

State Energy Assurance Planning Framework

Prepared by the National Association of State Energy Officials

The purpose of this framework is to assist states in the design, development, and writing of the State Energy Assurance Plans that have been funded by DOE/OE. This framework is based on [State Energy Assurance Guidelines](#) version 3.1 December 2009 and the following planning elements should be considered for inclusion in any well developed state plans. These are NOT required elements, rather ones that should be considered and used as appropriate in State plans which will vary based on the needs of each state.

The sequence of topics or elements should be arranged so that they best meet state needs and the flow of the states' plans. Finally, the elements of the plans may vary according to the state agency that is drafting them or executing them in accordance to its particular legal and regulatory framework. This is, however, a "state plan" and should include the roles, responsibilities and response of all state agencies that have a role in responding to energy emergencies and to support efforts to reduce the risk and vulnerabilities of critical energy infrastructures and enhance their resiliency in partnership with the private sector.

Plans can be in a single planning document or in several different documents or volumes. If multiple documents are used, there should be one document that ties them together and explains their relationship to one another.

The state will need to make a determination as to whether parts, or entire Plans, are sensitive and can be exempt from disclosure under state freedom of information acts or sunshine laws. Any section of the Plan that is exempt from public disclosure should be in a separate section of the Plan and appropriately labeled as such in the header or footer of each page.

Emergency preparedness includes activities associate with assuring that staff is trained on the plan and its implementation and undertakes periodic training to remain current with state and federal plans. Exercises are another important element of preparedness and are provided for as part of the energy assurance program. These preparedness elements are not included in the following outline, but could be elements of the plan.

More guidance on the planning "process" can be found in a document titled: "Developing and Maintaining State, Territorial, Tribal, and Local Government Emergency Plans" (March 2009) prepared by the Department of Homeland Security, FEMA. This guidance is intended to promote a common understanding of the fundamentals of planning and decision making to help emergency planners examine a hazard and produce integrated, coordinated, and synchronized plans. See: http://www.fema.gov/pdf/about/divisions/npd/cpg_101_layout.pdf

State Energy Assurance Plan(s) (Level 1 Outline)

1. Executive Summary
2. Introduction and purpose of the document(s)

PART I Operational Elements

3. Summary Description of the state's Energy Used and Expenditures¹.
4. Description of events in the state that have historically caused energy disruptions and state actions that have been taken in response and the potential for future events.
5. [State agencies and their roles \(include organizational charts\) and relationship with Federal, Regional and Local Authorities.](#)
6. Private energy producers, largest consumers, associations and their interaction with state, federal and local authorities.
7. [Methods for assessing the consequences and severity of energy emergencies and tracking the rate of recovery.](#)
8. [Emergency communication procedures](#)
9. [Management decision process](#)
10. [Legal authorities](#)
11. [Public information program](#)

Part II Contingency Plans

12. Energy Emergency Response Plans²
 - a. [Petroleum](#) products and ethanol, biodiesel and other liquid energy resources
 - b. [Natural gas](#)
 - c. [Electricity and energy resources used to generate electricity](#) (including coal, renewables (wind, solar, etc.) energy efficiency and smart grid)
13. [Describe linkages to other state and federal response plans and procedures](#)
14. Describe linkages to non-government private sector response plans and procedures

Part III Critical Energy Infrastructure Plans

15. [State Plan for Enhancing the Resiliency and Protecting Critical Energy Infrastructure](#) (Note: much if not all of the information in this section of the plan may be considered sensitive and treated as confidential due to the security implications and may be better bound in a separate document or appendix, see [Guidelines page 19](#))

¹ For one example see <http://www.dleg.state.mi.us/mpsc/reports/energy/energyoverview/>

² The risk of a disruption due to a cyber attack should be addressed as part of the plans for each energy resource. For further information see [Cyber Security page 23](#), State Energy Assurance Guidelines Version 3.1 December 2009

Detailed Framework for State Energy Assurance Plans (*Level 2 Outline*)

1. Executive Summary
 - a. Should summarize the plans to effectively communicate with policy makes
2. Introduction and purpose of the document
 - a. Should include a schedule for how often the plans should be regularly reviewed and update
3. Summary Description of the State's Energy Used and Expenditures (Draw from the EIA [State Energy Data Reports](#)³)
4. Description of events in the state that have historically cause energy disruptions, and state actions that have been taken in response and the potential for future events.
5. State agencies and their roles (include organizational charts) and relationship with Federal, Regional and Local Authorities.
 - a. Energy emergency response and
 - b. Energy critical infrastructure production and enhancement of resiliency ([see Energy Sector Specific Plan](#))
 - c. Cyber Security ([see Guidelines page 23](#))
6. Private energy producers, largest consumers, associations and their interaction with state, federal and local authorities.
7. Assessing the consequences and severity of energy emergencies and tracking the rate of recovery⁴. ([see Guidelines Appendixes D and E](#))
 - a. Methods for ongoing monitoring of energy markets
 - b. Sources of data including used including the Energy information Administration, trade press, and other sources of information
 - c. Energy Private Sector Contacts
 - d. Data analysis capabilities and the use of forecasts
 - e. State sources for situation analysis including sector specific agencies and the emergency management and homeland security agencies
8. Emergency Communication Procedures internal to state and local government and with the private sector in monitoring the events and recovery efforts. (Describe how information is shared and with whom, what information is shared⁵ and the communication channel used, phone, e-mail, etc. Accurate and updated 24 hour emergency contact lists should be prepared and updated annually (may be included as an Appendix to the plan or bound separately to improve readability and to facilitate future updates).
 - a. Within state energy agencies
 - b. With other states departments or agencies including the emergency management agency and the position of individuals e.g. Director or Supervisor of XYZ

³ For one example see <http://www.dleg.state.mi.us/mpsc/reports/energy/energyoverview/>

⁴ Note: section 6, 7 and 8 alternatively could be organized by energy resources, i.e., petroleum, natural gas and electricity which each of these topics specifically discussed for each.

⁵ The use of flow charts may be helpful.

- c. Role of the State Energy Emergency Assurance Coordinators, ([see Guidelines page 39](#))
 - d. Contacts with the Private Sector (including producers, transporters, gatherers and largest consumers)
9. Describe Management Decision Process:
- a. Who is responsible for the identification and assessment of disruptions or potential for disruptions, i.e. quantification of the scope, potential duration, severity and duration of an event?
 - b. Describe how the information is validated and when it finalized who is it provided to as described in the emergency communication procedures
 - c. Describe who formulates recommendations for any actions that might be taken in response and who will be involved in the decision making process. From what plans and legal authorities will these be drawn? This can range from simply increased monitoring to Declaration of an emergency or disasters. ([See Figure 5 in the guidelines page 45](#)).
 - d. Procedures for issuing a declaration
 - i. Energy emergency
 - ii. General emergency or disaster
10. Identify what are available legal authorities that can be used in response to an emergency? ([see Guidelines page 30](#))
- a. States Statues
 - b. Executive Orders
 - c. Administrative Rules or emergency rules
 - d. Public utility commission orders
 - e. Federal authorities effecting states (emergency waivers, exemptions others)
 - f. Other authorities
 - g. Voluntary appeals
11. Public Information Program, ([see Guidelines page 69](#)). How will communication with the media be handled and who will serve as the spokesperson for the state or state agencies as appropriate. This will vary and should be defined based on the scope of the events.
- a. Coordination and roles
 - i. State Agency Staff
 - ii. Governor's Office
 - iii. Joint Information Center (JIC) if activated in a disaster
 - b. Operational Considerations
 - c. Data and Information Acquisition and Dissemination
 - d. Equipment requirements, such as phone banks, computers, and required for press briefing, etc.
12. Energy Emergency Response Plans^{6, 78}

⁶ For each specific response measure [each element of the design of the measure](#) should be addressed as outlined beginning on [page 46](#) of the State Energy Assurance Guidelines, Version 3.1 December 2009

⁷ The risk of a disruption due to a cyber attack should be addressed as part of the plans for each energy resource. For further information see Cyber Security [page 23](#), State Energy Assurance Guidelines Version 3.1 December 2009

- a. Petroleum – Gasoline, Diesel Fuel, #2 Heating Oil, Propane, Ethanol, Biodiesel, Other.
 - i. Description and location, capacity and throughput of petroleum Infrastructure
 - ii. Monitoring Supply and Demand
 - 1. Describe how the disruption or energy emergency will be monitored and the data, tools and methods that are available to undertake the assessment. (Reference material may be included in one or more appendices’)
 - 2. Describe how response and recovery efforts will be monitored and how the estimated rate of recovery to normal conditions will be monitored.
 - 3. Describe historical linkages and how the associated effects will be identified, monitored and communicated
 - iii. Managing Supply and Assuring Essential Public Needs. (see Guidelines page 64)
Examples include, but are not limited to:
 - 1. Driver Hour Waivers (see Guidelines page 66)
 - 2. Fuel Specification (Environmental) Waivers (see Guidelines page 68)
 - 3. Priority Energy Users Programs/Policies (See Guideline page 65)
 - 4. State Set-aside programs (See Guidelines Appendix F)
 - 5. Plans for resupply of gas stations on evacuation routes and in the recovery phase (see Guidelines page 65)
 - 6. Use and recovery of ethanol and biodiesel supply
 - iv. Reducing Demand. (see Guidelines page 64) Examples include, but are not limited to:
 - 1. Telecommuting
 - 2. Ridesharing/vanpooling programs
 - 3. Programs to increase the use of mass transit and mass transit deployment
 - 4. Improved vehicle maintenance
 - 5. Alternative fuels vehicle programs
 - 6. Public Information based emergency conservations actions
 - 7. Reduction of highway speed limits
 - 8. Home energy saving recommendations (propane/fuel oil)
- b. Natural Gas⁹ (see Guidelines page 56)
 - i. Description and location, capacity and throughput of natural gas Infrastructure
 - ii. Monitoring Supply and Demand
 - 1. Describe how the disruption or energy emergency will be monitored and the data, tools and methods that are available to undertake the

⁸ This should include a schedule reflecting regular review and updating of the plan and the agency that is responsible for initiating this actions.

⁹ This plan should be prepared in close coordination with the state public utility commission. There may be tariffs, rules or commission orders that may govern emergency actions to be taken by utilities they regulate. This section of the plan may be description only with regards to actions take by electric utilities which would precede any actions that may be required by the state.

- assessment. (Reference material may be included in one or more appendices')
2. Describe how response and recovery efforts will be monitored and how estimated of the rate of recovery to normal conditions will be monitored
- iii. Managing Supply and Assuring Essential Public Needs
 1. Curtailment provisions in Local Distribution Utilities tariffs, or Public Utility Commission rules or orders for end use customers and transportation customers
 - iv. Reducing Demand
 1. Reduction in natural gas usage in state facilities (executive order or directive)
 2. Public information program on residential conservation measures
 3. Use of any potential fuel switching options
 4. Reduction in natural gas fired electric generation
 5. Industrial conservation measures.
 6. Temperature reduction initiatives where applicable
 - a. Electricity and Energy Resource used to Generate Electricity¹⁰ (including coal, renewables (wind, solar, etc.) energy efficiency and smart grid) (see [Guidelines page 49](#))
 - v. Description and location capacity and throughput of electric generation, transmission and distribution Infrastructure including renewable energy resources and energy efficiency programs
 - vi. Description of systems used to supply energy resources for power generation
 - vii. Monitoring Supply and Demand
 1. Describe how the disruption or energy emergency will be monitored and the data, tools and methods that are available to undertake the assessment. (Reference material may be included in one or more appendices')
 2. Describe how response and recovery efforts will be monitored and how estimated of the rate of recovery to normal conditions will be monitored.
 - viii. Independent System Operator Emergency Response Plan Summary (if applicable)
 - ix. Transmission System Operator Emergency Response Plan Summary (if applicable)
 - x. Local Distribution Utility Emergency Response Plan Summary
 - xi. State Actions to managing supply and assure essential public needs
 - xii. Uses and recovery of wind, solar and other power supply resources

¹⁰ This plan should be prepared in close coordination with the state public utility commission. There may be tariffs, rules or commission orders that may govern emergency actions to be taken by utilities they regulate. This is likely to include reporting of power outages, as one example. This section of the plan may be description only with regards to actions taken by electric utilities which would precede any actions that may be required by the state

- xiii. State Actions to reducing demand
 - 1. Reduction in electric usage in state facilities (executive order or directive)
 - 2. Expansion of Energy Efficiency programs
 - 3. Demand response
 - xiv. Smart Grid role and use in outages (if applicable)
 - xv. Cyber Security requirement for the Smart Grid (Role of the state)
13. Describe linkages to other response plans and procedures
- a. State Emergency Management or Disaster plan
 - i. Energy Emergency Annex or section
 - ii. [Emergency Support Function 12 Energy](#)
 - iii. Incident Command
 - 1. [National Incident Management System](#)
 - iv. Other state agency plans
 - 1. Cyber security
 - b. Federal Plans
 - i. A brief summary of the [National Response Framework](#) may be useful to include
 - c. Federal authorities (See [Appendix C of the state Energy Assurance Guidelines](#))
 - d. Other Plans
14. Describe linkages to non-government private sector response plans and procedures
15. For significant disaster events states should prioritize the recovery of social and economic critical infrastructure and should coordinate with the private sector.
16. State Plan for Enhancing the Resiliency and Protecting Critical Energy Infrastructure (*Note: much if not all of the information in this section of the plan may be considered sensitive and treated as confidential and may be better bound is a separate document or appendix, see [Guidelines page 19](#)*)
- a. Does the state have a Plan for Critical Infrastructure Protection, how is the Energy Sector addressed in this plan and how are the public and private sector plans coordinated?
 - b. What are the roles and responsibilities of the state agencies involved with Critical Infrastructure Protection? ([see Guidelines page 16](#))
 - c. Description and prioritization of critical state energy infrastructure and key assets
 - d. Assessing risk, vulnerabilities, criticality and the nature of the threat. Includes the assessment to recover into a normal state and the long-term impacts that may not be apparent in the short-term (e.g. long-term financial impact)
 - e. Identifying Protective Measures
 - i. Developing investments that build resiliency ([see Guidelines page 9](#))
 - ii. Diversification of energy sources and integration of renewable resources (wind, solar geothermal, other)

- iii. Enhance reliability and resiliency¹¹ Increased efficiency of systems
 - iv. Development of Smart or Intelligent Power Grid
 - v. Cyber Security programs and initiatives
 - f. Policies and Procedures for Protecting sensitive information
 - g. What framework might exist that supports the Public Private partnership as described in the [National Infrastructure Protection Plan](#)
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¹¹ Owner and operator of critical energy infrastructure should consider energy alternatives ,diversification and improved efficiency as part of their planning including Continuity of Operations Plans (COOP)

Response Measure Elements (*Level 3 Outline*)

For each contingency the following items should be considered and described as appropriate in the planning document. (See [Guidelines page 46](#))

1. **Program Elements**
 - a. Description of the Measure
 - b. What is the Intent of the Measure
 - c. When the Measure should be used.
 - d. Legal Authority
2. **Coordination**
 - a. Role of the private and public sectors
 - b. Relationship to the state's emergency management plan
 - c. Affects on other jurisdictions, regional entities and the federal government
 - d. How will local governments be effected or have a role?
3. **Implementation**
 - a. Estimated budget and staffing
 - b. Estimated computer requirements and security
 - c. Procedures
 - d. Implementation lead time
 - e. Administration including the roles of other state or local agencies
 - f. Evaluation mechanisms
4. **Impact Assessment**
 - a. Estimated demand reduction
 - b. Estimated reductions in fuel consumption
 - c. Estimated increase in supply
 - d. Interdependency effects
 - e. Social impacts
 - f. Economic/financial impacts
 - g. Information management
 - h. Programmatic threats (for instance those associated with new or obsolescence technology)
5. **Risk Management**
 - a. Historical performance and deviation of response measure (i.e. lessons from the past)
 - b. Define and monitor critical elements for the successful performance of the response measure
 - c. Identify medium-to-long term impacts to reduce unintended consequences.