

# ESF 12

## Emergency Operations Plan – Emergency Support Function 12 *Energy*

# Section 1: Introduction

## 1.1 Lead Agencies

- Public Utilities Commission (PUC)
- Governor's Energy Office (GEO)

## 1.2 Supporting Agencies

Department of Defense, Veterans, and Emergency Management - Maine National Guard (MENG)

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## Section 2: Purpose, Scope, Situation, and Assumptions

### 2.1 Purpose

Emergency Support Function 12 (ESF-12), Energy, provides a framework for coordination for emergency response measures used by the MEMA, PUC, GEO, other state agencies, non-government organizations, and private utilities in responding to and recovering from fuel shortages, power outages, and capacity shortages caused by an emergency incident, major disaster, acts of war, terrorism (physical or cyber), or civil disturbance in the state of Maine.

### 2.2 Scope

This annex is applicable to agencies and departments in the state of Maine, as well as affiliated energy partners, with a role in fuel and power supply activities in response to an emergency incident or major disaster. ESF-12 will coordinate the emergency supply and transportation of fuel and the provision of emergency power to support immediate response operations as well as the restoration of the normal supply of power. ESF-12 will work closely with local, state, and federal agencies, energy offices, suppliers, generators, transmission and distribution entities, and fuel delivery organizations (e.g., motor transport association, pipeline owners, petroleum terminal operators, railroads).

As the situation develops, agencies within ESF-12 will work collaboratively to provide coordination and support to local jurisdictions based on their agencies or organizations unique areas of expertise, resources, and authorities, to include the following:

- State assistance will be prioritized in the following manner:
  - Coordinate the supplying of fuel to emergency response organizations, critical infrastructure, and in areas along evacuation routes.
  - Coordinate the supplying of technical personnel, equipment, materials, and supplies, support of efforts by EOCs and ESFs to repair or restore essential operating facilities and infrastructure.
  - Update emergency shelter power status and unmet needs in coordination with the American Red Cross (ARC) and ESF 6, Mass Care. Assist in providing resources for emergency power generation.
  - In coordination with ISO New England, provide emergency planning, data analysis, forecasting of the energy situation, and implementation of energy conservation measures.
- ESF-12 agencies will coordinate with other state, local, and federal agencies, private utilities, industry, and through the Public Information Officer (PIO) in carrying out their responsibilities.

### 2.3 Situation

ESF-12 addresses significant disruptions, as determined by the State Emergency Operations Center (SEOC) Manager, in energy supplies for any reason, whether caused by physical or cyber disruption of energy transmission and distribution or delivery systems, unexpected operational failure of such systems, or unusual economic or international political events. Electric energy shortages may result from generation capacity shortages, transmission limitations, or fuel curtailment. Generation capacity shortfalls will likely occur during extreme weather conditions.

However, they could also be the result of a higher-than-projected demand for energy during periods when generating units are normally unavailable due to scheduled maintenance or unplanned generating unit outages. Other energy shortages, such as interruptions in the supply of natural gas or other petroleum fuels for automotive transportation and other industrial uses, may result from extreme weather conditions, work stoppages, or international embargoes.

## 2.4 Assumptions

- The impact of a major natural disaster or a technological or other man-made event affecting one or more areas of the state could result in an energy emergency when demand for electricity, fuel, or any other material related to energy production exceeds the available supply. The secondary effects of damage to energy systems in the state could render local support systems inoperable for a prolonged period.
- Dispersed and widespread damage from a disaster will hinder restoration of energy-distribution facilities, which can directly impact other critical facilities and systems such as transportation, communications, and utility systems. Failure of these systems has a direct effect on a community's ability to recover from a disaster, which is why timely restoration of energy supply systems is vital.
- The restoration of normal operations at energy facilities and distribution systems is the primary responsibility of the facility/infrastructure owners. However, since the restoration of normal operations is critical to the recovery process, ESF-12 through the SEOC may provide the appropriate supplemental state assistance and resources to facilitate restoration in a timely manner.
- Demand on local resources in anticipation of or response to a major threat may overwhelm local energy capabilities and fuel availability.
- The GEO has authority under 37-B M.R.S.A. section 742, and pursuant to 49 CFR, part 390.23, of facilitating a waiver to the U.S. Department of Transportation, Federal Motor Carrier Safety Regulations, specifically 49 CFR, part 395, Hours of Service of Drivers.
- During periods of abnormal weather, or in the event of multiple unanticipated generating unit outages, there may be times when generating capacity falls short of customer demand. That said, this has not happened in recent history. If there was a catastrophic failure, it would be a region-wide failure, as our electric grid is maintained as a region.
- Widespread and prolonged electrical power failure may occur in the event of an emergency or major disaster. Without electric power, communications will be affected and traffic signals will not operate, causing gridlock. Public health and safety services will be impacted. Outages will impede the distribution of petroleum products to support emergency power generation.
- Fuel hoarding will likely occur when prolonged fuel scarcities are anticipated.
- Affected areas may not be readily accessible, except by air.
- ESF-12 will communicate and coordinate with state, county, and local support agencies, private industry, and the utilities to prioritize emergency support and energy restoration efforts.

## Section 3: Concept of Operations

### 3.1 General

This annex will be activated at the direction of MEMA when there is the potential for a disaster or an existing disaster requiring statewide coordination of resources. Upon request from MEMA, ESF-12 agency liaisons will report to the SEOC to coordinate resources to support the response to energy-related emergencies and requests for assistance. The lead agencies will provide direction to and work in conjunction with the support agencies to coordinate all state-level activities associated with ESF-12 in as efficient a manner as possible, with prioritization for the protection of life and property.

Each responsible agency/organization supporting this annex shall designate a minimum of four trained persons to serve as a representative for their respective agency/organization at the SEOC to support ESF-12 activities.

MEMA is responsible for coordinating the functions of ESF-12 and for bringing additional resources from other federal and state agencies, as needed.

- Energy and fuel-related response activities will be provided upon mission assignment from MEMA only when county and local resources are deemed inadequate or potentially inadequate, in responding to and recovering from the incident. Operations will continue at the SEOC until the SEOC returns to normal operations or as otherwise directed.
- Responsible agencies are assigned to ESF-12 to support the restoration of energy services and resources, including fuel shortages, power outages, and capacity shortage after a major disaster or emergency. Although the composition of the responding agencies will likely change as a result of the nature of the event and planning process, it is anticipated that these agencies and the other supporting organizations will constitute the basis for providing energy-related assistance.
- When electric utility operating reserves are nearly exhausted, and there is an immediate possibility of curtailment or loss of firm load, or when other energy supplies (such as natural gas or automobile fuel) are disrupted, an appraisal of the situation will be made by designated authorities and personnel.
- Emergency organization personnel are mobilized to direct and coordinate relief efforts, communicate with the public and appropriate governmental agencies, and ensure restoration of normal service.

The following are the objectives of ESF-12:

- Establish a framework for state-level emergency-related energy prevention, preparedness, mitigation, response, and recovery activities;
- Share information and coordinate response activities across pertinent state agencies regarding energy related requests for assistance in a manner that ensures consistency with established state policies and procedures;
- Monitor and mitigate potential effects of a disaster on critical state-level energy infrastructure before, during, and after an incident, with particular attention to problems that may threaten public safety or disrupt response activities;
- Provide situational awareness and expertise on the status of energy infrastructure and fuel supplies in Maine and neighboring states and Canada;

- Assess energy system damage, energy supply, demand, and resources needed to restore such systems.
- Assist state, local, and tribal agencies in obtaining fuel for transportation and emergency operations.
- Administer, as needed, statutory authorities for energy priorities and energy allocations.
- Coordinate with federal ESF-12 and support agencies to assist energy suppliers in obtaining information, equipment, specialized labor, fuel, and transportation to repair or restore energy systems.
- Recommend local and state actions to save energy in response to an emergency incident or major disaster.
- Coordinate with local, state, and federal agencies to provide emergency energy information, education, and conservation guidance to the public.
- Coordinate information with local, state, federal officials and energy suppliers about available energy supply recovery assistance.
- Recommend to the State Coordinating Officer (SCO) and the Federal Coordinating Officer (FCO) priorities to aid restoration of damaged energy systems.
- Process all fuel and power assistance requests from local Emergency Operations Centers (EOCs) and ESFs received through the SEOC.

## 3.2 Activities

Responsible Agencies for ESF-12 should conduct the following actions:

### a. Prevention

- Communicate and share information across agencies with energy responsibilities.
- Collaborate and coordinate on energy related reliability and security (physical and/or cyber) initiatives.
- Identify opportunities to collaborate on protection of critical energy and fuel related infrastructure and key resources in the state of Maine.
- Identify potential emergency energy issues and collaborate to develop or recommend protocols, procedures, and policies to prevent or mitigate their effects.

### b. Preparedness

- Notify MEMA of any changes that may impact the operation of this ESF.
- Participate in meetings of ESF stakeholders if coordinated by MEMA to review and update the ESF annex.
- Develop and maintain internal agency operational plans and procedures, resource directories, and emergency contact lists to support ESF-12 activities.
- Ensure procedures are in place to access directory information and quickly notify personnel in support of this plan.
- Maintain current inventories of respective agency facilities, equipment, materials, supplies, special capabilities, and personnel throughout the state.
- Complete appropriate training and participate in exercises, as requested.
- Ensure that all responsible agencies have pre-designated staff available to support this annex and SEOC operations.

- Participate in scheduled exercises and training in order to test, validate, and provide working experience for ESF-12 liaisons on this annex and related procedures.

## c. Response

### i. Pre-Impact

- Provide at least two representatives to the SEOC to support ESF-10. A total of four personnel must be trained to support the lead agencies.
- Maintain communications within the SEOC, obtain status reports, and keep the SEOC informed of progress of assigned tasks.
- Notify the appropriate points of contact at each responsible agency and organization to pre-position resources and response personnel, as needed.
- Review existing plans and procedures.
- Ensure responsible agency decision makers are kept informed of the situation.
- Coordinate information collection and summarization to verify energy damage assessment, restoration activities, capabilities, and inventories, and report this information on a regular basis to the SEOC Planning Section.
- Provide situational awareness information for reports and/or statements to the SEOC Planning Section, as needed.
- Identify available resources and coordinate the mobilization and pre-positioning of response resources, once it is apparent that state energy resources will be required or as requested by the SEOC Manager.

### ii. Initial Response

- If agency has not already done so, provide appropriate representative(s) to the SEOC to support ESF-12.
- Designate appropriate staff to support response.
- Verify inventories of available resources and provide a summary listing to the SEOC Operations and Logistics Section Chiefs.
- Establish communications with appropriate agency field personnel to coordinate response efforts.
- Establish and maintain communications with utility representatives and/or fuel suppliers to determine response and recovery needs.
- Provide situational awareness information for reports and/or statements to the SEOC Planning Section, as needed. In addition, use information provided by the SEOC Planning Section to plan effective response actions.
- Develop and prioritize strategies to support initial response, to include the mobilization of resources and personnel.
- Ensure establishment of communications with the SEOC to coordinate the response and planning efforts for the emergency or major disaster.
- Oversee implementation of pre-determined cost accounting measures for tracking overall ESF-12 personnel, equipment, materials, and other costs incurred during emergency response actions.
- If not already completed, pre-position response personnel and equipment when state energy resources will likely be needed.
- Conduct an initial assessment of energy needs, and assemble and analyze energy data for forecasting future energy availability.



- Monitor the procedures followed by utilities during shortages of energy-generating capacity to ensure statewide action and communication.
- Determine the generating capacity in the state of Maine, peak loads expected throughout the duration of event, explanation of utilities' actions, and recommendations of state and local agency actions in support of the utilities.
- Coordinate with county governments, trade associations, industry, the media, and federal counterparts.
- Monitor procedures and activities of the petroleum industry regarding emergency fuel supplies.
- Coordinate with MEMA, DPS, and the Governor's Office to obtain driver hour waivers to assist in obtaining emergency supplies of petroleum and propane products.
- Coordinate with federal ESF counterpart, as needed.

**iii. Coordination with other ESFs**

- ESF-1, Transportation, for the reallocation of critical energy supplies.
- ESF-13, Public Safety and Security, for energy and utility-related traffic control needs and public safety and security.
- ESF-13, Public Safety and Security, to coordinate security for vital energy supplies.
- ESF-15, External Affairs, to update news organizations with assessments of energy supply, demand, and resources available to repair or restore energy generation and distribution systems.
- ESF-15, External Affairs, to provide energy emergency information and guidance to the public.
- Other ESF teams in anticipation of projected energy-related needs and coordinate appropriate response efforts

**iv. Ongoing Response**

- Monitor state, county, local, utility, and fuel oil organization response actions.
- Assess requests for aid from county, local, state, and federal agencies, and energy offices, suppliers, and distributors.
- When requested, coordinate with responsible agencies to obtain needed resources to repair damaged energy systems. Coordinate with the SEOC Manager and state and local emergency organizations to establish priorities for repairing damage to energy generation and distribution systems beyond those already established between responsible agencies and local emergency organizations.
- Coordinate with ISO New England on operating procedure action levels and any necessary public appeals for voluntary conservation.
- Keep accurate logs and records of emergency responses.
- Provide information to the Planning Section, as needed, to update Situation Reports and Incident Action Plans.
- Document observations and recommendations for after-action reports and other reports as appropriate.

**d. Recovery**

- As needed, coordinate resources to support energy-related requests for assistance during recovery.
- Provide assistance and technical expertise to MEMA damage assessment teams.

- Anticipate and prepare to provide technical assistance, personnel, and resources to support ongoing restoration of utility and fuel infrastructure.
- Participate in after-action reviews.

**e. Mitigation**

- Identify potential emergency energy issues and collaborate to develop or recommend plans, protocols, procedures, and policies to prevent or mitigate their effects.
- As needed, conduct assessments of ESF-12 capabilities to identify potential resource shortfalls.
- As needed, develop plans to mitigate identified shortfalls of resources

## Section 4: Responsibilities

### 4.1 Lead Agencies

#### a. Public Utilities Commission – *electricity*

PUC monitors the performance of utility distribution systems, restoration of utility services, and capability to respond to outages. Responsibilities include:

- Report to the SEOC, as directed, to staff the ESF-12 work station.
- Identify and coordinate ESF-12 staffing requirements at the SEOC.
- Direct, coordinate, and integrate the overall state effort to provide resources needed for energy restoration.
- Develop written procedures to implement ESF-12 responsibilities, as necessary.
- Maintain communications with electric and natural gas providers and other essential energy components of the affected area to obtain information concerning damage and required assistance in their areas of operation.
- Monitor the actions taken by the individual utilities during generating capacity shortages and the actions taken by other utilities to ensure coordinated statewide action and communications.
- Coordinate with ISO New England, and electric utilities to compile the following information:
  - Electric generating capacity in the State of Maine,
  - Expected electric peak load in the State of Maine,
  - Geographic areas and number of customers expected to be most severely affected, if available,
  - Status of any major generating unit outages,
  - Expected duration of event,
  - Explanations of utilities planned actions, and
  - Recommendations of agency actions in support of the utilities.

Where applicable, these requirements also relate to other energy sources that include, but are not limited to, natural gas, wind, oil, and propane.

In addition to the above list, provide information related to outages (customers impacted/estimated restoration times), utility demand, utility planned actions, and recommendations of agency actions in support of utilities.

- Implement energy emergency procedures for reducing demand, when necessary.
- Communicate and coordinate with county, local, state, federal agencies, and organizations in coordinating resources to respond to any energy emergencies and work on energy restoration.
- Ensure that necessary cost accounting measures are being used by all support agencies and that summary reports are generated, as needed, and shared with SEOC Command Staff.
- Coordinate with other ESFs to obtain information related to vendors, volunteer groups, and other organizations that may be able to supplement local and state transportation resources.
- Provide regular updates on ongoing ESF-12 operations to the SEOC Operations and Planning Sections.

- Coordinate with other responsible agencies to commit agency resources for energy resources and prioritize needs based on the protection of life and property.
- Work with ISO New England to coordinate with private energy suppliers to obtain status information on a regular basis.

#### **b. Governor's Energy Office - fuel**

GEO is responsible for planning and coordinating state energy policy and serves as the primary energy policy advisor to the Governor. As the designated State Energy Office, the GEO is charged with providing leadership in the development of public and private partnerships that achieve clean, reliable, affordable, efficient, sustainable, indigenous, and renewable energy resources. It is the responsibility of the GEO to work in conjunction with other departments of State Government, the Legislature, and private and nonprofit sectors to advance and optimize Maine's energy security, economic development, and environmental health. The GEO develops and implements policies and programs aimed at ensuring the adequacy, security, diversity, and cost-effectiveness of the State of Maine's energy supply within the context of creating a cleaner energy future.

- Allocate state-owned/administered fuel, when necessary and available.
- In the event of a shortage of automobile fuel or fuels needed for other industrial purpose, the ESF-12 lead will coordinate with industry trade groups and associations to obtain essential fuel supplies.
- Coordinate with ESF-13, Public Safety and Security, to obtain waivers for industry requests for waivers to hours of service for energy industry truck drivers and overweight energy transportation vehicles, as necessary.
- Coordinate with the ESF-3, Public Works and Engineering, to obtain necessary emergency environmental waivers.
- Coordinate with other agencies and organizations, as necessary.
- Develop protocols to establish priorities to repair energy systems and coordinate the provision of temporary, alternate, or interim sources of natural gas supply, electric power, wind, and propane fuels.

## **4.2 Supporting Agencies**

### **a. Department of Defense, Veterans, and Emergency Management - Maine National Guard**

Provide personnel and equipment (e.g., line trucks, splicer trucks, trenchers, cable line trucks, and power generation equipment) to support missions if requested.

### **b. Other Agencies**

Other agencies (e.g., governmental and non-governmental agencies) not explicitly named in this plan may have authorities, resources, capabilities, or expertise required or needed to support ESF-12 activities. These agencies may be requested to support ESF-12 activities on an as needed basis.

## Section 5: Supplementary and Procedural Documents

- MEMA Electric Procedures
- Maine Energy Assurance and Emergency Management Plan  
[http://maine.gov/energy/pdf/EAP\\_Final\\_7.2012.pdf](http://maine.gov/energy/pdf/EAP_Final_7.2012.pdf)

## Section 6: References

- Effects of Geomagnetic Disturbances on the Bulk Power System
- Energy Fast Facts July 2014
- Issues Affecting Co-Location of Energy Infrastructure 2011
- Maine Biofuels in Heating Oil 2011
- Maine Combined Heat and Power 2010
- Maine Energy Profile 2014
- Maine Hydropower Study 2015
- Maine Waste to Energy Power 2011
- Oil Dependence Reduction Assessment 2013
- Oil Dependency Reduction Policy Recommendations
- Reliability Guideline: Geomagnetic Disturbances
- Residential Geothermal Heating and Cooling Systems in Maine
- Review of Terms and Conditions for Long-Term Contracts and Renewable Ocean Energy
- Guidelines for Activating Canadian Utilities
- United States Electricity Industry Primer
- Maine Energy Risk Profile <http://www.energy.gov/sites/prod/files/2015/05/f22/ME-Energy%20Sector%20Risk%20Profile.pdf>
- Maine Comprehensive Energy Plan Update 2015  
<http://maine.gov/energy/pdf/2015%20Energy%20Plan%20Update%20Final.pdf>