



Guidance for Developing a Fuel Contingency Plan

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Introduction

Business continuity planning, sometimes also referred to as continuity of operations (COOP) planning, involves the development of various contingency plans designed to mitigate the impacts of natural or human-induced disruptive events on core functions. Business continuity plans are appropriate for government agencies and non-governmental organizations (NGOs) that have responsibilities for assisting areas impacted by natural or manmade disruptive events to recover from such events and return to normalcy. Business continuity plans can be equally valuable in assisting private sector businesses to maintain some or all of their core business functions in the aftermath of disruptive events.¹ This Guidance is intended to assist both public and private sector entities in building or enhancing the continuity of their operations. While the approach to improving business continuity is fundamentally the same for public and private entities, unique obligations and opportunities that exist for the public sector are also highlighted.

This document was developed in support of the 2015 Florida Fuels Regional Resiliency Assessment Program (RRAP) project. The RRAP is a cooperative, non-regulatory, Office of Infrastructure Protection (IP)-led assessment of specific critical infrastructure and regional analysis of the surrounding infrastructure. In response to the key findings and resilience enhancement options, DHS has developed this planning guide for public and private sector organizations to evaluate their fuel dependencies.

No area of the country is immune to natural or manmade events that can disrupt the critical infrastructure and external services that are essential for maintaining core functions of both public and private sector entities. As a consequence of location or geography, some areas of the country may have a higher probability of experiencing disruptive natural events (e.g., hurricanes in the Gulf and Southeast States, tornadoes in the Midwest, crippling winter storms in the northern States, earthquakes in the seismically active areas of the West Coast and Alaska) and, as a result, a greater likelihood that the fuel infrastructure serving those locations will be affected, leading to a greater likelihood that fuel contingency plans will need to be implemented. (See the “Extreme Weather Can Cause Fuel Shortages throughout Florida” sidebar for an example of how hurricanes can disrupt the fuel infrastructure in Florida, resulting in local fuel shortages.) Even when disruptive weather events do not occur, equipment failures and human error can incapacitate key fuel infrastructure. Disruptions to any part of the refined petroleum fuel infrastructure can have significant direct and cascading impacts on an area’s recovery efforts. The petroleum fuels infrastructure comprises a complex network of heavily dependent and interdependent assets and actions, each of which is vulnerable to disruptive events. Recent events involving human error in one instance and equipment failure in another interrupted fuel deliveries to certain markets by one of the primary pipelines serving the Gulf and Atlantic Seaboard States. Although swift and well-coordinated responses by the pipeline owner and petroleum suppliers brought the fuel distribution network quickly back to normal, price increases and short-term fuel shortages still materialized in some local markets.²

¹ Resources are available for developing Business Continuity Plans. Guidance developed for the Department of Homeland Security’s Ready.Gov program is available at: <https://www.ready.gov/business/implementation/continuity>. Some industry associations have also developed business continuity guidance for their members. National and International Standards also provide frameworks for plan development. See, for example, the ISO 22301 Business Continuity Management Systems self-assessment questionnaire at <https://www.bsigroup.com/LocalFiles/es-MX/ISO%2022301/BSI-ISO-22301-Self-Assessment-checklist.pdf>, the National Fire Protection Association (NFPA) Standard 1600 available at <http://www.nfpa.org/assets/files/aboutthecodes/1600/1600-13-pdf.pdf>, and the ASIS American National Standard for Organizational Resilience, adopted by DHS for use in its Private Sector Preparedness (PS-Prep) Program, <https://www.asisonline.org/News/Press-Room/Press-Releases/2010/Pages/OrganizationalResilienceANSIStandard.aspx>.

² A discussion of how the petroleum industry reacted to these events and an analysis by the Energy Information Administration (EIA) of the resulting impacts on gasoline availability in the impacted regions can be found here: <http://www.eia.gov/todayinenergy/detail.php?id=28632>.

Those pipeline incidents are prime examples of how those responsible for the operation of the petroleum infrastructure can quickly adjust to disruptions; nevertheless, interruptions in fuel deliveries to local markets and resulting shortages may, in some cases, be unavoidable. Public and private sector organizations that depend on that petroleum infrastructure for core functions must recognize the potential for fuel shortages in local markets and develop appropriate fuel contingency plans to mitigate the impacts on their operations.

This Guidance is intended to assist public and private sector organizations in assessing their dependency on fuel and establishing policies that support continuation of core functions during fuel shortages at appropriate or necessary levels. The Guidance also informs decisions regarding the nature and complexity of fuel contingency plans that will correctly reflect both the criticality of an organization's core functions and the severity of its fuel dependencies. The Guidance also offers options for alternative fuel acquisition strategies, from agreements with fuel vendors to amended operating procedures, to expanded in-house or collaborative fuel management capabilities.

The information contained in the body of this Guidance is applicable equally to public and private sector organizations. Appendix A provides additional information for public agencies reflecting their unique obligations and fuel access opportunities.

Appendix B provides references to documents and reports that can provide examples of the benefits of some of the options presented in this Guidance or best practices that can be considered.

Extreme Weather Can Cause Fuel Shortages throughout Florida

In Florida, severe weather events in the form of tropical storms, including hurricanes, are likely annual occurrences with the potential to result in widespread damage to Florida's critical infrastructure, especially its ports. Because the overwhelming majority of liquid petroleum fuels for both transportation and energy production arrive in Florida by maritime deliveries to four of Florida's major ports (Everglades, Tampa, Jacksonville, Canaveral) (see this EIA publication for additional details: <http://www.eia.gov/todayinenergy/detail.php?id=15651>), severe weather events that disrupt normal port operations and interrupt fuel deliveries will likely result in near-term local or regional shortages.

The limited in-state fuel distribution infrastructure further suggests that local fuel shortages will not be quickly resolved by transfers of fuel from unaffected regions. Because most fuel distributors operate on a "just-in-time" fuel purchasing schedule, panic buying that is likely to occur in the days preceding landfall of severe weather will exacerbate any fuel shortage resulting from interrupted deliveries. If the damage to port infrastructure is substantial, those shortages can exist for extended periods after a weather event.

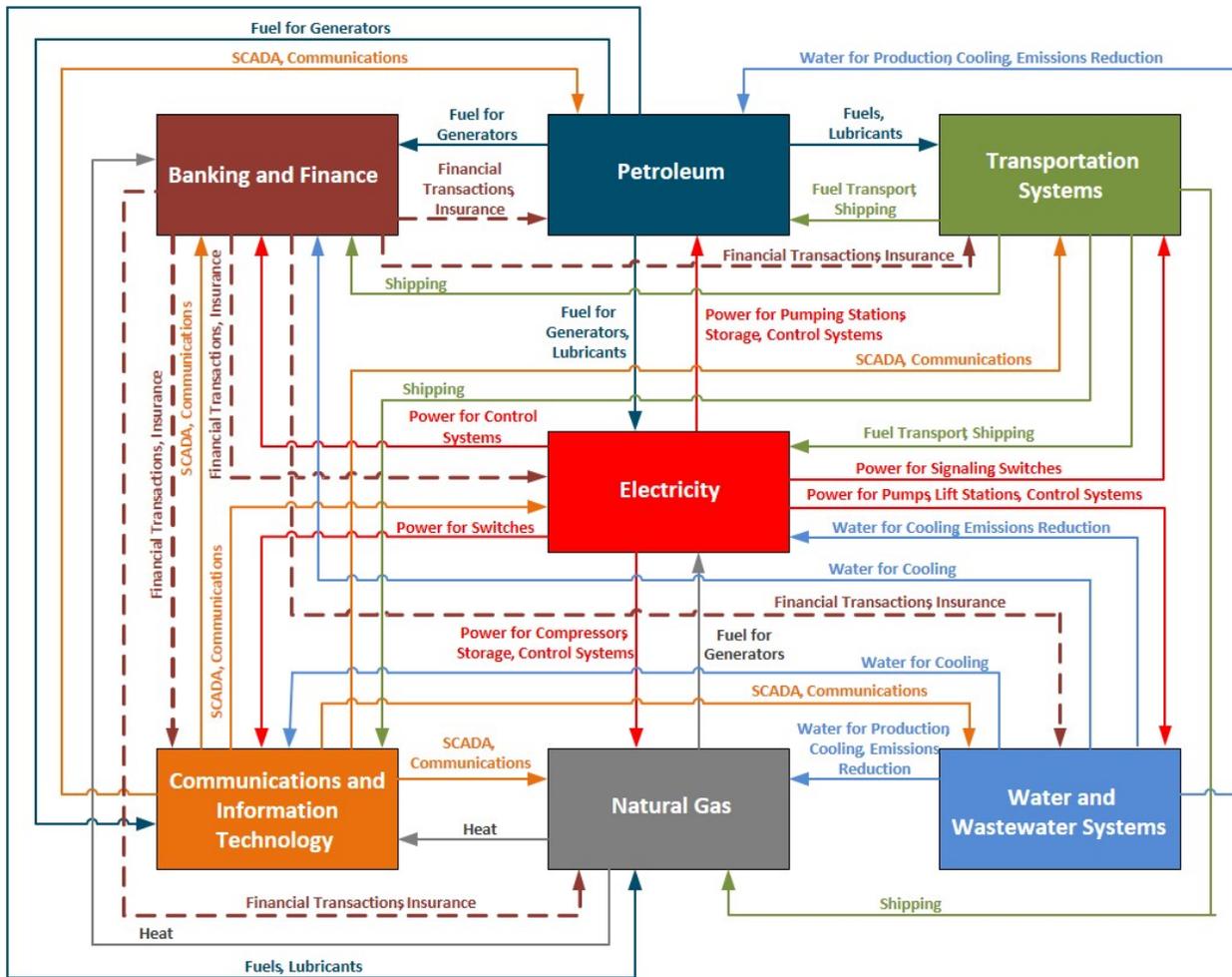
Severe weather could also impact the Gulf Coast refineries that produce most of the fuel currently consumed in Florida and/or suspend marine transport of fuel through the Gulf of Mexico, further contributing to the possibility that a severe weather event will result in fuel shortages somewhere in Florida, even without direct impact to Florida's petroleum infrastructure. These factors, validated by experience, combine to make a compelling case for the development of fuel contingency plans, especially for those private sector businesses that are expected to play pivotal roles in the State's response to and recovery from severe weather disruptions. Although developed in response to liquid petroleum fuel shortages resulting from severe weather events impacting Florida and/or the Gulf Coast region, the guidance provided in this document is intentionally generic; it can be used by any private sector business or public sector entity whose normal business practices have a dependency on petroleum fuels and which seeks to enhance the resilience of those business functions in the face of petroleum fuel shortages.

All levels of government should be continuously engaged in the development, refinement, and maintenance of COOP plans and associated contingency plans to ensure the continued availability of goods and services essential for sustaining the lives, health, and welfare of the public within their jurisdictions and for facilitating the rapid return of impacted areas to normalcy. Although the responsibility for development of overall disaster response plans falls primarily to State-level governments, effective State plans are augmented by complementary plans developed at regional and local government levels and the business continuity plans of private sector businesses that own or operate critical infrastructure or that perform essential response and recovery services under those government plans.

Regardless of their involvement in the provision of essential services to ensure public safety, private sector businesses that want to sustain core business functions during fuel shortages should also consider developing a fuel contingency plan. Such a plan should be based on their understanding of how a fuel shortage will affect their operations and the actions that will allow them to continue business operations at some satisfactory level throughout the duration of a local fuel shortage. Regular interactions with local and State emergency response authorities throughout their plan's development ensures those private sector organizations that their plan will be compatible with government fuel contingency plans designed to respond to the same disruptive event.

Although each fuel contingency plan is unique to an individual business or organization, all fuel contingency plans will contain common elements and should be developed systematically through consideration of critical factors. Properly designed fuel contingency plans allow businesses to interact effectively with State and local emergency response authorities, fuel vendors, critical service providers, other business partners, and trade associations to ensure a fully coordinated approach to a fuel disruption and will allow recoveries to proceed in proper priority order.

Finally, core functions with a dependency on fuel are likely to also have dependencies and interdependencies on other critical infrastructure and services and fully effective fuel contingency plans must acknowledge and accommodate those interdependencies and dependencies. The figure below shows the primary interdependencies among critical infrastructure, as well as their fuel dependencies. Although this Guidance focuses specifically on building a fuel contingency plan, the comprehensive business continuity plan of which that fuel contingency plan will become a critical part may also need to include a full complement of interacting and coordinated contingency plans addressing all interdependent and interconnected infrastructure, services and capabilities.



Dependencies and Interdependencies Among Critical Infrastructure³

³ Phillips, J., M. Finster, J. Pillon, F. Petit, and J. Trail, *State Energy Resilience Framework*, Argonne National Laboratory, Global Security Sciences Division, ANL/GSS-16/4, Argonne, Ill, USA, 2016.

Building a Fuel Contingency Plan

The five steps presented in this Guidance can be used to define the scope and content of an organization's fuel contingency plan. The fuel contingency plan template (see Attachment) presents a structure to organize the information you collect and to develop your organization's fuel contingency plan.

1. Identify the Goals and Objectives of Your Fuel Contingency Plan

Answers to the following will help to define the overall goal and objectives of your fuel contingency plan.

- Does my organization conduct core functions that are essential to the lives, health, welfare, and safety of the public impacted by an emergency and that must be sustained during emergencies?
- Of all the core functions that must continue during an emergency, which have a fuel dependency?
- Which core functions need to operate at full capacity throughout the period of a fuel shortage?
- Which core functions can be allowed to continue operating at a reduced rate?
- Are there other functions that need to continue during fuel shortages to preserve the market share and reputation of my business?
- Which of my business activities can be suspended throughout the duration of a fuel shortage without long-term damage to my business?
- What is the impact on my organization's overall operation from the loss of fuel?
- Should my plan support the entirety of my operations or just core functions?
- To what extent does my organization want to mitigate that loss?
- What does my organization's fuel contingency plan seek to accomplish?

Use historical purchasing and operating records to calculate the fuel needed to support the core functions that will be sustained by the fuel contingency plan, their associated equipment, and complementary activities, considering both direct and indirect fuel demands. Examples might include: transportation fuel for a delivery vehicle, fuel for essential equipment such as forklifts to load the vehicle, and generators to power lighting and heating, ventilation, and air-conditioning for warehouses and other associated and complementary activities such as communication and dispatch activities when grid power is unavailable. Depending on the scope of the fuel contingency plan, fuel demand calculations can also include indirect fuel demands such as the fuel needed by key employees who conduct core functions to commute to and from work.

2. Develop the Logistics of Your Fuel Contingency Plan

While the primary purpose of a fuel contingency plan is to secure the necessary amount of fuel to continue core functions during fuel shortages, your ability to conduct core functions during and in the aftermath of emergencies will depend on a number of factors besides available fuel. Ensure the commitments contained in your fuel contingency plan are realistic.

Commitments in your contingency plan are likely to be based on one or more of these factors: the number of trained personnel expected to be available to conduct core functions, the number of assets associated with core functions that are expected to be available, the number and types of associated equipment assets expected to be available, the resilience of companies that supply goods and services essential to the conduct of core functions and the priority you have with those suppliers, the amount of fuel you expect to have in onsite storage tanks at any time, and your ability to transfer fuel from non-essential vehicles and equipment to assets involved in core functions. Your plan's commitments may need to be modified as any of these factors change.⁴

Fuel shortages can last for extended periods. Consider both your instantaneous fuel needs, as well as your fuel needs over time, and identify options for establishing fuel access procedures that are sustainable and compatible with the time frames over which you will need to replenish fuels to ensure uninterrupted core functions.

Considering the current manner in which you secure fuel for your core functions and your current fuel management capabilities will assist you in the development of the logistics that must be included in your fuel contingency plan. Consider whether new or modified policies are necessary to complement the implementation of your fuel contingency plan. Answers to the following questions will help to determine what information or procedures need to be included.

- Determine how a reduction in fuel demands for continuing core functions could be achieved through efficiency improvements while still satisfying that function's purpose.
- Consider whether individuals responsible for conducting core functions will be available during and in the aftermath of a severe weather event or other emergency. Do you have a policy that releases employees to deal with family needs during emergencies that would affect the availability of key personnel? Modify the extent to which you intend to conduct core functions on the basis of employee availability expectations.
- Determine whether assets (i.e., vehicles, equipment, supplies) essential to the conduct of core functions are likely to survive the impact of a severe weather event; determine the feasibility of relocating all or some of those assets to safer protected locations. Modify the extent to which you intend to conduct core functions involving those assets on the basis of their likely availability during and in the aftermath of an emergency.
- Consider the extent to which you can reduce or eliminate other activities without irreparable long-term harm to your organization's reputation; can prime customers be serviced in the short term by other companies or institutions not impacted by the emergency? Develop procedures for safely suspending non-essential functions and for restarting them when feasible.
- Interact with emergency planning authorities to ensure your employees and vehicles have the proper credentials to be allowed entry into impacted areas to perform essential lifeline services or service and/or restore critical infrastructure.

⁴ Not mentioned as a primary controlling factor is the price of fuel during shortages. Price increases are inevitable during fuel shortages. While some price increases are justified, reflective of legitimate increases in costs associated with modified and less efficient supply and distribution mechanisms put in place to address the shortage, State Attorneys General, District Attorneys, or local prosecutors monitor price increases for fuel and other essential services during emergencies, investigate complaints of price gouging, and pursue enforcement of applicable State statutes and regulations. See this summary of price gouging statutes and regulations: <https://timedotcom.files.wordpress.com/2014/12/price-gouging-statutes.pdf>. Although clearly affecting the costs of continuation of core functions during fuel shortages, price increases alone should not be a deterrent to fuel contingency plan development.

- If your core functions include lifeline function activities (i.e., actions designed to protect the lives, health, welfare, and safety of the public during and after emergencies), make yourself and your organization known to emergency response authorities, including sharing continuity plans and fuel contingency plans (as well as other contingency plans you might develop for alternatively securing other complementary services such as power and communication). Establishing your organization as a stakeholder involved in emergency response and recovery activities can help ensure you receive timely information regarding fuel availability and create an avenue for you to provide information on your own evolving condition and fuel needs. Establish agreements and protocols for how you will communicate your fuel needs to State or local emergency response officials.⁵
- Verify that the retail fuel vendors from which you expect to purchase fuel during emergencies have firm contracts with their wholesale fuel distributors⁶ and are themselves resilient against widespread power failures.⁷
- Establish fuel purchasing agreements that also address replenishment intervals.
- Determine your current onsite fuel storage capability and capacity along with the amount of fuel routinely maintained in onsite storage tanks. Consider a policy that requires a minimum amount of fuel to be present in onsite storage tanks at all times. Base your onsite fuel capacity on those minimum volumes, not on storage tank nameplate capacities.⁸
- Panic buying in advance of an approaching storm can accelerate the onset of fuel shortages; ensure your fuel contingency plan identifies how your organization will approach fuel purchases at the initial official notification of approaching storms.
- Determine whether it is feasible to obtain fuel from partner organizations (e.g., sister companies or subsidiaries) not engaged in core functions or impacted by the fuel shortage.
- Establish detailed standard operating procedures (SOPs) for each activity you expect to be conducting while your fuel contingency plan is in effect. Ensure SOPs address employee roles and responsibilities, associated safety issues, and prohibitions.

⁵ Businesses that conduct lifeline sector activities either before landfall of tropical storms or in the aftermath of severe weather events may be eligible for Federal and/or State support in securing fuel during fuel shortages. See the following section for details.

⁶ During fuel shortages, distributors will honor firm fuel purchasing contracts first, leaving only the remaining amount of fuel available for spot purchases. Fuel purchase contracts typically also include a clause identifying how and when, during shortages, a lesser volume of fuel than that specified in the contract will be provided.

⁷ An onsite power generator will allow a retail fuel vendor to continue to dispense fuel during power grid disruptions. State regulations may require certain retail fuel outlets to be power-resilient. For example, Florida law requires retail fuel vendors located on designated evacuation routes to have onsite power generating capability.

⁸ If your fuel contingency plan relies on fuel in onsite storage tanks, be sure you also consider the resilience of those tanks to the same types of disruptive events that can cause an area fuel shortage, and take steps to harden those tanks as necessary.

3. Collect Information Required for Implementation

Successfully executing any contingency plan relies heavily on what you know, when you know it, and whom you can rely on for information and support. Your fuel contingency plan should include the procedures by which you can secure the necessary information to support the myriad decisions you must make. Identify relevant information and establish the processes by which you will attain and maintain situational awareness of relevant factors throughout the duration of the emergency, including tracking changes to the critical aspects of the emergency over time. The following types of information should be assembled and maintained:

- Become familiar with and maintain copies of current State and local emergency plans and the State energy assurance plan,⁹ including statewide fuel contingency plans that may be contained in a fuel annex to the State’s energy assurance plan.
- Determine how elements of State or local contingency plans will intersect with and impact the execution of your fuel contingency plan—for example, will the fuel rationing element of the State’s fuel contingency plan impact your ability to access fuel, and does the plan permit you to obtain appropriate credentials that would mitigate that impact by exempting you from those rationing controls?
- Identify key individuals in State and local emergency operation centers that you can rely on as official sources of critical information and to whom you should report your own condition and fuel needs.¹⁰
- Identify mechanisms for accessing situational awareness information; interactions with State and local emergency planners and regional planning councils and groups, together with reviews of relevant plans, will identify the various communication strategies that are being employed for disseminating important information to all stakeholders.¹¹
- Assemble and regularly update contact information for company employees; critical utility service providers; State and local government personnel responsible for dealing with the fuel aspects of an emergency response and recovery plan; fuel vendors, distributors, and transporters; transportation officials responsible for communicating the status of transportation infrastructure (such information may also be available through State Department of Transportation 511 program Websites); and other companies that provide resources supporting your core functions.
- Develop and maintain an inventory of critical assets (vehicles, equipment, critical components [e.g., batteries]) that support core functions; identify emergency replacement sources.¹²

⁹ State energy assurance plans are separate from a State’s emergency response plans and are designed to address the State’s current and future energy needs. To date, only some States have decided to append a fuel contingency plan to their energy assurance plan. Note that some energy assurance plans are “For Official Use Only” and may not be available for review. In those instances, contact your State’s energy office to identify any State emergency plans addressing fuel that may be available for your review.

¹⁰ Identify individuals in your State emergency operation center with the responsibility of implementing “Emergency Support Function (ESF) 12 – Energy” of the State’s comprehensive emergency plan, especially the aspects of ESF-12 that deal with fuel.

¹¹ Typically, a variety of communication strategies will be employed simultaneously e.g., official Websites maintained by emergency operation centers and transportation authorities, local news broadcasts, RSS feeds, and all manner of social media postings. Establish your ability to access information from multiple “official” sources by multiple means. Assign key personnel the responsibility of regularly reviewing official information sources and communicating relevant information to personnel conducting your core functions.

¹² Companies that rely on similar critical assets should consider entering into agreements that allow sharing of critical assets during emergencies.

- Assemble and maintain information that can help you access fuel during fuel shortages, distributing such information to key employees. Information may include the following:
 - guidance from fuel vendors or industry associations that could complement your fuel contingency plan;
 - agreements established for emergency fuel deliveries;
 - location and operational status of fuel dispensing facilities, including accessible highway routes and maps;
 - agreements with fuel vendors for acceptable alternative payment methods during power failures that prevent credit card transactions;
 - possible support from Federal, State, or local emergency response authorities (see next section for details); and
 - other information that can support successful implementation of your fuel contingency plan.

- With widespread power failures always a possibility during severe weather events, maintain all contact information and procedures in both electronic and hard copy form; distribute the information to key employees.

4. Consider Other Options

The guidance provided above is intended to support development of a fuel contingency plan that reflects your existing core functions and supporting infrastructure and presumes no fundamental changes to current business practices. Consider refining and expanding your fuel contingency options by modifying business practices or by introducing the options presented below.

Two types of options may be available: options that reduce fuel demands, and options that modify your fuel management capabilities. Option A for reducing fuel demands can address only core functions or all functions and could be permanent changes or made effective only during emergencies involving fuel shortages. Even when permanent, these options may not completely eliminate the need for a fuel contingency plan, but they could reduce the fuel demands of the core functions addressed in your fuel contingency plan and improve your company’s overall resilience to fuel shortages and delay the implementation of fuel access alternatives.

Option B involves fundamental changes to your organization’s business processes, including installation of additional infrastructure and/or new contracts or agreements with fuel vendors and other organizations that are designed to improve your priority for accessing fuels during shortages. Even if feasible, some of the options presented below involve significant capital investments that put them beyond the financial wherewithal of many small- and medium-sized companies to pursue independently, although some of those costs may be eligible for Federal and State financial support. Other options could be established with only the minimal administrative costs of establishing emergency procedures or replacing SOPs with more fuel-efficient alternatives.

A. Options for Reducing the Fuel Demands of Your Business Practices

- Explore ways to improve the fuel efficiencies of your core functions (as well as the efficiency of your overall operation), including ways to minimize the fuel dependencies of your employees:¹³
 - Consider replacing some portion of your vehicle fleet with more fuel efficient vehicles (e.g., electric, hybrid electric, compressed natural gas). Any such changes will also introduce

¹³ Many of the options listed here for reducing consumption of transportation fuel fall within the envelope of traditional “Transportation Demand Management” strategies. See: *Best Practices in TDM in the Seattle Urban Mobility Plan*, available at <http://www.seattle.gov/transportation/docs/ump/07%20SEATTLE%20Best%20Practices%20in%20Transportation%20Demand%20Management.pdf>.

- additional responsibilities to maintain information on the locations of resilient fueling or charging locations for your alternative fueled vehicles.¹⁴
- Consider modifying your vehicle fleet to add fuel diversity—some transportation fuels may be in short supply while others are more readily available, potentially allowing for at least some portion of your vehicle fleet to continue operating.
 - Encourage car-pooling arrangements among employees and/or establish flex-time work schedules to reduce the number of commuting trips required; provide incentives by subsidizing fuel costs or providing car pool vehicles and subsidizing any additional insurance costs. (In many metropolitan areas, High Occupancy Vehicle lanes on major thoroughfares allow car pool vehicles to travel to and from work with greater time and fuel efficiencies.)
 - Introduce flex-time options for employees that reduce the number of commuting trips.
 - Introduce opportunities for some employees to work from home.
 - Review all fuel-dependent operating procedures to identify and implement options for improving overall fuel efficiency.
 - Conduct cross-training of select personnel on core functions, maximizing the potential for qualified individuals being available to continue those core functions during emergencies.
 - If your organization operates out of multiple locations, consolidate operations to a central location to the greatest extent possible.
 - Identify options for safely transferring fuels from non-essential vehicles and equipment to support core functions.
- Apply any or all of the above options to all of your business functions, not just core functions, and consider which can be in effect at all times and which will be implemented only during fuel emergencies.

B. Options Involving Fundamental Changes to Fuel Management Practices

- Sharing your business continuity/COOP plan and your fuel contingency plan with State and local government emergency planners allows you to identify your potential eligibility for priority access to fuel under your State’s “Fuel Set-Aside” program or other type of priority fuel distribution program.¹⁵ See Appendix A for additional guidance if yours is a government organization or is otherwise responsible for essential services related to public safety or repair and restoration of critical infrastructure.
- Ensure compatibility of your fuel contingency plan with the emergency plans of vendors and suppliers; explore options with those vendors for establishing your business as a priority customer. Volumes of fuels purchased and methods of payment (e.g., a fuel company credit card) may be sufficient to make you a preferred customer.
- Consider adopting a SOP that requires essential vehicles and equipment to have their fuel tanks filled at the close of each business day.

¹⁴ The U.S. Department of Energy maintains the Alternative Fuel Data Center Website, which provides information on the locations of fueling and charging stations for alternative vehicle fuels. Depending on the scale and geographic reach of the emergency, not all of these stations will be functional. See: <http://www.afdc.energy.gov/locator/stations/>. An App for Smartphones developed by the National Renewable Energy Laboratory is also now available: <https://energy.gov/eere/articles/alternative-fueling-station-locator-app-provides-info-your-fingertips>.

¹⁵ Fuel Set-Aside programs are designed to provide fuel on a priority basis to organizations involved in lifeline activities during emergencies. Although many States empower their governor to commandeer fuel in a declared emergency to support lifeline activities, not all States will have developed a Fuel Set-Aside program.

- Consider increasing or installing onsite fuel storage capability. However, when pursuing this option, remember that storage of flammable or combustible fuels requires compliance with a variety of safety and environmental regulations and may require permits from State and/or local environmental protection and fire safety authorities.¹⁶ Be sure to consider the impact of onsite fuel storage on your insurance premiums.
- Identify additional retail fuel vendors from whom you might be able to obtain fuel during fuel emergencies, ensuring that each retail vendor is resilient with respect to onsite emergency power.
- Identify options for entering into firm contracts for fuel purchases. During fuel shortages, fuel distributors will give priority to existing firm contracts and make only the fuel that remains available through spot purchases.
- Review the energy assurance plan and any fuel contingency plans of your State to understand and pursue potential benefits offered by such plans to your organization's fuel resilience. See Appendix A for additional guidance if yours is a government organization or is otherwise responsible for essential services related to public safety or the repair and restoration of critical infrastructure.
- Consider your physical circumstance, identifying other businesses and organizations in your immediate geographic vicinity (e.g., an industrial park) that might have similar fuel and power dependencies for their core functions and who may be interested in forming an association through which fuel can be purchased in greater volumes under a firm contract. Such an association can be further supported with the installation of a centralized storage tank and power-resilient dispensing equipment. Combining fuel needs of multiple companies will maximize purchasing power and may allow purchasing agreements with wholesale distributors to also include a delivery service.¹⁷
- If your core functions (and their supporting functions) depend heavily on electric power, consider enhancing onsite emergency power generation capability, either by installing a permanent emergency generator and fuel storage tank or by modifying your facility's existing electrical infrastructure to facilitate installation of a portable generator. If you perform lifeline functions, you may be eligible for Federal support for such changes. Through a program operated in conjunction with the Federal Emergency Management Agency (FEMA) known as the Emergency Power Facility Assessment Tool (EPFAT), the U.S. Army Corps of Engineers (USACE) can evaluate the emergency power requirements for certain private sector businesses, develop specifications for an emergency generator that can support core functions, assist in the installation of appropriate transfer switches that expedite connections to a portable emergency generator, and deploy the appropriately sized portable generator during emergencies. USACE will also register the facility with FEMA, making your facility eligible for priority distribution of fuel to support the emergency generator. Details of the EPFAT program can be found at http://www.usace.army.mil/Portals/2/docs/Emergency%20Ops/National%20Response%20Framework/power/EPFAT_Fact_Sheet_21_April_2015.pdf.

¹⁶ Gasoline stored over extended periods will degrade and become unusable. Gasoline in onsite storage tanks should be routinely consumed and regularly replaced to ensure its quality.

¹⁷ During fuel shortages, fuel distributors will give priority to satisfying firm purchase contracts, making only any remaining fuel available for spot market purchases.

- Review FEMA guidance for developing emergency operations plans, and develop your fuel contingency plan in a manner compatible with that guidance.¹⁸
- Review materials and resources available through FEMA’s voluntary Private Sector Preparedness Program (PS-Prep™) and consider developing your business continuity plan and associated contingency plans in accordance with the guidance offered in that program.¹⁹
- Look for and pursue Federal and State grant opportunities that can help defray the costs of infrastructure modifications and expansions that improve your operations’ resilience against the impacts of a fuel shortage. Government agencies, NGOs, and private sector companies engaged in activities that provide support to those impacted by a disruptive event or other emergency or that conduct activities to service, repair, and restore critical infrastructure may be eligible for financial assistance that can help defray the costs of actions which reduce vulnerabilities or improve the resilience of their facilities, resources, assets, or operations. FEMA’s Hazard Mitigation Grant Program may be one such source of Federal funds. Private sector businesses are not directly eligible for FEMA grants, but States can apply for a hazard mitigation grant on behalf of a private sector business that is relied on to perform activities essential to the State’s response to and recovery from a natural disaster. These grants are usually awarded after a Presidential disaster declaration to reduce losses from similar events in the future. Additional details are available on this FEMA Website: <http://www.fema.gov/hazard-mitigation-grant-program>. Also, the FEMA *Hazard Mitigation Assistance Guide*, available at <https://www.fema.gov/media-library/assets/documents/117020>, can assist a company in determining its eligibility for FEMA funding of its mitigation efforts.²⁰ See Appendix A for additional guidance. See, also, the related documents listed in Appendix B.
- Consider joining FEMA’s National Business Emergency Operations Center, a virtual FEMA organization that facilitates information sharing between public and private sector stakeholders in planning for and responding to emergencies. Registering in this program allows private sector organizations to identify potential sources of resources and capabilities and allows FEMA to quickly identify needs of private sector organizations that play pivotal roles in an area’s response to and recovery from an emergency. Details can be found here: https://www.fema.gov/media-library-data/20130726-1852-25045-2704/fema_factsheet_nbeoc_final_508.pdf.
- Consider subscribing to the “Fleet Open/Closed Service” offered by the Multi-State Fleet Response Working Group of the All Hazards Consortium; during and in the aftermath of an emergency, this application monitors digital retail transactions of businesses critical to supporting disaster response and recovery (e.g., gas stations, food establishments, hotels) as an indication that the business continues to function in the face of widespread grid power outages, and provides real-time information to subscribers, including suggesting available routes to the open business from a subscriber’s location.²¹

¹⁸ FEMA, 2010, *Developing and Maintaining Emergency Operations Plans, Comprehensive Preparedness Guide (CPG) 101, Version 2.0*, November, https://www.fema.gov/media-library-data/20130726-1828-25045-0014/cpg_101_comprehensive_preparedness_guide_developing_and_maintaining_emergency_operations_plans_2010.pdf, accessed August 15, 2016.

¹⁹ FEMA’s PS-Prep™ program offers preparedness development in accordance with any of three performance standards, based on the size and complexity of your organization, Details are available at this FEMA Website: <https://www.fema.gov/voluntary-private-sector-preparedness-program-ps-preptm-small-business-preparedness>. The Business Protection Tool Kit developed under that program is available at https://www.fema.gov/pdf/privatesector/FEMA_PS-Prep_Toolkit.pdf.

²⁰ An overview of FEMA’s Hazard Mitigation Assistance and additional information can be found at <https://www.fema.gov/hazard-mitigation-assistance>.

²¹ Details on the “Open/Closed Application” can be found at this All Hazards Consortium Website: <http://www.fleetopenclosed.org/index.html>.

5. Write, Distribute, Train, Exercise, and Refine Your Plan

Completing the steps above puts you in a position to establish your fuel contingency plan. The additional important activities outlined below will ensure that your plan will be available when it is needed. Ideally, your fuel contingency plan will become an important element of your overall business continuity plan, working in concert with contingency plans you develop to secure other necessary resources or support during emergencies.

A. Write the Contingency Plan

Any contingency plan must be in writing to be effective. A written plan provides a reference point for necessary actions during emergencies or disruptions and promotes your company's resilience by providing an organizational basis of facts, information and prevailing conditions from which to adapt to, modify, or overcome the existing circumstances. The key thing to know about a plan is that it is a tool of your own making. A plan is a flexible thing. A plan is both a reference point and a guideline to a common goal. The questions you answered earlier helped to identify "Who is involved," "What you need to know," "When to act," "Where to go or to look," and how you will determine the answers to the questions associated with "Why and How?" See the "Business Continuity Planning Suite" on this Department of Homeland Security Website for additional guidance: <https://www.ready.gov/business-continuity-planning-suite>.

It is important that this plan, once completed, be approved and supported at the highest levels in your organization. The plans should state who has approved the plan and when it was last approved.

At a minimum, the written plan should contain the following:

- Overall goals and objectives;
- Corporate policies that facilitate contingency plan implementation, including the expected or prevailing conditions that will trigger implementation of the plan;
- Assumptions regarding how and when fuel shortages may occur and the fundamental assumptions you have made regarding possible fuel shortages, on which your fuel contingency plan is based;
- Sources and types of information that will inform your decision to activate your fuel contingency plan;
- Sources and types of information that will inform your decision to deactivate your fuel contingency plan and return to normal business practices;
- Communication strategies that will inform employees, partners, government authorities and customers on the activation, status, and deactivation of your fuel contingency plan;
- Roles and responsibilities of all employees;
- Internal and external communication strategies;
- Information sources and exchanges;
- Contact information for all employees;

- Contact information for government authorities, partners, and other private sector individuals who are critical to plan implementation and with whom critical information must be exchanged throughout the period when the contingency plan is in effect;
- Critical information on evolving conditions, sources of support and locations of critical resources (including maps detailing preferred routes, where appropriate), and access procedures;
- Detailed SOP for each specific action that will be undertaken in implementing the plan, including the desired or expected outcomes; and
- Procedures that will ensure the management of changes and refinements you make to your plan.

B. Distribute the Plan

Distributing a written plan to all employees will ensure that they will know your organizational goals and objectives; written information facilitates employee interactions as well as effective contact with governmental and private organizations that can assist in the implementation of your plan during emergencies. Your plan must function in coordination with numerous other plans that will be put into effect by governmental and private sector organizations in anticipation of or during an emergency or in response to a disruption to normal conditions. Exchange contingency plans with government and private sector organizations whose plans intersect with yours, and ensure the information flow in your plan is sufficient for you to maintain situational awareness of relevant conditions and the status of all intersecting plans throughout the period of the emergency or disruption. Review information management and communication strategies contained in intersecting government and private sector plans to ensure compatibility with your plan; adapt and adopt as necessary to establish common platforms for information management and communication among intersecting plans.

C. Train Personnel on the Plan

Ensure that all employees understand what is expected of them in implementing the contingency plan. Consider training that might be necessary for all employees to be comfortable with their assigned roles. Cross-train employees to ensure availability of trained personnel to conduct critical activities. Ensure that all employees understand the additional safety issues that may be associated with alternative practices called for in your plan. Training on accessing critical information from various media may also be appropriate.

D. Exercise and Refine the Plan

As with business continuity plans and COOP plans, contingency plans are not static but rather attain their maximum effectiveness through the process of continuous improvement. Conduct periodic exercises of your plan, both internal to your organization and in concert with external partners, establishing mechanisms for receiving feedback from all participants. Government organizations continuously test the effectiveness of their emergency plans and to gather information that supports plan enhancements. Those exercises can be full-scale or virtual (e.g., tabletop exercises). Whenever possible, identify your organization to government emergency planners as a stakeholder in their plan refinement activities and look for opportunities to participate in planned exercises as a way to test the sufficiency and effectiveness of your plan. Engage with private sector companies that provide resources and support critical to your plan's success to periodically evaluate plan compatibility. Use the experiences of exercising your plan to make modifications or refinements following established "management of change" procedures, and distribute the resulting amended plan to employees and external partners. Schedule exercises of your plan after any modification to fundamental business practices or infrastructure modification.

Exercises, whether virtual or actual, provide the experiences and information needed to refine your plan to ensure its feasibility, practicality, and effectiveness. However, even as they are executed, plans may also need to be flexible and capable of being revised “on the fly” as emergencies evolve and factors affecting fuel availability and accessibility change. For example, access to your primary fuel vendor may be initially impossible because of damage to highway infrastructure—but access may be re-established once temporary infrastructure repairs are completed but while the larger fuel shortage condition is still in effect. Throughout the emergency or duration of a fuel shortage, maintain continuous situational awareness using your selected information sources and be prepared to make appropriate changes to your efforts to access fuel in response to changing conditions.

In addition to necessary updates indicated by exercises, review and update your fuel contingency plan at least every 2 years or when there have been changes in core functions or business operations that would affect fuel usage.

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Appendix A: Additional Considerations for Public Sector Organizations

Like private sector commercial businesses, public sector organizations have fuel dependencies associated with their core functions. Unlike private sector businesses, however, public sector organizations may be required by statute, regulation, or executive directive to ensure that certain core functions continue undiminished throughout the period of a fuel shortage. This is especially the case for agencies (and their supporting non-governmental organizations [NGOs] and commercial entities) responsible for providing safety, shelter, and life-sustaining commodities to affected members of the public and for performing essential response and recovery actions. While such absolute and non-negotiable obligations may simplify agency policy decisions (e.g., by eliminating any consideration of curtailment of certain core functions), they also obligate public sector organizations to go to greater lengths in the design of their fuel contingency plans to ensure that sufficient fuel is available for core functions throughout the period of fuel shortages. And, while each public agency is responsible for developing its own fuel contingency plan, those agency-specific or organization-specific plans must be developed in the context of, and be compatible with and complementary to, the State's overall emergency response policies, strategies, and plans, including the State's anticipated coordination with Federal agencies conducting Emergency Support Functions (ESFs) defined in the *National Response Framework*.²² To ensure consistency in the State's collective response to fuel emergencies, fuel contingency plans of individual State agencies, regional or local government authorities, or essential service organizations will ideally be fully integrated elements of the State's overall emergency response plan and be included in State, local, or municipal energy assurance plans.²³

Additional opportunities may exist for public agencies and NGOs and commercial entities that support them to receive Federal funds to implement changes to an organization's physical infrastructure and assets and other administrative changes that will enhance the organization's ability to meet emergency response and recovery obligations. In addition to considerations and strategies presented in the body of this fuel contingency plan guidance, representatives of public sector agencies and their supporting organizations should review the following considerations in the development of their organization's fuel contingency plan. Those considerations should also extend to utility owners and operators responsible for repairing and restoring critical infrastructure essential for emergency response and for an impacted area's return to normalcy.

- Review existing State statutes, executive directives, and the State emergency operations plan to understand the specific obligations of your organization or agency.
- Collaborate with your State's energy official to ensure that your fuel contingency plan is compatible with your State's energy assurance plan.²⁴

²² Details of the organization and ESF assignments in the National Response Framework can be found at this FEMA Website: <https://www.fema.gov/national-response-framework>.

²³ Using a grant from the U.S. Department of Energy and assisted by the National Association of State Energy Officials (NASEO), States have developed Energy Assurance Plans that address all types of energy, including fuels. Details of the Energy Assurance Plan program can be found at this NASEO Website: <http://www.naseo.org/energyassurance>.

²⁴ Under a grant from the U.S. Department of Energy, States developed State Energy Assurance Plans. The National Association of State Energy Officials (NASEO) supported these planning efforts by producing planning guidelines, available at http://www.naseo.org/data/sites/1/documents/publications/State_Energy_Assurance_Guidelines_Version_3.1.pdf.

- Review the National Petroleum Council’s report, *Enhancing Emergency Preparedness for Natural Disasters – Government and Oil and Natural Gas Industry Actions to Prepare, Respond, and Recover*, to understand the basic elements of petroleum fuel supply chains and their vulnerabilities to disruption and to identify ways to establish effective working relationships with members of your local Oil and Natural Gas community.²⁵
- Local and municipal government authorities should review materials that were developed for the Local Energy Assurance Planning initiative.²⁶
- Those responsible for public water or wastewater facilities or water management projects that can ensure the protection of public health should review the Federal funding opportunities available for those types of critical infrastructure or initiatives. (See Supporting Resilience Enhancements of Critical Facilities and Essential Services discussion.)
- Share the details of your completed fuel contingency plan with authorities in the State’s emergency operations center and confirm your contingency plan’s compatibility with the State’s emergency operations plan and the emergency and fuel contingency plans of other public sector organizations and agencies.
- Interact with other agencies or organizations in your State that have similar fuel dependencies for their respective essential core functions to identify and pursue collaborative opportunities for joint fuel access strategies.
- Corroborate your organization’s estimate of fuel demands as suggested in Section 1 by reviewing your State’s energy profile published by the Energy Information Administration (EIA).²⁷
- Become familiar with your State’s participation in the Emergency Management Assistance Compact (EMAC) and other supplementary interstate and intrastate agreements that provide the mechanisms by which your agency can access fuels from other participating organizations, and incorporate relevant information into your fuel contingency plan.²⁸

²⁵ The National Petroleum Council report is available at http://www.npc.org/reports/2014-Emergency_Preparedness-lr.pdf.

²⁶ The Local Government Energy Assurance Planning (LEAP) program was funded through the American Recovery and Reinvestment Act (ARRA). In addition to access to ARRA funds, local and municipal governments had access to technical assistance in developing energy assurance plans for their jurisdictions. Although the LEAP program is no longer active, potentially valuable guidance, publications, and lessons learned are still available through the LEAP Website: <http://www.energyassurance.us/home>. Although the resources available through this Website are focused on the broader objective of ensuring the availability of all forms of energy, guidance on fuel contingency planning is also provided. Appendix B provides hyperlinks to some of the guidance developed through the LEAP program.

²⁷ State energy profiles are produced by the EIA and are available on the EIA Website: <http://www.eia.gov/state/>.

²⁸ EMAC details can be found on this Website: <http://www.emacweb.org/>.

- Participate in your State’s hazard mitigation plan for critical infrastructure, which is designed to inventory and assess hazard mitigation capabilities, including the authorities, policies, programs, staff, funding, and other resources needed to accomplish mitigation and reduce long-term vulnerabilities; ensure that your agency’s fuel contingency plan is developed within the context of your State’s overall mitigation strategy for critical infrastructure vulnerabilities and benefits from consideration of relevant Federal Emergency Management Agency (FEMA) guidance; share information on the relevant elements of your fuel contingency plan with the State’s senior official responsible for development, formal adoption, and submission of the State hazard Mitigation plan to FEMA.²⁹

- Maintain a list of NGOs and commercial entities that you will rely on for assistance or support in completing your agency’s emergency response and recovery activities; ensure that the fuel demands of those entities are represented in any request to FEMA for fuel assistance; act on behalf of those NGOs and commercial entities in securing FEMA funding to support their resilience enhancement efforts.

- Regularly review Federal funding opportunities from FEMA and other Federal agencies that could be used to support your organization’s resilience enhancements. (See the Supporting Resilience Enhancements of Critical Facilities and Essential Services section) Take these steps to facilitate and expedite your access for Federal funding support:
 1. Remain familiar with the parameters of Federal funding opportunities for which your facility might be eligible,
 2. Identify local and State officials through whom you would submit your funding request,
 3. Establish an internal procedure for assessing damage recovery and improvement costs to be included in your request, and
 4. Establish all necessary emergency policies and procurement procedures (including granting emergency authorities and assigning roles and responsibilities to key personnel to pursue funding).

- If your organization is a water or wastewater facility, review relevant guidance from the U.S. Environmental Protection Agency (EPA), including *Hazard Mitigation for Natural Disasters, A Starter Guide for Water and Wastewater Utilities*.³⁰

- Routinely review Federal funding opportunities from FEMA and other Federal agencies that could be used to support your agency’s resilience enhancements.

²⁹ In March 2015, FEMA released the *State Mitigation Plan Review Guide*, which became effective on March 6, 2016, and which is now codified in 44 CFR Part 201. States that develop and pursue hazard mitigation strategies in a manner consistent with the FEMA guide will benefit from collaborations with FEMA on their plan’s development and maximize their access to funding under FEMA’s Hazard Mitigation Grant Program (see: <https://www.fema.gov/hazard-mitigation-grant-program>). The *State Mitigation Plan Review Guide* and related FEMA publications are available at: <https://www.fema.gov/media-library/assets/documents/101659>. Information on additional FEMA funding opportunities for vulnerability mitigation is available at <https://www.fema.gov/hazard-mitigation-planning>. Bulletins that provide additional guidance on key topics related to mitigation planning are available at <https://www.fema.gov/media-library/assets/documents/115780>.

³⁰ EPA, *Hazard Mitigation for Natural Disasters, A Starter Guide for Water and Wastewater Facilities*, available at <https://www.epa.gov/sites/production/files/2016-08/documents/160815-hazardmitigationfornaturaldisasters.pdf>. More broadly, EPA’s Water Security Division offers a variety of products and services designed to assist water and wastewater facilities in assessing vulnerabilities, developing general and hazard-specific emergency plans, and building operational resilience against “all-hazards” incidents—accessible at https://www.epa.gov/sites/production/files/2016-08/documents/wsd_products_and_services_lits_2016_508_compliant.pdf. Follow new product developments by joining the Water Security Division’s mailing list: https://visitor.r20.constantcontact.com/manage/optin?v=001jNS004Ui3ONyQJ_6_uIwJWXCv7UW3njxaPd15SdUIDy1AolfRx3ffoFsOJ6jXUExIGHx3uTVkup8PUocOvrVHadch-XA1Tnb2_hj61rLc04%3D.

- Review the guidance to Federal agencies on the development of COOP plans for examples of possible formats and content and best practices that have applicability to your own agency's contingency plans.³¹
- Interact with the appropriate legislative committees to request appropriations sufficient to fund installation and operation of infrastructure expansions or modifications that would enhance your organization's fuel resilience during fuel shortages.
- Seek the legislative authorities necessary to enter into agreements with commercial organizations that would enhance your organization's fuel resilience during fuel shortages.
- Enter into agreements or contracts with private sector organizations that may be able to assist in the performance of your core functions.
- Develop strategies for effective and timely communication with members of the public that typically rely on your organization's core functions regarding the status of your ability to perform those core functions and incorporate such communication strategies into your fuel contingency plan.
- Be prepared to supply information and status regarding your agency's fuel requirements and your current capabilities to access fuel (including through your agency's fuel contingency plan) to State authorities to support your State's request for bulk and/or retail fuel support from FEMA during declared disasters.³²

³¹ *Continuity of Operations (COOP) Multi-Year Strategy and Program Management Plan Template Guide* is available at this FEMA Website: https://www.fema.gov/pdf/about/org/ncp/coop_multi_year_plan_guide.pdf.

³² With the President's issuance of an emergency or major disaster declaration to a State that includes Direct Federal Assistance (DFA), States may request fuel from FEMA for State agency core functions that protect life and provide for public health and safety (and fuel for those private sector organizations that support agencies in those core functions) if there is an insufficient supply of fuel from private sources. In addition to providing the details on the amounts and types of fuels required, the associated delivery and downloading logistics, the identification of a State custodian, and appropriate security provisions, your State's request for Federal fuel must document that the State has exhausted its own capabilities to secure the fuel, including from EMAC sources, and document any compelling reasons for not sourcing the fuel from private sources when such fuel is available. Details of your State's eligibility for DFA involving fuels are outlined in FEMA's *Fuel Services Guide (2017)* which is available upon request from FEMA-Regional-Plans@fema.dhs.gov.

Supporting Resilience Enhancements of Critical Facilities and Essential Services

Various Federal agencies can provide support for enhancing the resilience of critical facilities that are essential for public health and safety or for expediting the restoration of critical services. Although some Federal programs are specifically designed to support water and wastewater facilities, other public facilities, NGOs, and certain for-profit private sector companies that operate critical infrastructure or conduct essential services may also be eligible for Federal funding and/or technical assistance in mitigating vulnerabilities or enhancing resilience. Support comes in the form of project grants, formula grants, capitalization grants, and direct and guaranteed loans. EPA provides an overview of the major Federal disaster assistance programs for water and wastewater facilities (<https://www.epa.gov/fedfunds/overview-Federal-disaster-funding-opportunities-water-and-wastewater-utilities>). Some of the programs mentioned in that EPA overview are also available to other critical facilities or services. The Websites for primary Federal programs through which support may be available are listed below.

EPA: The Clean Water State Revolving Fund is an EPA-State Partnership that provides a permanent independent source of low-cost financing for a variety of community improvement projects, including improving the fuel resilience of critical infrastructure. <https://www.epa.gov/cwsrf>

FEMA: Water and wastewater facilities are eligible for FEMA's Hazard Mitigation Grant Program that can be used to fund resilience enhancements. <https://www.fema.gov/hazard-mitigation-grant-program>

HUD: Water and wastewater facilities may be eligible for the U.S. Department of Housing and Urban Development Community Development Block Grants to defray the costs of facility improvements, including, for example, improving the facility's power resilience. <https://www.hudexchange.info/programs/cdbg-entitlement/cdbg-entitlement-program-eligibility-requirements/>

USDA: Through the Rural Utilities Service Water and Environmental Programs, the U.S. Department of Agriculture can fund construction and enhancements of rural water facilities or technical assistance for such projects. <http://www.rd.usda.gov/programs-services/all-programs/water-environmental-programs>

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Appendix B: Recommended Reading

Listed below are documents and reports that may support development of elements of a fuel contingency plan or help determine eligibility for Federal funding. The listing is not comprehensive, but nevertheless provides information on best practices and lessons learned, many of which may be immediately transferrable to your organization's fuel contingency plan with little to no modification. Although the references included here are hyperlinked for convenience, readers are encouraged to periodically review the Websites for each document for possible revisions. The Federal Emergency Management Agency (FEMA), the U.S. Department of Energy (DOE), and the U.S. Environmental Protection Agency (EPA) publications are all available through the respective Websites of those agencies. Publications and reports by the National Association of State Energy Officials (NASEO) are available digitally through the NASEO Website. In addition to the State-specific plans listed below, individual State energy assurance plans may also be available directly from individual State energy officials upon request. Also listed are other documents that reinforce elements of this Guidance or provide examples of resilience enhancements in general or best practices in developing fuel contingency plans.

FEMA Publications

Developing and Maintaining Emergency Operations Plans, Comprehensive Preparedness Guide (CPG) 101, version 2.0, November 2010, available at https://www.fema.gov/media-library-data/20130726-1828-25045-0014/cpg_101_comprehensive_preparedness_guide_developing_and_maintaining_emergency_operations_plans_2010.pdf.

Climate Change Adaptation Policy Statement, 2011-OPPA-01, available at https://www.fema.gov/media-library-data/20130726-1919-25045-3330/508_climate_change_policy_statement.pdf.

State Mitigation Planning Key Topics Bulletins – Risk Assessment, June 2016, available at https://www.fema.gov/media-library-data/1464972786707-d686a56e54284eb815b1624224dfaa5b/RiskAssessment_KeyTopics_Bulletin_Final.pdf.

State Mitigation Planning Key Topics Bulletins – Planning Process, July 2016, available at https://www.fema.gov/media-library-data/1468867403587-36535211c7c892fb7b1956e961d05a49/PlanningProcess_KeyTopics_Bulletin_508.pdf.

State Mitigation Planning Key Topics Bulletins – Mitigation Capabilities, September 2016, available at https://www.fema.gov/media-library-data/1474922239359-986b9b410443b41d944df0165dcafc79/MitCapabilities_KeyTopics_Bulletin_508.pdf.

State Mitigation Plan Review Guide Fact Sheet, undated, available at https://www.fema.gov/media-library-data/1468324613209-15c5785b90b32bb51a2c3041272928e5/State_Mitigation_Plan_Review_Guide_Fact_Sheet_Final_508.pdf.

State Mitigation Plan Review Guide, Released March 2015, Effective March 6, 2016, available at https://www.fema.gov/media-library-data/1425915308555-aba3a873bc5f1140f7320d1ebabd18c6/State_Mitigation_Plan_Review_Guide_2015.pdf.

Hazard Mitigation Assistance Cost Share Guide for Applicants, Subapplicants, and FEMA, May 2016, available at <https://www.fema.gov/media-library-data/1463766664964-4e6dd22652cb7c8a6162904f3b1b2022/FinalHMACostShareGuide508.pdf>.

Federal Insurance and Mitigation Administration (FIMA) Policy, FP 302-094-2, March 6, 2015, available at https://www.fema.gov/media-library-data/1426627679120-b028b51ffe4dcae55e157baa2be7a02b/State_Mitigation_Plan_Review_Guide_Policy_FP_3020942.pdf.

FEMA Fuel Services Guide, 2017, available upon request from FEMA-Regional-Plans@fema.dhs.gov.

Continuity of Operations (COOP) Multi Year Strategy and Program Management Plan Template Guide, undated, available at https://www.fema.gov/pdf/about/org/ncp/coop_multi_year_plan_guide.pdf.

FEMA Private Sector Preparedness Program, Business Protection Toolkit, undated, available at https://www.fema.gov/pdf/privatesector/FEMA_PS-Prep_Toolkit.pdf.

NASEO Publications

Biodiesel Fueled Vehicles and Emergency Response, iREV Case Study, June 2016, available at <http://www.naseo.org/data/sites/1/documents/publications/iREV%20Biodiesel%20Case%20Study.pdf>.

Electric Vehicles and Emergency Response, iREV Case Study, June 2016, available at <http://www.naseo.org/data/sites/1/documents/publications/iREV%20EV%20Case%20Study.pdf>.

Integrating Alternative Fuel Vehicles in Energy Assurance Planning - Information, Examples, and Data Resources to Guide States, November 2015, available at <http://www.naseo.org/data/sites/1/documents/publications/AFV-EA%20Report%20FINAL1.pdf>.

Natural Gas Vehicles and Emergency Response, iREV Case Study, June 2016, available at <http://www.naseo.org/data/sites/1/documents/publications/iREV%20Natural%20Gas%20Case%20Study.pdf>.

Petroleum Shortage Supply Management: Options for States, September 2012, available at http://www.naseo.org/data/sites/1/documents/publications/Petroleum_Shortage_Supply_Management.pdf

Propane Vehicles and Emergency Response, iREV Case Study, June 2016, available at <http://www.naseo.org/data/sites/1/documents/publications/iREV%20Propane%20Case%20Study.pdf>.

Transportation Technical Reference Manual: Guide to Characterize the Savings, Benefits, and Costs of Transportation Efficiency Measures, June 2014, available at http://www.naseo.org/data/sites/1/documents/publications/TRM_FINAL.pdf.

State Energy Assurance Guidelines, Version 3.1, December 2009, available at http://www.naseo.org/data/sites/1/documents/publications/State_Energy_Assurance_Guidelines_Version_3.1.pdf.

State-Specific Plans

Oregon Petroleum Emergency Preparedness Program, undated, available at https://www.oregon.gov/OMD/OEM/ossprac/docs/or_petroleum_preparedness_prog.pdf.

Oregon State Energy Assurance Plan, August 2012, available at <https://www.oregon.gov/energy/Pages/EnergyAssurance.aspx>.

Portland Local Energy Assurance Plan, June 2012, available at <https://www.portlandoregon.gov/pbem/53662>.

Georgia Energy Assurance Plan, January 28, 2013, available at [http://www.gema.ga.gov/Plan%20Library/Energy%20Assurance%20Plan%20\(2013\).pdf](http://www.gema.ga.gov/Plan%20Library/Energy%20Assurance%20Plan%20(2013).pdf).

State of Arkansas Energy Assurance Plan, October 2013, available at http://www.arkansasenergy.org/sites/default/files/content/arkansas_energy_assurance_plan.pdf.

Florida Energy Assurance Plan, April 2011, available at http://www.floridadisaster.org/documents/FEAP_Final_Version_4.25.11.pdf.

Illinois Energy Assurance Plan, Version 5.0, Update April 30, 2016, available at <https://www.illinois.gov/dceo/whyillinois/TargetIndustries/Energy/Documents/2015%20IEAP%20Final.pdf>.

Massachusetts Emergency Support Function 12 – Energy, December 2016, available at <http://www.mass.gov/eopss/docs/mema/resources/plans/cemp/maesf-12-energy-final-2015.pdf>.

California Energy Assurance Plan, June 2014, available at <http://www.energy.ca.gov/2014publications/CEC-600-2014-006/CEC-600-2014-006.pdf>.

Texas Energy Assurance Plan, November 2012, available at http://www.puc.texas.gov/industry/electric/reports/energy_assurance/Energy_Assurance_Plan-Texas.pdf.

Publications specifically designed for local government

Public Technology Institute, *Local Government Energy Assurance Guidelines*, Version 2.0, 2011, available at <http://www.pti.org/programs/energy/guidelines.asp>.

Public Technology Institute, *Local Government Energy Assurance Guidelines*, Version 1.0, 2008,, available at https://5904999a-a-62cb3a1a-s-sites.googlegroups.com/site/ptileap/guidelines/Local-Government-Energy-Assurance-GuidelinesV1.pdf?attachauth=ANoY7covNE78MozwJMg6yRf-I9tUsvtIyaV1wdqjC_USrJNlLh8IaWZUPG8YbNM5qZh4SDvp4MnvbW_3wfK2mzl4Xq2JG0-U6RHbjlkL5-m_Tm6HNBJcKW0u8uhyspQYtKBA20GwzLzHXvZhAUfxHh2eU_-YMG1-Kc7qDWRQsrYd580tT2QjCZzkx57FshVruO5qMHEZbIkvo-ueS31UVQ9Mw-GeMI4SxG2mwwOr2Hq7yREv5xGP8-OoY_LxjNvoIGvI_kJYu6coKG2NSj98TAuFzAWW5LHyg%3D%3D&attredirects=0.

Public Technologies Institute, DOE, *Introduction to Energy Infrastructure Interdependencies, Local Government Energy Assurance Planning*, 2011, available at https://5904999a-a-62cb3a1a-s-sites.googlegroups.com/site/ptileap/publications/LEAP-Interdependency.PDF?attachauth=ANoY7cpK4COejdny1NFTNwjZ0yN4Z4LzSg-Y7TCcxePF0tkCViS7s1QOoCia45hQMS1iznEZhosvdFdhRKlZSQiH5J7i24gMdduFEQt0xdJP_xgUQgKeyGr9-rJ8mJfRy2FAq1HIBzGOSue7r5PAkoQ98RpBmkXpQxKoXdNx97ilfve4Gu0Vonk--rj18lnfwHxyPOjQeBSgLnQ9TnCGDYxuWK4ej9EeFgDtUstrZF1GBR8bNVHteM%3D&attredirects=0.

Public Technologies Institute, DOE, *Energy 101: Key Concepts for Local Governments, Local Government Energy Assurance Planning*, 2011, available at https://5904999a-a-62cb3a1a-s-sites.googlegroups.com/site/ptileap/publications/Energy_101_8-3-11.pdf?attachauth=ANoY7cr2WihR-Hx_4dKpSAzHxSRPKKEw0rvFOTalzl6tL3EcRozSnuVgcCDyJmNrIdiZ9-mY4dijWJJUh4I1i0cJ8ENli9h117L9_eHY8YZq9KMWcK6jmGdamsGA2BOI3FvCu4SZO6hy3e3yj8mCUTNPV045cOU9VT_4TtkY82Xfkf-avr-jHbELdkr9-7x6suO_ejS7dGh_RSQiYjIWe9MQgyQemsqn2iOPqCESuxzj9IIDGk_1Y%3D&attredirects=0.

California Local Energy Assurance Planning, *Methodology*, November 2012, available at <https://dl.dropboxusercontent.com/u/60849267/Methodology%20v%2012.pdf>.

California Energy Commission, *California Petroleum Fuels Set-Aside Program – Application for Emergency Fuels Allocation, Applicant Handbook*, August 2016, available at <http://www.energy.ca.gov/2016publications/CEC-200-2016-008/CEC-200-2016-008.pdf>.

Seattle Urban Mobility Plan - Best Practices in Transportation Demand Management, January 2008, available at <http://www.seattle.gov/transportation/docs/ump/07%20SEATTLE%20Best%20Practices%20in%20Transportation%20Demand%20Management.pdf>.

EPA Publications

Power Resilience – Guide for Water and Wastewater Facilities, December 2015, available at <https://www.epa.gov/sites/production/files/2016-03/documents/160212-powerresiliencguide508.pdf>.

Hazard Mitigation for Natural Disasters – A Starter Guide for Water and Wastewater Utilities, June 2016, available at <https://www.epa.gov/sites/production/files/2016-08/documents/160815-hazardmitigationfornaturaldisasters.pdf>.

All-Hazard Consequence Management Planning for the Water Sector, November 2009, available at <http://www.awwa.org/portals/0/files/legreg/security/allhazard.pdf>.

Other Relevant Publications

U.S. Army Corps of Engineers, Emergency Power Facility Assessment Tool, available at <http://epfat.swf.usace.army.mil>.

Continuity Central, “A Six-Step Guide for Preparing for a Fuel Shortage,” available at <http://www.continuitycentral.com/feature0576.htm>.

Continuity of Operations Planning for Small Airports, available at <https://www.nap.edu/download/23675>.

Overview of Airport Fueling System Operations, available at <https://www.nap.edu/download/22141>.

Airport Emergency Post-Event Recovery Practices, available at <https://www.nap.edu/download/22151#>.

Attachment – Fuel Contingency Plan Template

(It is recommended that the plans and guidance from the U.S. Department of Energy, the Federal Emergency Management Agency, and National Association of State Energy Officials in Appendix B be reviewed prior to developing a plan with this template)

(Include an Errata sheet to document corrections from previous versions)

(Include a tabulation of revisions to the plan)

Introduction:

- Provide a brief discussion on your State's vulnerability to severe weather events and the potential for such events to disrupt the delivery of liquid petroleum transportation and energy fuels.
- Discuss other events and conditions not related to a weather event (e.g., interruptions in Gulf Coast refinery operations, physical damage to infrastructure of receiving ports) that could result in regional or even statewide fuel shortages. State and local emergency plans can provide relevant information.
- Discuss the manner and timing by which statewide or regional fuel shortages will impact business practices. Describe the business practices or infrastructure modifications already in place designed to mitigate or forestall the onset of such impacts.

Goal and Objectives:

- Show the relationship of this contingency plan to your organization's comprehensive business continuity plan (BCP) or continuity of operations (COOP) plan, if you have one, showing how this contingency plan supplements the BCP or COOP plan by providing details on how certain critical functions can be sustained during emergencies.
- Describe the ultimate goal of this plan as securing sufficient fuel to allow continuation of core functions throughout the duration of fuel shortages.
- Describe the core functions that will be supported by this plan and whether they will operate at their rated capacities or at some reduced rate.
- Identify the business functions that will be suspended during fuel shortages in order to conserve fuel.
- Identify other modifications to business practices that will be undertaken when this contingency plan is executed, including actions to reduce overall fuel demand or otherwise mitigate the impact of a fuel shortage on business practices.
- Identify the tactical objectives that will be pursued to satisfy the plan's goal.
- Identify other corporate plans with which this plan will interact; identify requirements of this plan that could be deferred to directives and information already provided in a comprehensive BCP or in other contingency plans that supplement that BCP. For example, emergency contact information for all employees called for in this contingency plan could be referred to a BCP list that already contains that information.

Plan Activation and Applicability:

- Document the planning assumptions behind your fuel contingency plan—that is, what events are expected to result in a fuel shortage, what will be the immediate impacts to your business practices when fuel shortages occur, and how will your fuel contingency plan attempt to mitigate those impacts.
- Describe the circumstances that will inform senior management decisions to implement the plan (e.g., upon receiving official notice of an approaching severe weather event, or notices from primary fuel provider) and how such decisions and plan activation will be communicated to employees.
- Describe the actions that will be taken by senior management and others to inform government officials, suppliers, utility providers and others that the fuel contingency plan has been activated.
- Describe the business units and locations that will be subject to and supported by this plan.
- Indicate the factors that senior management will rely on in returning to normal fuel acquisition procedures and normal business practices.

Policies:

- Describe the official internal sources of information that will be established for the situational awareness of all employees.
- Describe the policies that will go into effect to support plan implementation; policies could include telework and flex time strategies for employees and car pools.
- Describe the process by which certain business functions will be suspended during fuel shortages to reduce overall fuel demands and how they will be subsequently restarted once the fuel shortage is resolved.
- Identify the credentials that will be secured from State or local government emergency response authorities that will grant access to impacted areas for response or critical infrastructure restoration.
- Describe the authorized fuel purchases that can be made under this plan.

Employee Roles and Responsibilities:

- Identify senior management individuals who have authority to make decisions under this plan.
- Identify individuals who have specific responsibilities under this plan.
- Identify prohibited actions while this plan is in effect; emphasize prohibitions on actions involving fuel management that are unsafe.
- Provide guidance to all employees on how to behave when this plan is put into effect; identify expectations of employee behavior during advance-notice events (i.e., projected hurricane landfall) or during no-notice event activations (e.g., avoid panic buying, maintain vehicle fuel tanks in nearly full conditions during the severe weather season, maintain a personal fuel reserve in a portable storage container).
- Describe the training that will be undertaken to ensure that employees understand and can conduct their duties safely during implementation of this plan; include, especially, cross-training of select individuals to ensure the availability of trained staff to conduct core functions under the auspices of this plan.

Standard Operating Procedures (SOPs) for Actions Directed by this Plan:

- Develop detailed SOPs for each unique activity that will be conducted under the auspices of this plan. Pay particular attention to minimum employee qualifications and training, and how any new safety aspects of the unique activity will be addressed; distribute SOPs to all staff. All actions involving management of fuel should be supported by a detailed SOP.

Communication Strategies Employed During Emergencies:

- Identify the methods by which important situational awareness information and information regarding this plan's implementation will be exchanged between management and employees during and in the aftermath of a fuel disruption; list all communication strategies that may be employed.
- Identify the official external sources of information that senior management will rely on for situational awareness and decisions regarding this plan.
- Identify the information employees are obligated to convey to senior management.
- Defer to the communication strategies that may be outlined in the organization's BCP or COOP.
- Identify who is authorized to provide information to State and local emergency response authorities.
- Indicate how employees will communicate with fuel vendors and other external sources of support (e.g., utility providers).

Critical Information for Plan Implementation:

- Include an updated database of contact information for government authorities, fuel vendors, suppliers, utility providers, other external sources of support, and employees.

Critical Agreements:

- Include agreements in place with government authorities for access to fuel.
- Include agreements in place with fuel vendors and/or fuel distributors for access to fuel during emergencies.
- Include agreements in place for acquisition of emergency power.
- Identify other companies with whom agreements are in place for emergency access to equipment or critical inventory items.
- Include agreements in place regarding acquisition of emergency generators.

Critical Assets:

- Include an updated inventory of company-owned resources (e.g., vehicles, equipment, spare parts).
- Include an updated inventory of fuel storage capabilities—volume, location, fuel type, electric power resilience (e.g., supported by an emergency power generator).

After-action Reports:

- Develop an after-action report each time this plan is exercised or implemented in response to an actual severe weather emergency or fuel shortage event that will provide a critical, objective analysis of the effectiveness and sufficiency of this plan. Provide a mechanism for employees to provide feedback on their experiences in implementing this plan that can contribute to that analysis and provide the basis for plan improvements and refinements. Share the after-action report with employees, together with an updated fuel contingency plan.