

Emergency Support Function #12 ENERGY

Lead Agency

- Virginia Department of Emergency Management (VDEM)

Support Agencies and Organizations

- Department of Mines, Minerals and Energy (DMME)
- State Corporation Commission (SCC)
- Virginia Electric Cooperatives
- Dominion Virginia Power
- Appalachian Power Company (APCO)

Purpose

Emergency Support Function (ESF) #12 is responsible for coordinating the restoration of damaged energy systems and components during an emergency incident.

Scope & Applicability

ESF #12 collects, evaluates, and shares information on damaged energy systems and estimates the impact within the affected areas. The term “energy” includes producing, refining, transporting, generating, transmitting, conserving, building, distributing, and maintaining energy systems and system components. Additionally, ESF #12 provides information concerning the energy restoration process such as projected schedules, restoration timelines, geographic information on the restoration, and other information as appropriate.

Policies

- All agencies assigned responsibilities within this ESF will develop and maintain the necessary plans, standard operating procedures, mutual aid agreements, and model contracts to successfully accomplish their tasks.
- Restoration of normal operations at energy facilities is the responsibility of the facility owners.

Organizational Structure

SCC is the designated commodity manager for Natural gas and electric power.

DMME is the commodity manager for petroleum products and solid fuels (primarily coal).

ESF #12 maintains lists of energy-centric critical assets and infrastructures, and continuously monitors those resources to identify and correct vulnerabilities to energy infrastructure.

ESF #12 addresses significant disruptions in energy supplies, whether caused by physical disruption of energy transmission and distribution systems, unexpected operational failure of such systems, or unusual economic or political events.

ESF #12 addresses the impact that damage to an energy system in one geographic region may have on energy supplies, systems, and components in other regions. Consequently, energy supply and transportation problems can be intrastate, interstate, and/or international.

The private sector will be relied upon to manage independently until it can no longer do so, or until the health, safety, and welfare of citizens are at risk. The industries will be expected to establish their own emergency plans and procedures and to implement them through their own proprietary systems.

In the event of a potential or actual energy shortage, the SCC and DMME will, as requested by the Governor and in coordination with the

Virginia Emergency Response Team (VERT), implement voluntary and/or involuntary conservation measures as appropriate and allowable by law.

If the energy supply situation worsens and a state of emergency is declared, mandatory conservation measures may be required. SCC and DMME will then provide technical assistance and staff support to the VERT as requested.

Following an incident, the Virginia Emergency Response Team (VERT) with staff support from SCC and DMME, will coordinate the provision of emergency power and fuel to affected jurisdictions to support immediate response operations. They will work closely with federal energy officials, other Commonwealth support agencies, and energy suppliers and distributors. During emergency incidents designated SCC and related state agency personnel report through the VERT for coordination of emergency response activities.

Concept of Operations

ESF #12 will respond to the VEOC when an incident has or threatens to disrupt the routine energy production and distribution networks. ESF #12 will implement standard procedures and coordinate actions to assist local governments. While restoration of normal operations at energy production and distribution facilities is the primary responsibility of the owners of those facilities, ESF #12 provides the appropriate supplemental assistance and resources to enable restoration in a timely manner.

Roles & Responsibilities

Virginia Department of Emergency Management

- Collect, evaluate, and share information on damaged energy systems and estimate the impact within the affected areas.
- Coordinate the implementation voluntary and mandatory energy conservation

measures once the Governor has declared a “state of emergency.”

Department of Mines, Minerals and Energy

- Receive requests from fuel oil suppliers, transporters, or trade associations to implement vehicle weight and driver hours of service waivers. Communicate these requests to VDEM, who will coordinate implementation of the waivers with VDOT, VSP, and the federal government, and communicate news about the issuance of these waivers to the petroleum distribution industry.
- Coordinate with trade associations to share information and prepare needs assessments.
- Maintain current contact information with the petroleum product and propane distribution and delivery industry.
- Provide data regarding supplies and use of petroleum products.
- Coordinate regional contacts. Renew contacts with key contacts annually or more often as needed.
- Maintain ready-to-go guidance materials to assist State government facility managers responding to a petroleum products energy emergency.
- Be prepared to advise the Governor during an energy emergency. The Governor will direct conservation measures and other actions, usually as recommended by federal guidance, through the DMME or, in the event of a state of emergency, through the VEOC.
- Develop and maintain the Petroleum Products and Coal Energy Emergency Handbook, to include key contacts in government and industry, ready-to-go press releases, and other guidance materials for implementing voluntary and mandatory conservation measures.

- Assist and provide technical expertise as needed to the Office of the Secretary of Commerce and Trade and to the VEOC during an energy emergency.
- Receive and review reports submitted by the SCC, major industries that use coal, coal dealers, and local governments regarding impending coal shortages and potential consequences of continued reductions in supply.
- Keep the VEOC and state agencies informed as necessary about the status of coal when potential or actual shortages exist.
- Keep information resources available so the public may be fully informed on matters pertaining to a coal shortage.

State Corporation Commission

- Monitor natural gas supplies, including establishing alert points where increased emergency preparedness would be taken.
- Provide liaison with federal agencies and the natural gas industry to provide the earliest possible warning of shortages.
- Develop and maintain priorities and rules for curtailment and allocation procedures for natural gas.
- Develop and maintain priorities and rules for voluntary and mandatory conservation procedures for natural gas.
- Develop and maintain procedures for special hardship appeals of curtailment and conservation procedures for natural gas.
- Provide guidance to the VERT as to the extent of shortages, as a basis of recommending to the Department of Environmental Quality the need to temporarily waive air pollution control regulations to allow industrial boilers and furnaces to switch to less clean, heavy oil products.
- Be prepared to request cooperation from railroads in expediting movement of propane cars, both empty and loaded.
- Keep the public fully informed on all matters pertaining to a natural gas shortage.
- Monitor utility fuel supplies and reserves, including establishing alert points where increased emergency preparations would be taken.
- Provide liaison with federal agencies and the electric power industry to provide the earliest possible warning of shortages.
- Monitor power supply and demand during critical periods.
- Develop and maintain priorities and rules for curtailment procedures.
- In situations where widespread system infrastructure damage occurs, the SCC will work with utilities to implement a restoration strategy.
- Develop and maintain voluntary and mandatory conservation procedures to be implemented during a shortage.
- Assist with the legal interpretations of all orders as requested by the VEOC.
- Keep the public fully informed on all matters pertaining to an electric power shortage.
- Acting as the interstate pipeline agent, the SCC will coordinate with pipeline companies, other states, and Federal/State emergency agencies regarding product disruptions resulting from pipeline distribution and/or system failures. Additionally, the SCC shall be the clearinghouse on communications with pipeline company officials and

emergency response agencies regarding the status of the emergency and the current condition of the pipeline.

Authorities & References

Authorities

- Virginia Emergency Services and Disaster Laws.
- Commonwealth of Virginia, State Corporation Commission, Natural Gas Priorities and Rules.

References

- Tri-State Coordinating Committee on Resource Shortages, Washington Gas Light Company Regional Alert Plan.
- Emergency Management Accreditation Program (EMAP) 4.6.3: The emergency operations/response plan shall identify and assign specific areas of responsibility for performing essential functions in response to an emergency or disaster. Areas of responsibility to be addressed include: energy and utilities services.

Monitoring Procedures

In the event that a shortage of any fuel appears possible in the near future, DMME will institute monitoring activities for petroleum products, primarily gasoline and other distillate fuel. DMME in conjunction with the VEOC will:

- Establish regular telephone communications with Virginia's petroleum product trade associations. The object of these contacts will be to receive advance notice of jobber and dealer difficulties in obtaining supplies.
- Establish contact with SCC in order to receive and share information regarding interstate pipeline distribution system disruptions and emergencies. The SCC will communicate with officials of the pipeline companies on situations where actual or prospective failures may impact established delivery schedules and allocations of pipeline space.
- Analyze the petroleum supply situation and brief the Coordinator of Emergency Management whenever a significant change appears to have occurred.
- Contact the major oil companies through the Virginia Petroleum Council and request their cooperation and assistance in bringing additional fuel into the state as needed.
- Keep utilities informed through the SCC of developments in the situation to facilitate provisions for assistance from them.
- Monitor principal transportation bottlenecks reported by the oil companies and jobbers.

Note: For additional information, reference the Petroleum Products and Coal Energy Emergency Handbook.

Attachment 1 – Natural Gas

Purpose

This section assigns responsibilities and provides the organization and procedures required to ensure that maximum advance warning will be provided of a potential critical shortage of natural gas; and that in a shortage situation, the distribution and use of available natural gas will be consistent with state priorities of providing for the health, safety, and welfare of the citizens of the Commonwealth.

Organizational Structure

Close coordination with federal and state agencies, natural gas suppliers, and distribution companies will be needed to monitor the adequacy of the supply and distribution of natural gas. ESF #12, through the VERT, will keep the Governor, appropriate state agencies, and the natural gas industry informed of the developing situation and of emergency actions required. Local gas distribution companies will also keep local authorities informed of any potential or actual shortages.

Concept of Operations

Most natural gas must be brought in from outside sources through interstate transmission companies that supply gas to Virginia.

The Federal Energy Regulatory Commission (FERC) makes and administers the rules for the equitable allocation of natural gas at the federal level when the supply is insufficient to meet the demand. In accordance with their authority, it is FERC policy to adjust natural gas curtailments to ensure "the protection of deliveries for the residential and small-volume consumers who cannot be curtailed on a daily basis, and to require instead reduction in deliveries for large-volume interruptible sales". Assistance and guidance can be obtained from FERC with respect to problems involving interstate gas supplies and other matters pertaining to their authority.

The Federal Department of Energy (DOE) manages all interstate aspects of an energy crisis. In an energy emergency, the DOE may provide personnel to the VEOC for federal interagency coordination, state and local government liaison, and integrate contingency measures.

DMME will implement information gathering systems to monitor and forecast national and local natural gas demands and available supplies.

SCC will manage available resources within state priorities so the effects of a shortage will be minimized.

SCC, under the Code of Virginia, has the authority to allocate supplies between distributor companies within the state to protect the public health, safety, and welfare. Also, the SCC's "Natural Gas Priorities and Rules" establishes an emergency coordination committee to facilitate transfers of gas between companies operating within Virginia.

SCC's "Natural Gas Priorities and Rules" also establishes the order in which categories of customers can be curtailed when supplies are insufficient to serve firm requirements. This plan establishes curtailment priority classifications for all firm customers.

Attachment 2 – Electrical Power

Purpose

This section assigns responsibilities and provides the organization and procedures required to ensure the maximum advance warning will be provided for any shortage of generating capacity or fuel supply. In a shortage situation, the distribution and use of available electricity will be consistent with state priorities of providing for the health, safety, and economic wellbeing of the citizens.

Organizational Structure

SCC in coordination with federal agencies, other state agencies, and the electric power industry will monitor the adequacy of generating capacity and fuel supplies. ESF #12, through the VERT, will keep the Governor, appropriate state agencies, and the electric power industry informed of the developing situation and of possible emergency actions that may be required.

Concept of Operations

Privately-owned, Cooperatives, and Municipal utilities provide service to residents of Virginia. (Dominion Virginia Power and the Appalachian Power Company are the state's two largest electric generating companies and together account for more than 90 percent of electricity sales.)

Electricity is produced by using several types of fuel. A shortage of any one of the primary fuels could impact the availability of other fuels, and also could affect the adequacy of electricity supply in the Commonwealth.

Capacity deficiency emergencies are usually caused by a failure of some portion of the bulk power system, either at the generating station or in the transmission network. These may be caused by isolated situations to catastrophic natural disasters.

Fuel shortage emergencies are different in that the available generating equipment is capable of sustaining the system load, but the primary fuel is not available.

A prolonged shortage of electricity could have the following adverse impacts on the state through selective load shedding and enforced conservation measures:

- Impair the provision of services essential for health and safety.
- Require reduced hours of operation of all sectors of the economy.
- Cause unemployment.
- Reduce travel and tourism.

Response Capabilities

The interconnection of utilities inside and outside of Virginia permits, to a degree, the transfer of power to meet unusual demands either from capacity deficiencies or a localized fuel shortage. The utilities have on file, at the SCC, emergency service restoration plans for response to capacity deficiency emergencies from natural disasters.

The power generating companies also have load shedding plans which reduce demand and energy consumption, first by voluntary conservation, then by predetermined selective load shedding. Load Shedding Plans are primarily designed to be implemented in capacity deficiency emergencies requiring a fast drop in load levels to prevent the failure of the system. Each utility has a specific and detailed plan of how to drop portions of its load in order to prevent uncontrolled loss of the system. The components of a typical Load Shedding Plan are described here:

- Should it become necessary to curtail electricity usage, the utilities in Virginia will implement their electric energy

emergency conservation plans, which are on file with the State Corporation Commission. These emergency procedures will be put into operation when the public health, safety, and welfare are threatened.

- Curtailment Procedures - If voluntary and mandatory conservation actions do not sufficiently reduce the use of electricity, then electricity supplies may be cut off to certain users in order to preserve electricity for higher priority users. All or any of the following actions may be taken by the Governor, upon a declaration of a state of emergency, to conserve electricity. The discontinuation of electricity could include places of amusement, non-essential public places, schools not being used for sheltering, commercial wholesale and retail establishments, and office buildings not engaged in public safety and welfare.
- In a severe shortage situation, upon the declaration of a state of emergency, the Governor may allocate or regulate the sale, distribution, and use of all electricity available within the state. Mandatory conservation measures for residential, governmental, commercial, and industrial users may also be instituted as needed.
- The SCC will regulate the utilities' management of their available resources so that the effects of a shortage will be minimized.

Attachment 3 – Petroleum Products

Purpose

To provide for the citizens of the Commonwealth in a reasonable and responsible manner when disaster strikes and gasoline, home heating oil, or other petroleum fuel supply systems suddenly fail resulting in a threat to health and safety; to be capable of immediate collaboration with energy providers to help direct critical supplies to priority locations and restore supply and distribution systems as soon as possible; and to cooperate with the federal government to recommend, encourage, and, under extreme conditions, mandate appropriate conservation measures until market forces can reestablish a working balance between supply and demand.

Organizational Structure

DMME will communicate with petroleum industry contacts to gather available information about developing emergency supply and demand situations. In the event of an actual shortage, ESF #12, through the VERT, will keep the Governor, appropriate state agencies, and the petroleum industry informed of the developing situation and of possible emergency actions that may be required. This will be completed in coordination with the U.S. Department of Energy and the Office of Energy Emergencies.

Depending on the nature of the energy emergency, selected representatives from the private sector may be invited to serve in an advisory capacity in areas where their particular expertise applies.

Concept of Operations

Petroleum is widely used throughout Virginia. Transportation is primarily fueled by petroleum. Other petroleum products are used for space heating, industrial processes, and electric generation. Propane is used in Virginia for industrial, agricultural, transportation, and residential uses. Almost all petroleum products must be brought in from outside sources.

A variety of circumstances could cause serious international, national, statewide or area shortages of petroleum products with little advance warning. These include:

- An embargo by one or more oil-producing nations.
- International tension that might impact ocean shipping.
- The blockage of waterways, railways or roadways by icing, flooding or other circumstances.
- An extended period of extremely cold weather which would increase demands for refined products for residential, commercial, and industrial heating above forecasted requirements.
- Production downtime at major refineries.
- Poor distribution of supplies within industry distribution systems. Spot shortages may occur with middle distillates and propane in winter due to inadequate pipeline capacity, pipeline failures, pipeline allocation limits, and surface transportation problems. Spot shortages of gasoline or kerosene may occur due to various problems such as pipeline disruptions or the need to supply multiple products to the marketplace, such as reformulated gasoline, to certain areas of the state.

A significant shortage of petroleum products could have the following adverse impacts on the Commonwealth:

- Require reduced hours of operation for schools, businesses and industry.
- Cause substantial unemployment.

- Prevent the distribution of essential supplies and the provision of services essential to health and safety.
- Cause a reduction in the production of electric power.
- Present a health hazard as a result of cold homes and a shortage of home cooking fuels.
- A gasoline and diesel fuel shortage could have a serious impact on the economy of the Commonwealth.

This plan relies on a cooperative partnership between government agencies and private industry. DMME will coordinate a network of contacts between industry and government to help ensure an efficient state response to a petroleum fuel supply shortage or disruption. Information about the network of contacts will be included in the separately published Petroleum Products and Coal Energy Emergency Handbook.

The overall federal/state strategy for responding to a petroleum emergency is to:

- Allow market principles to guide action to the maximum extent possible.
- Implement energy conservation measures to reduce demand as needed and in accordance with federal law (Public Law 94-163 of 1975, Section 362), initially on a voluntary basis, and later on a mandatory basis, if necessary (This action is under federal control).

The Federal Strategic Petroleum Reserve will be released only under extreme circumstances when important national issues are at stake. (This action is under federal control.)

1. Information Gathering

DMME will keep a list of petroleum product contacts in the Petroleum Products and Coal Energy Emergency Handbook. These contacts will be used during a period of emergency to

help monitor the supply of petroleum products. During a potential or actual energy emergency, monitoring activities would be implemented so that the most appropriate response can be made. DMME will use information from other sources such as the U.S. Department of Energy, Energy Information Administration, and other state agencies to assess any potential shortage situation. This information may include:

- Information regarding supply disruptions or product shortages.
- Current world oil production compared to prior year's production.
- Virginia prices for gasoline, propane, and distillate fuels.
- Spot market prices for petroleum.
- Domestic crude oil and product supply balance.
- Information from the Virginia Department of Social Services on emergency fuel needs for low-income citizens (Local social services offices report on families and individuals needing assistance.)

2. Conservation Measures

If requested by the U.S. Department of Energy (DOE), the Governor, or; if conditions warrant, DMME can directly appeal for voluntary conservation measures to stretch the available supplies and reduce unnecessary petroleum use. DMME will coordinate conservation measures in advance with DOE and the Governor's Office, through the Office of the Secretary of Commerce and Trade and the VEOC.

As the situation grows more acute, the Governor may declare a state of emergency in order to direct the VEOC to implement additional voluntary and selected mandatory conservation measures.

As a last resort, the VEOC will recommend to the Governor the implementation of the State Set-Aside Program.

- Under Virginia's Set-Aside Program, major oil companies will be asked during shortage months to reserve one to three percent of their total supply of gasoline, kerosene, diesel, or No. 2 heating oil for reallocation and delivery to assist with essential needs as identified by the Governor. An energy supply emergency may be a critical reduction in supply either in an area of the state or in the state as a whole.
- The procedures will be activated in the event that a petroleum products shortage results in a reduction in supply of ten percent or more, either in an area of the Commonwealth or in the Commonwealth as a whole. The VEOC would direct the major oil companies to hold in reserve a small percentage (one to three percent) of their total supply of petroleum products for Virginia during the shortage months. The VEOC would then determine the volume of releases and the manner of distribution depending upon the severity of the shortage and the extent of the shortage geographically.

All conservation strategies shall be coordinated with the U.S. Department of Energy and with the Governors, and commodity managers of neighboring states and the District of Columbia. The list of these contacts shall be kept in the Petroleum Products and Coal Energy Emergency Handbook.

In the event of a severe and prolonged shortage, the governor may "control, restrict, allocate, or regulate the use, sale, production, and distribution" of any or all petroleum products within Virginia in accordance with the Commonwealth of Virginia Emergency Services and Disaster Law of 2000, as amended. Mandatory conservation measures for residential, governmental, commercial, and industrial users may also be instituted as needed.

Attachment 4 – Solid Fuels

Purpose

To provide for the citizens of the Commonwealth in a reasonable and responsible manner when disaster strikes and solid fuel supply systems suddenly fail resulting in a threat to health and safety. Be capable of immediate collaboration with energy providers to help restore supply and distribution systems as soon as possible. Cooperate with the federal government to recommend, encourage, and, under extreme conditions, mandate appropriate measures until market forces can reestablish a working balance between supply and demand, maintain the economic viability of the Commonwealth, and provide for the health, safety, and well-being of its citizens.

Organizational Structure

Procedures will be established to receive information from coal users about potential or actual coal shortages in a timely manner, and in coordination with the VEOC, rapidly cope with these shortages. Coordinate with federal and other state agencies, manufacturer, utility, transportation and coal trade associations or companies, and the SCC to identify developing coal supply or distribution problems. DMME will make recommendations to the VEOC which will work closely with other state agencies and commodity managers that have coal-related responsibilities keeping them advised of potential or actual coal shortages. Prior to making decisions or recommending specific courses of action regarding coal, the impact and consequences on other energy resources should be considered. ESF #12, through the VERT, will keep the Governor, appropriate state agencies, and the solid fuel industry informed of the developing situation and of possible emergency actions that may be required.

Depending on the nature of the energy emergency, selected representatives from the private sector will be invited to serve in an advisory capacity in areas where their particular expertise applies.

Concept of Operations

Most Virginia electric generating utilities and some independent power producers use coal. These plants normally maintain reserve supplies of coal. A shortage of coal will result in the need to implement electric power conservation programs initially and more stringent control measures later as coal stocks are reduced. See the Virginia Energy Emergency Plan for Electricity.

There are a number of coal-burning industries in Virginia. Individual industrial companies normally maintain reserve supplies of coal. A prolonged coal supply or railroad disruption would rapidly deplete available coal stocks and potentially result in increased unemployment. This could also result in an increased reliance on liquid fuels and transport by truck, which could lead to increased energy cost.

In many instances, supplies are purchased to meet requirements on a regular basis. Coal dealers and retailers who supply lump coal for home use normally maintain limited reserves. A lengthy rail or coal supply disruption or a prolonged period of extreme cold weather could deplete coal supply for home use and pose a threat to the health and safety of citizens. Relief organizations at the local level, under centralized direction, would need to assist needy families.

If coal shortages are likely to occur, DMME, in cooperation with the VEOC, will coordinate with industry and utility representatives and the SCC to recommend how best to resolve any shortages of coal.