energy Institute, Brown, Rewye, Gagliano, Energy Security, Denver/Washington, April 2003.
NCSL, Energy Institute, Energy Security, Conference, November 17,18, 2003, Denver, Co.
R.W. Greene, Confronting Catastrophe - A GIS Handbook, ESRI Press, Redlands, CA 2002.
The Strom Thurmond Institute, Badolato et al., Hurricane Hugo - Lessons Learned in Energy Emergency Preparedness, Clemson University, 1990.
The Strom Thurmond Institute, Badolato et al., Regional Differences, Common Concerns - Federal-State-Industry Roles in Energy, Emergency Preparedness, Clemson University, 1988.
US Dept of Energy, Oak Ridge National Laboratory, Handbook for State Energy Emergency Planning, Washington, DC, December 1990.
US Dept. of Energy, Infrastructure Assurance Center, Argon National Laboratory, Planning for Electric Power Disruptions- Chicago Metropolitan Area, February 2001.
US Dept. of Energy, Infrastructure Assurance Center, Argonne National Laboratory, Planning for Natural Gas Disruptions- Chicago Metropolitan Area, December 2002.
US Dept. of Energy, Office of Energy Assurance, Energy Assurance: State Stakeholder Meeting, June 9-10, 2003, Washington, D.C.