

Oil and Natural Gas Industry Preparedness Handbook



April 2016

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Oil and Natural Gas Preparedness and Response Strategy

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Introduction to the Oil and Natural Gas Strategy

The oil and natural gas industry has created the following strategy document to ensure that roles, responsibilities and needs are clearly identified prior to any events that may affect the integrity of oil and natural gas systems. The oil and natural gas industry has long maintained and been acknowledged for its serious commitment to the safety of infrastructure, workers and processes. Disruptive events, whether manmade or natural, should be approached with the same commitment to safety, resilience and the needs of the community. Therefore, the following strategy approaches preparedness and response from the local level, acknowledging that events impact workers, businesses and communities first and foremost. While resources and information are often held at the regional or national level, it is the facility operators and those on the ground who will have the best ability to assess their systems, identify needs, and execute the work needed to restore services. This strategy lays out how local responses can be aided by State and regional associations, established relationships with governments and communities, and how corporate and federal relationships and capabilities can facilitate efficient response and recovery at the local level.

Oil and Natural Gas Industry Preparedness and Response Strategy

Recent disruptive events affecting U.S. oil and natural gas infrastructure and operations, including 2012's Hurricane Sandy, have prompted the U.S. oil and natural gas industry to revisit and clearly define the strategy we use to prepare for and respond to all hazards. The following describes the priority actions of the industry, which have been, are being and will be taken to promote communication and information sharing in preparation for all events, both natural and manmade.

As a preface to this discussion of industry's strategy, it is the industry's position that incidents, whether anthropogenic or natural should be managed by local and State governments, under the construct of the National Response Framework (NRF). While the Federal government can have a role in a response, its involvement should take place only when local and state governments request it, and then their efforts should be in support of the State and local response activities. It is also industry's position that, as indicated in Presidential Policy Directive 8, the Department of Energy (DOE) is the lead coordinator and primary agency for Emergency Support Function (ESF) 12 - Energy during events, and activities and requests for information that involve the oil and natural gas industry should happen in coordination with DOE.

During any incident, there are many requests for information from owners and operators who are simultaneously attempting to restore services and infrastructure. Requests originate from all levels of government which are attempting to serve the needs of their constituencies by prioritizing resources, services and access to critical supplies. Crude oil, the products derived from crude (e.g. gasoline, lubricants, etc.), and natural gas, enable many of the critical services which support response and restoration. As such, having effective communication and informed stakeholders can facilitate more effective restoration of industry services and result in a more efficient recovery. However, there are challenges to effective communication across the complex oil and natural gas sector. These can include understanding the variety and volume of information requests from stakeholders during the course of recovery and the competing interests and priorities of governments, owners and operators and other stakeholders. Industry believes that effective communication and education across all stakeholder groups, beginning with our government partners, is the most efficient use of resources and will provide the greatest return for our nation.

Specifically, the industry believes that with regard to incidents involving the oil and natural gas infrastructure and systems, a two-phased approach implemented prior to, during, and after an event will ensure an efficient response and recovery of the affected systems.

Phase I – Educating Stakeholder Groups

Ensuring that stakeholders throughout the response community and across Federal, State and Local governments are knowledgeable of the oil and natural gas system is critical to the effective and efficient flow of information between the private and public sectors. Education must occur on a consistent basis to ensure decision makers have an informed understanding of the policy and operational differences amongst the diversity of fuels and how they are transported, the primary challenges and limitations industry faces during an event, and the processes and means in place to respond and restore critical services. The means to accomplish this include:

- Utilizing and disseminating materials, such as oil and natural gas delivery supply chains, to educate stakeholders.
- Holding regular educational sessions with decision makers and critical stakeholder groups on a consistent basis (regardless of events) to explain the oil and gas systems, markets and critical functions.
- Utilizing existing relationships and mechanisms to ensure channels of communication are open and effective.
- Identifying key staffing changes within stakeholder groups that warrant an education of the complexities of oil and natural gas systems.

Phase II – Formalizing Processes of Communication and Information Sharing

The dynamic nature of incidents often leads to communication and information sharing based on relationships rather than processes. This is particularly evident when robust processes and procedures have not been codified and exercised. A dependency on personal relationships can be beneficial as established relationships generally yield better communication but this dependency can also contain significant risk. The assumption that the two individuals in the relationship are always available (i.e. have not taken on a new job or are not themselves impacted by the incident), is one that often cannot be guaranteed. Therefore, formalizing a process based on position or role—from which relationships can grow—with government partners and partners in the field who will be participating in a response will support effective and appropriate information sharing during an event. Most importantly, formalizing processes will give both industry and government agreed upon mechanisms to avoid multiple requests for information/assistance from multiple parties. Thus, the oil and natural gas industry and its associations will:

- Work with local and State-based industry organizations to identify industry roles and responsibilities before, during, and after an event.
- Facilitate effective communication between key government representatives and company/facility representatives. Again, the local organizations will play a pivotal role in this effort.
- Develop processes to facilitate information sharing between impacted facilities and governments at the local level.
- Utilize existing exercises and drills, which occur regularly throughout the sector, to understand and institutionalize the processes and procedures that have been recognized and accepted by response partners.

Industry has provided guidance (see section: *Preparing at the State and Local Levels*) to its local partners to prepare them and their constituents for the impacts of events before they occur. This guidance reaffirms how the partners can form the essential processes and relationships, understand the varied needs and wants of members and governments, and exercise both to understand the complexities of response before an event impacts a State's or a region's critical energy infrastructure. A concerted effort by the local organizations and their constituents can help establish a baseline of education for stakeholders regarding the structure of the oil and gas industry, the requirements for basic operations, and the functions of markets. The end result, if a disruptive, future event occurs, will be a stronger and more effective partnership between industry and stakeholders at the local and state levels to improve resilience, and ultimately enable a more efficient restoration.

Energy Supply Chains

Oil and Natural Gas Industry Preparedness Handbook



An Introduction to Energy Supply Chains

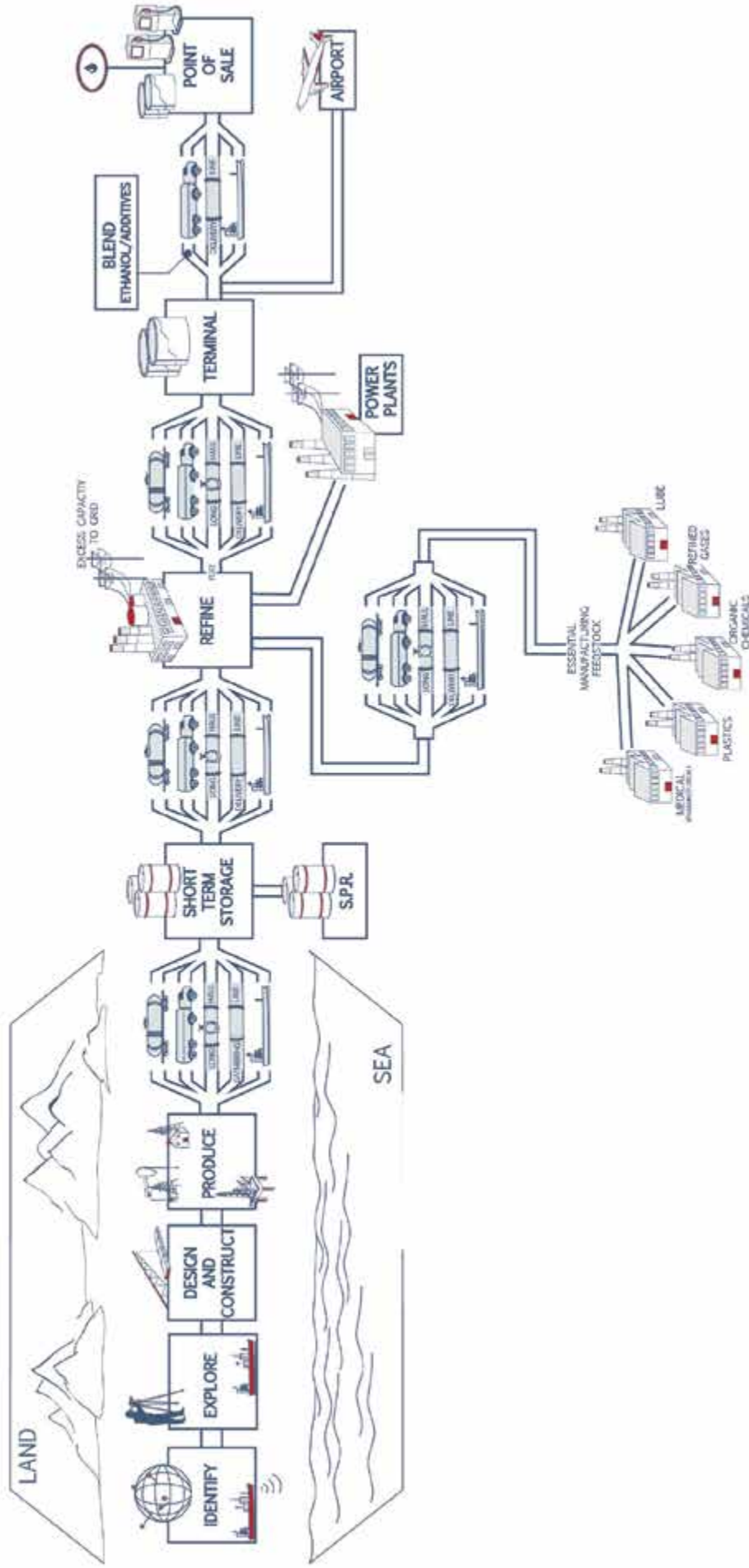
The following graphics provide an overview of the oil and natural gas supply chains. Oil and natural gas are key resources for the Nation, providing the energy needed to not only heat homes in the winter and cool them in the summer but also the fuel that powers private and commercial activities such as domestic truck fleets and emergency response vehicles. The diversity and complexity of these systems is often difficult to explain and understand, particularly when incidents occur and context is critical to effective decision making. These oil and natural gas system models provide simple but relatable visual descriptions of these critical systems, their major components, and the critical customers and services which are dependent on this energy.

Recognizing the critical components and their placement in the system provides the context to understand the consequences, both upstream and downstream of an impacted component of the fuel supply system. This identification of potential consequences should also help stakeholders recognize where critical interdependencies might impact other services and industries. Some examples include the increasing dependence of electric power generation on natural gas supplies, the reliance of generators on the availability of diesel fuel (a refined product), and the federal and state requirements for varied additives and properties of gasoline between winter and summer. Those involved in federal, state, local and private sector preparedness planning activities should familiarize themselves with the supply chains and attempt to determine which of their critical services are dependent on oil and natural gas supplies.

Additional information about dependencies and inter-dependencies can be found in the Sector Specific Plans developed in concert with the Department of Homeland Security's National Infrastructure Protection Plan (NIPP) found at <http://www.dhs.gov/national-infrastructure-protection-plan>. Under the NIPP each of the 16 critical infrastructure sectors is required to develop and implement a sector-specific plan, which details the application of the NIPP concepts to the unique characteristics and conditions of that sector. The Energy Sector-Specific Plan can be found at <http://www.dhs.gov/sites/default/files/publications/nipp-ssp-energy-2015-508.pdf>. In the Energy Sector-Specific Plan more details concerning dependencies and inter-dependencies can be found in Section 4.



CRITICAL ELEMENTS OF THE OIL SUPPLY CHAIN



Legend:
S.P.R.: Strategic Petroleum Reserve

RESOURCES: PEOPLE (HUMAN BEHAVIOR, SKILLED/TRAINED PERSONNEL)

POWER (ELECTRICITY)

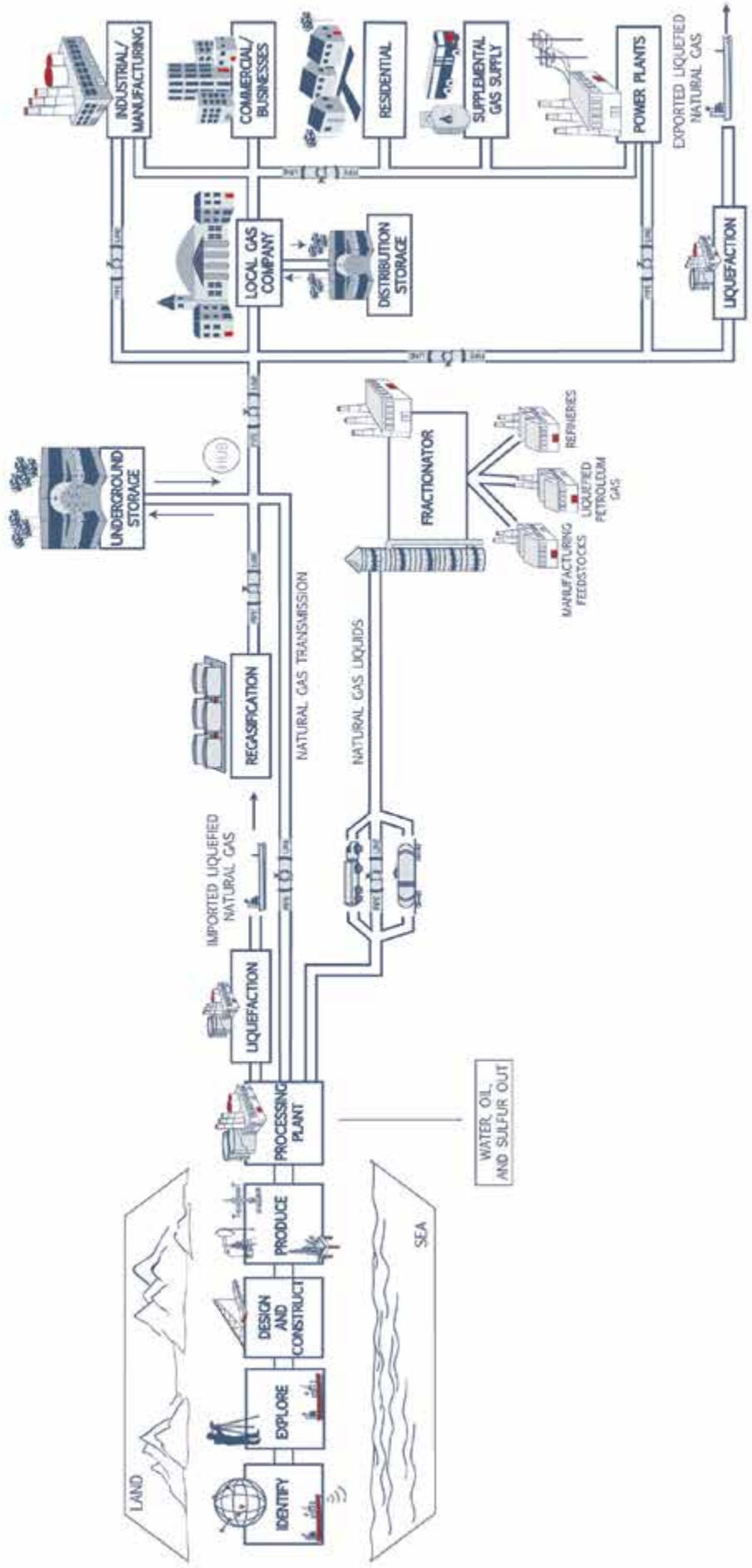
WATER

IT (TELECOM, CYBER, ACCESS CONTROL)





CRITICAL ELEMENTS OF THE NATURAL GAS SUPPLY CHAIN



RESOURCES: PEOPLE (HUMAN BEHAVIOR, SKILLED/TRAINED PERSONNEL) WATER POWER (ELECTRICITY) IT (TELECOM, CYBER, ACCESS CONTROL)



National Response Coordination

Oil and Natural Gas Industry Preparedness Handbook

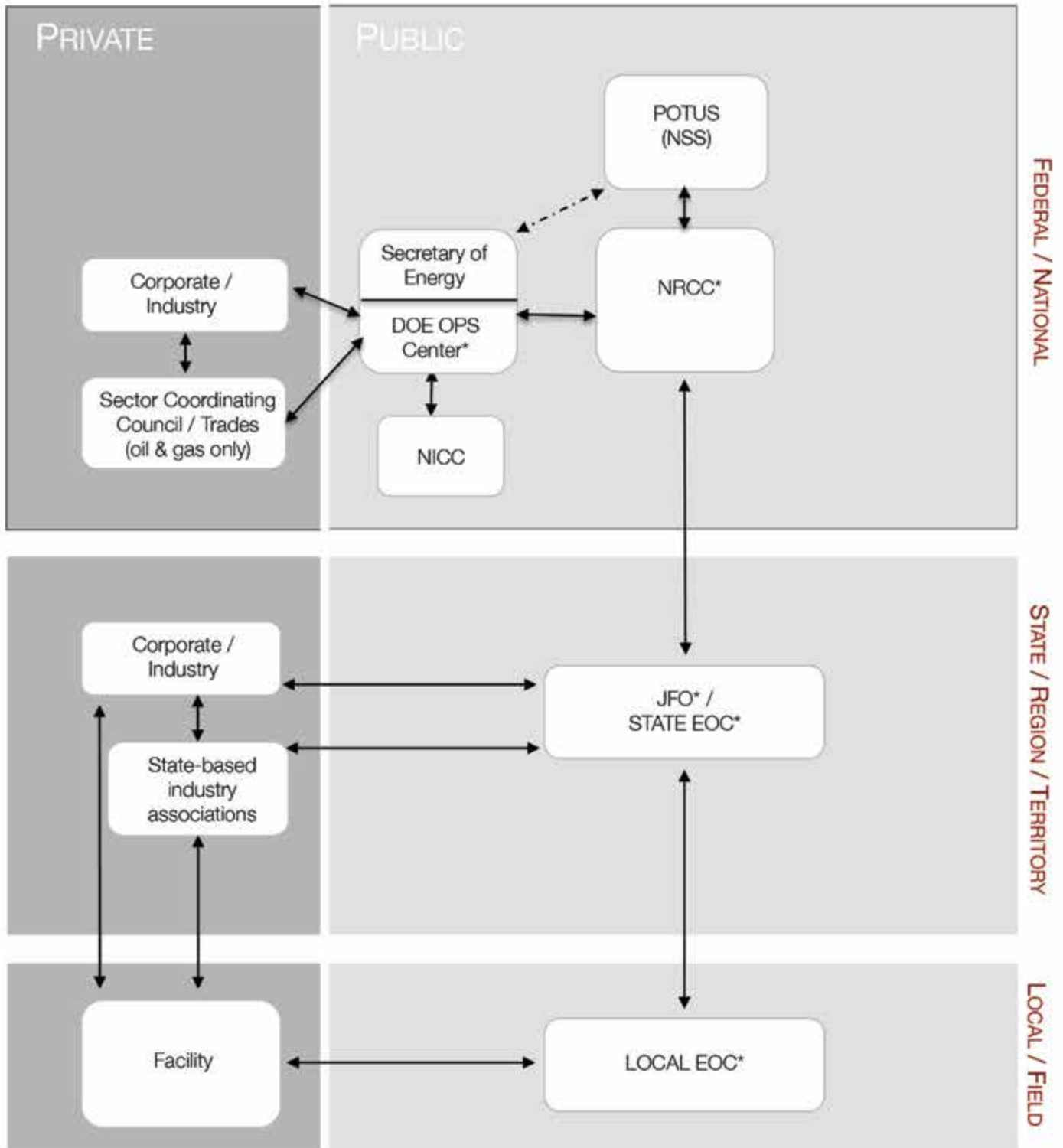


Utilizing the National Response Framework

During the response to an incident of National significance there are many needs and requests that need to be filled by governments, as well as by the private sector. Effective response requires the most efficient delivery of resources and information to ensure populations are secured and critical services are provided in a timely manner. The National Response Framework, the Incident Command System, and the recently released Presidential Policy Directive 8: National Preparedness (PPD 8), provide the frameworks and processes that should be utilized by all stakeholders in an event. The challenge is effectively communicating and operating within these structures when an event occurs and demands are being made across organizations and communities in the heat of the moment. The following graphic represents how industry understands the flow of information is supposed to work under the current framework.

Industry expects this process to work for incidents both small and large, and regardless of location. We have seen this process work effectively in the Gulf States, where significant elements of the oil and gas industry are located and where hurricanes and other large storms often affect operations. Industry stresses the importance of utilizing existing, tested structures and processes that Federal, State and local governments have created, exercised and implemented within their response and emergency management organizations.

ESF 12 OIL AND GAS INFORMATION FLOW: INDUSTRY PERSPECTIVE



COMMUNICATION MECHANISMS

- Face to face
- Phone
- Email (exchange, listserv)
- Two-way radio
- Interpersonal relationships
- Public / private databases
- Social media
- Radio & TV

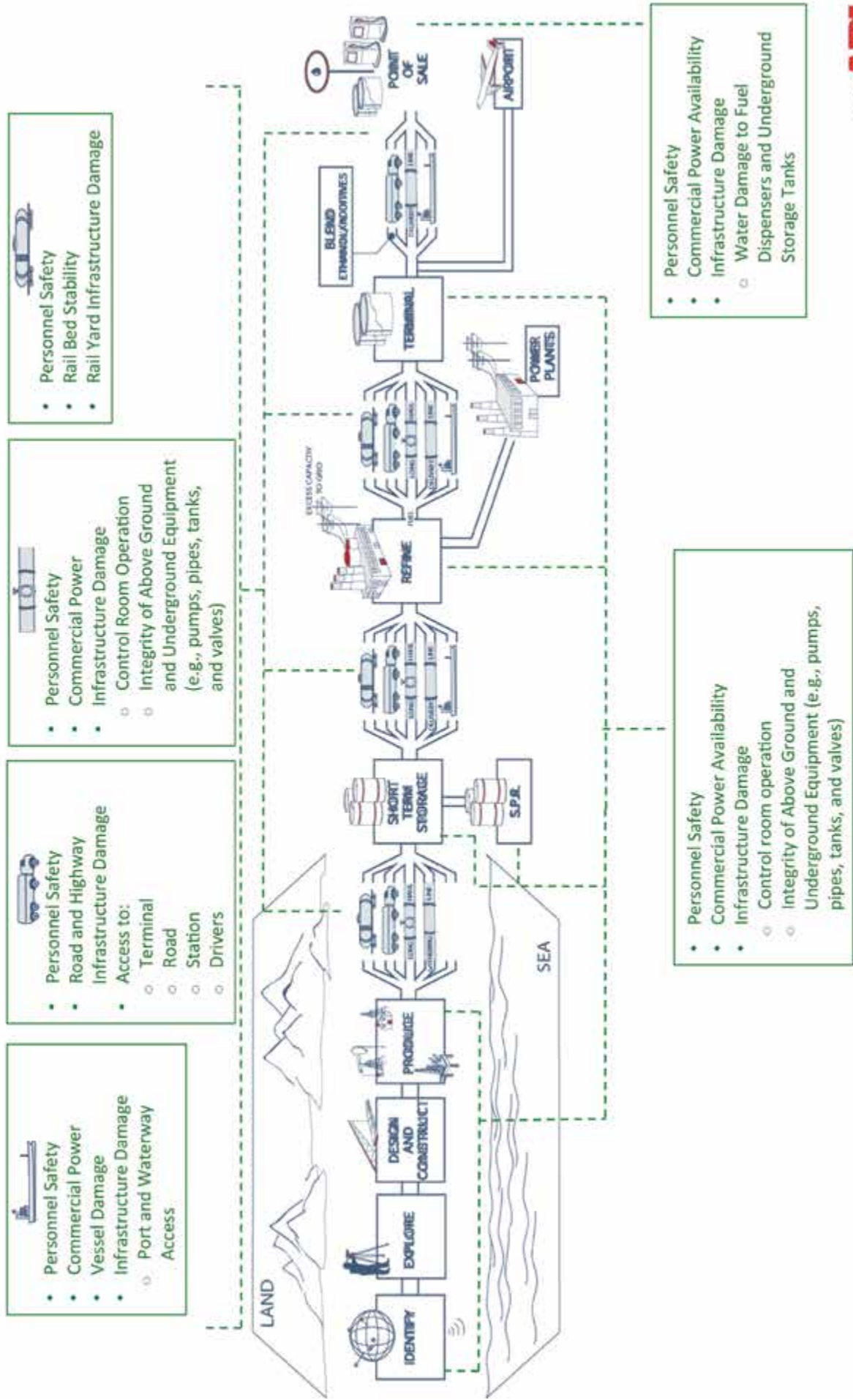
*Indicates ESF 12 presence at location

Explanation of Acronyms

- ESF Emergency Support Function**
ESFs provide the structure for coordinating Federal interagency support to an incident. They are mechanisms for grouping functions most frequently used to provide Federal support to States, both for declared disasters and emergencies under Stafford Act and non-Stafford Act incidents.
-
- EOC Emergency Operations Center**
A central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management functions. EOCs integrate into the Incident Command System (ICS) during large-scale events. EOCs operate at the local, state and federal levels.
-
- JFO Joint Field Office**
A component of the Incident Command System (ICS). Federal support to States is generally coordinated through a Joint Field Office (JFO). The JFO provides the means to integrate Federal resources and engage the impacted State(s) during an emergency. Senior officials from the State and key Federal departments form a Unified Coordination Group w/i the JFO to achieve shared objectives.
-
- NICC National Infrastructure Coordinating Center**
A component of the NOC. The NICC is an information and coordination hub that maintains situational awareness of the nation's essential Critical Infrastructure (CI). The NICC shares threat information, in order to reduce risk, prevent damage, and enable rapid recovery of CI assets from incidents caused by natural disasters, attacks, or other emergencies.
-
- NOC National Operations Center**
The NOC coordinates information sharing to help deter, detect, and prevent terrorist acts and to manage domestic incidents. Information on domestic incident management is shared with Emergency Operations Centers at all levels through the Homeland Security Information Network (HSIN).
-
- NRCC National Response Coordination Center**
A component of the NOC. The NRCC is a multiagency center that coordinates the overall Federal support for major disasters and emergencies, in support of operations at the regional-level. The FEMA Administrator, or his/her delegate, activates the NRCC in anticipation of, or in response to an incident. The NRCC activates and manages the appropriate Emergency Support Functions during an incident.
-
- NRF National Response Framework**
The National Response Framework (NRF), a component of the National Strategy for Homeland Security, guides the Nation in how all-hazards responses are coordinated and conducted by providing the structure and mechanisms for incident response in a national level policy. The NRF builds upon the scalable, flexible, and adaptable Incident Command System (ICS) structure, to align key roles and responsibilities across the Nation, linking all levels of government, nongovernmental organizations, and the private sector. ICS provides the template for managing incidents regardless of size, scope or cause.
-
- PSA Protective Security Advisor**
PSAs work within the Department of Homeland Security, Office of Infrastructure Protection, to assist owners and operators of critical infrastructure by coordinating requests for DHS-provided services such as training, grants, and vulnerability assessments. During an incident, PSAs work within state and local EOCs and JFOs, where they advise DHS and private sector representatives on interdependencies, cascading effects, and damage assessments concerning impacted critical infrastructure.
-
- SCC Sector Coordinating Council**
SCCs are self-organized and self-governed bodies that serve as principal sector policy coordination and planning entities. Membership composition varies from sector to sector; however, membership is representative of a broad base of owners, operators, associations, and other entities. The SCCs enable owners and operators of critical infrastructure to interact with the government on a wide range of sector-specific strategies, policies, activities, and issues.



OIL INDUSTRY – INFRASTRUCTURE ASSESSMENTS (ESF-12)



- Personnel Safety
- Commercial Power
- Vessel Damage
- Infrastructure Damage
 - Port and Waterway Access

- Personnel Safety
- Road and Highway Infrastructure Damage
- Access to:
 - Terminal
 - Road
 - Station
 - Drivers

- Personnel Safety
- Commercial Power
- Infrastructure Damage
 - Control Room Operation
 - Integrity of Above Ground and Underground Equipment (e.g., pumps, pipes, tanks, and valves)

- Personnel Safety
- Rail Bed Stability
- Rail Yard Infrastructure Damage

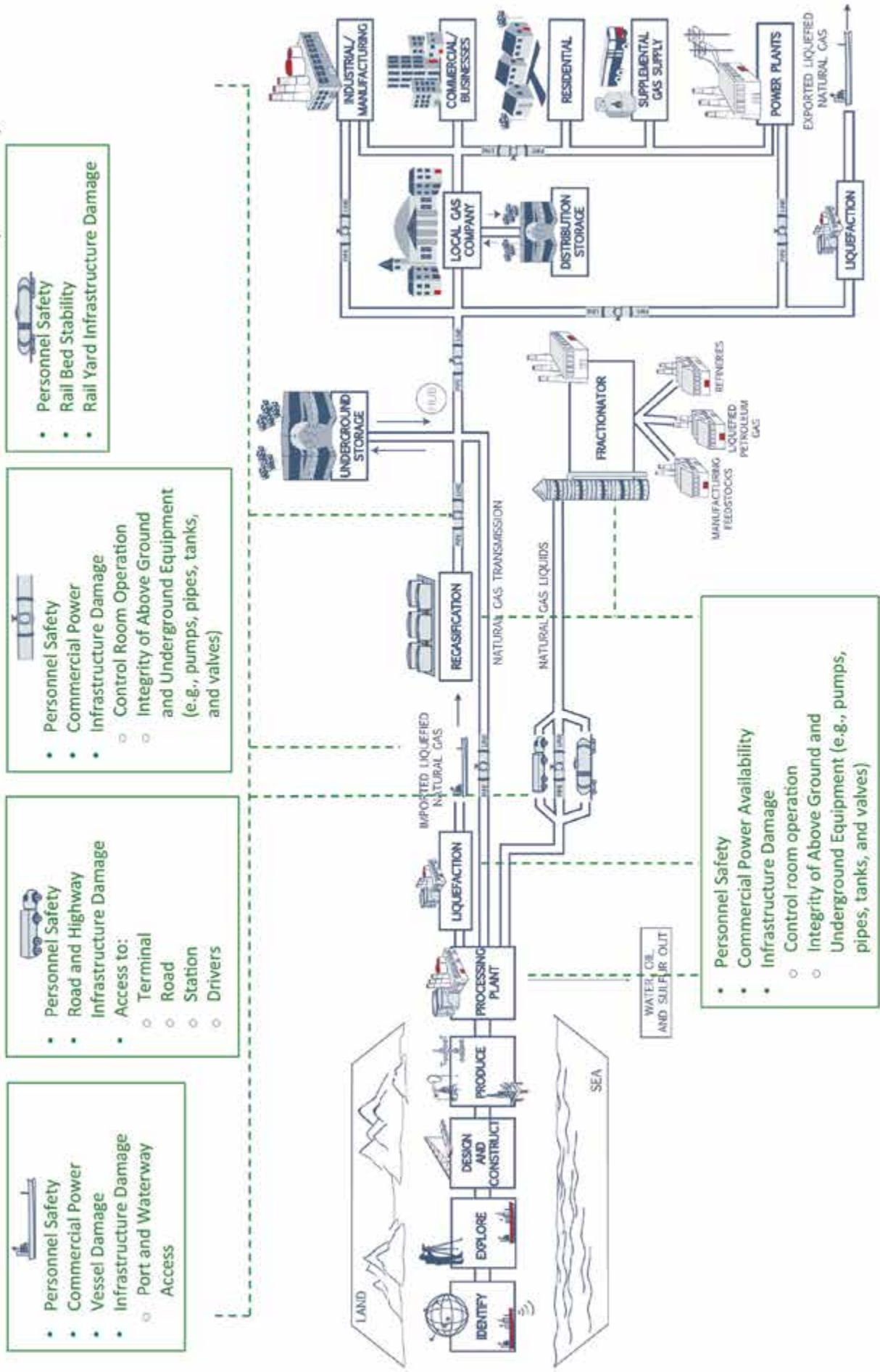
- Personnel Safety
- Commercial Power Availability
- Infrastructure Damage
 - Control room operation
 - Integrity of Above Ground and Underground Equipment (e.g., pumps, pipes, tanks, and valves)

- Personnel Safety
- Commercial Power Availability
- Infrastructure Damage
 - Water Damage to Fuel Dispensers and Underground Storage Tanks





NATURAL GAS INDUSTRY – INFRASTRUCTURE ASSESSMENTS (ESF-12)



GOVERNMENT & OIL INDUSTRY ENGAGEMENT (ESF-12)

DOE/EIA

- Fuel Supply Chain Analysis & Information Coord
- DHS/FEMA/USCG/CBP
- Conduct Pre & Post Incident Assessments
- Coordinate Marine Transportation System Recovery (MTS) thru ESF-1
 - Restore Marine Navigation System
- Support Response thru ESF-9,10

DOT/MARAD

- MTS Assessment and Recovery thru ESF-1
 - Assess Economic Impact

DOD/USACE/SUPSALV/MSC

- Repair MTS Infrastructure thru ESF-1,3
- Provide SUPSALV & MSC Resources

State/Local

- National Guard
- Response thru all ESFs

DOE/EIA

- Fuel Supply Chain Analysis & Information Coordination

DOT/FMCSA

- Declaration of Regional Emergency
- Provide Highway Assessment
 - Assess Economic Impact
- Coordinate Transportation System Recovery thru ESF-1

DOD/USACE

- Repair Infrastructure thru ESF-1,3

State/Local

- National Guard
- Response thru all ESFs

DOE/EIA

- Fuel Supply Chain Analysis & Information Coordination

DOT/PHMSA

- Provide Pipeline Assessment
 - Assess Economic Impact
- Coordinate Transportation System Recovery thru ESF-1

EPA

- Waive Fuel Requirements

State/Local

- National Guard
- Response thru all ESFs

DOE/EIA

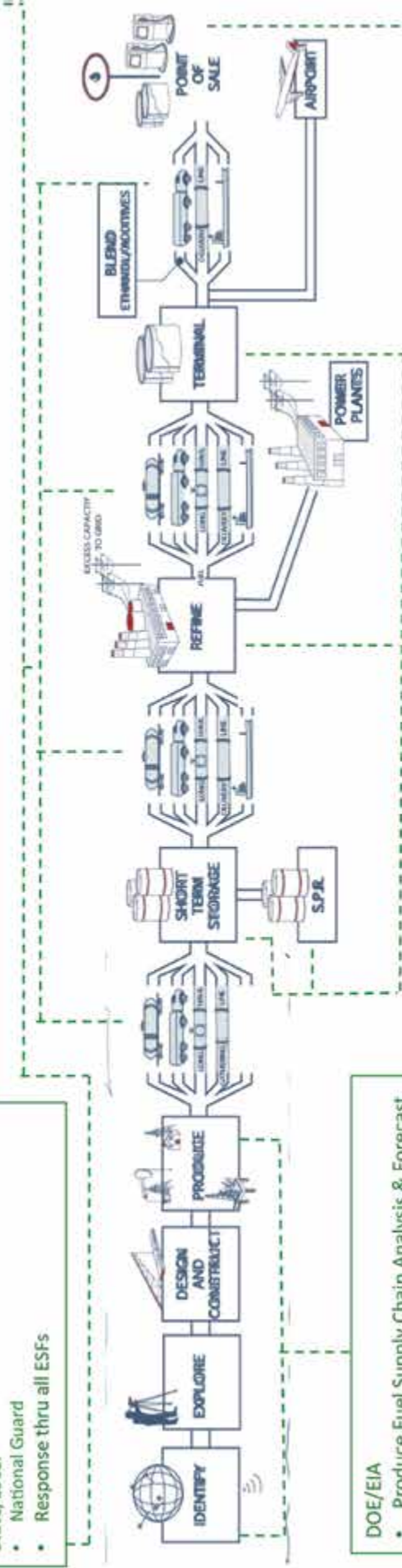
- Fuel Supply Chain Analysis & Information Coordination

DOT/FRA

- Approval to Restart
 - Provide Railway Assessment
 - Assess Economic Impact
- Coordinate Transportation System Recovery thru ESF-1

State/Local

- National Guard
- Response thru all ESFs



DOE/EIA

- Produce Fuel Supply Chain Analysis & Forecast

DOI/BSEE

- Produce Facility "Shut-In," Fuel Amount Affected & Personnel Evacuation List

DHS/OIP/FEMA/USCG

- Produce Infrastructure of Concern (IOC) List
- Manage Ports and Waterways Operations
- Support Response thru ESF-1,5,7,9,10,14

EPA

- Response thru ESF-10

State/Local

- Response thru all ESFs

DOE/EIA

- Produce Fuel Supply Chain Analysis & Forecast

DHS/OIP/FEMA/USCG

- Produce IOC List; Support Response thru ESF-5,7,10,14

EPA

- Waive Fuel Requirements
- Response thru ESF-10

State/Local

- Response thru all ESFs

Industry

- Return All Operations to Steady State

DOE/EIA

- Produce Fuel Supply Chain Analysis & Forecast

DHS/FEMA

- Support Response thru ESF-5,7,10,14

EPA

- Waive Fuel Requirements
- Response thru ESF-10

State/Local

- Waive Fuel Requirements
- Response thru all ESFs



GOVERNMENT & NATURAL GAS ENGAGEMENT (ESF-12)

DOE/EIA

- Fuel Supply Chain Analysis & Information Coordination
- DHS/FEMA/USCG/CBP
- Conduct Pre & Post Incident Assessments
- Coordinate Marine Transportation System Recovery (MTS) thru ESF-1
 - Restore Marine Navigation System
- Support Response thru ESF-9,10

DOT/MARAD

- MTS Assessment and Recovery thru ESF-1
 - Assess Economic Impact

DOD/USACE/SUPSALV/MSC

- Repair MTS Infrastructure thru ESF-1,3
- Provide SUPSALV & MSC Resources

State/Local

- National Guard
- Response thru all ESFs

DOE/EIA

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DOT/FMCSA

- Declaration of Regional Emergency
- Provide Highway Assessment
 - Assess Economic Impact
- Coordinate Transportation System Recovery thru ESF-1

DOD/USACE

- Repair Infrastructure thru ESF-1,3

State/Local

- National Guard
- Response thru all ESFs

DOE/EIA

- Fuel Supply Chain Analysis & Information Coordination

DOT/PHMSA

- Provide Pipeline Assessment
 - Assess Economic Impact
- Coordinate Transportation System Recovery thru ESF-1

State/Local

- National Guard
- Response thru all ESFs

DOE/EIA

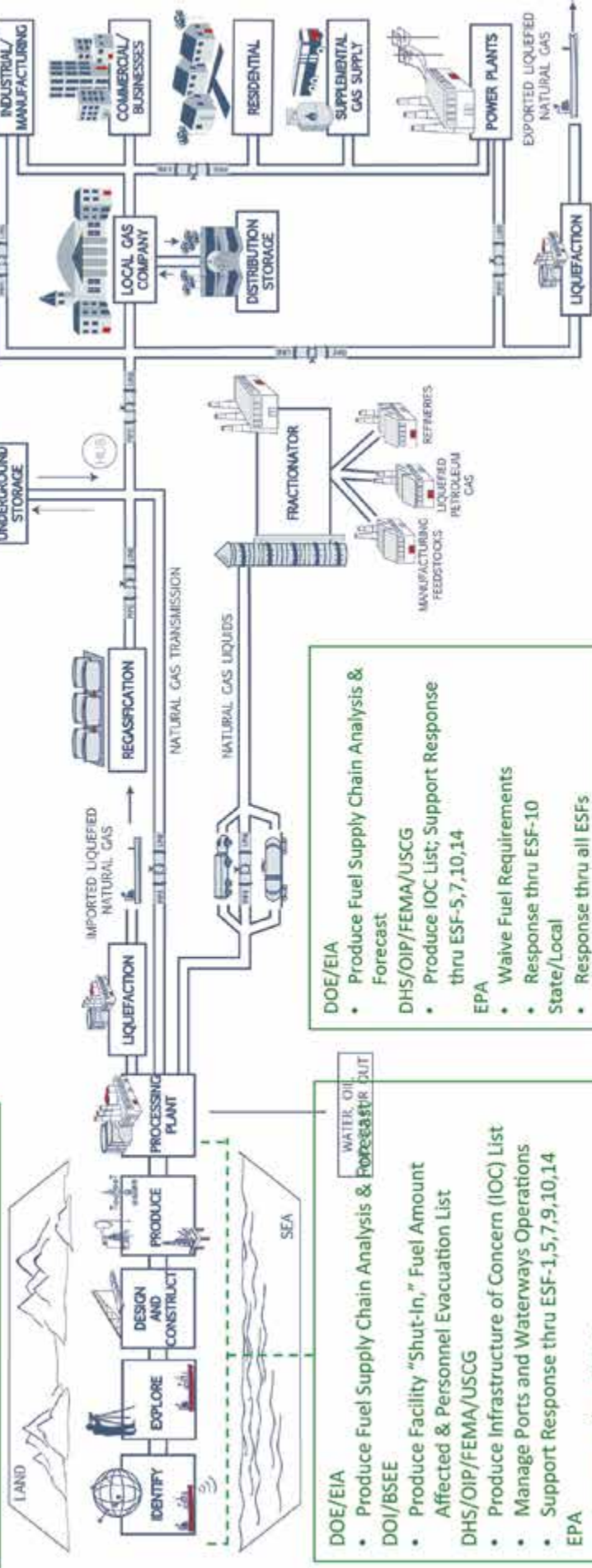
- Fuel Supply Chain Analysis & Information Coordination

DOT/FRA

- Approval to Restart
 - Provide Railway Assessment
 - Assess Economic Impact
- Coordinate Transportation System Recovery thru ESF-1

State/Local

- National Guard
- Response thru all ESFs



DOE/EIA

- Produce Fuel Supply Chain Analysis & Forecast

DOI/BSEE

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- Waive Fuel Requirements
- Response thru ESF-10

State/Local

- Response thru all ESFs

DOE/EIA

- Produce Fuel Supply Chain Analysis & Forecast

DHS/OIP/FEMA/USCG

- Produce IOC List; Support Response thru ESF-5,7,10,14

EPA

- Waive Fuel Requirements
- Response thru ESF-10

State/Local

- Response thru all ESFs

Industry

- Return All Operations to Steady State

Preparing at the State and Local Levels

Oil and Natural Gas Industry Preparedness Handbook



Introduction to Preparing for a Crisis at the State and Local Levels

The oil and natural gas preparedness and response strategy focuses the majority of efforts, resources and information on efforts at the local level. The following document outlines guidance for regional and state associations which support the oil and natural gas industry. The guidance includes recommendations that will allow associations to form the necessary relationships with members and governments before an event occurs, to understand what critical operations their members operate and depend on, and to recognize how exercising can support these activities and the actions that may be required if an event were to occur.

Preparing for a Crisis at the State and Local Levels

Resilience and restoration are affected at the local level before, during and after a major disruptive event, such as a hurricane, flood or terrorist attack which significantly impact critical energy infrastructure. The oil and natural gas industry and its associations are taking proactive steps to prepare themselves and their State partners for the potential impact of such events before they occur. The following guidance outlines how national and state-based industry associations can form the essential relationships, understand the varied needs and wants of members and governments, and exercise both to understand the complexities of response before an event impacts a State's or a region's critical energy infrastructure. Most importantly, this guidance aims to help all of the key players in an emergency scenario understand their role and how they interact with other players.

Know Who Does What

There are many roles and responsibilities assigned during a disruptive event that may be out of the scope of normal business operations, which means contacts should be established and responsibilities understood in preparation for, rather than in response to an event. In an event, having established relationships facilitates effective information sharing, the communication of needs and priorities, and the acquisition of resources. During an event it is extremely difficult to determine who the appropriate contacts are within companies, at facilities and in government.

Although each event is different, depending on scope, duration, and impact, general responsibilities should be outlined and contacts documented to help shorten response time, develop accurate situational awareness, and advance restoration. Initially, contacts should be identified by position, rather than individual, as turnover takes place and functions change. When considering positions and responsibilities, it is also critical to identify who the decision makers are within organizations, both public and private. Developing relationships with the appropriate individuals during normal operations will make communication easier during the tumult of a disruptive event. Creating an annual process to update and verify suitable emergency contacts is a good practice to reaffirm existing relationships and to create new ones, when needed. Including mobile phone numbers and alternate email addresses is an important detail to consider when gathering and documenting information. During periods of disruption, primary methods of communication are often unreliable or unavailable due to infrastructure damage, loss of power, etc. Cell phones, text messages, and other means of communication should be considered and utilized to ensure communication is effective.

Lastly, it is important to predetermine, to the extent possible, the stakeholders and organizations that might request information during an event, their need and/or authority, and the purpose of the information requested. While requests may differ with each type of event, government entities at the State, local and federal levels will require specific information to manage critical services and public order. These needs should be identified through the process of established channels of communication with the appropriate parties involved in response. Industry and association representatives can use this information and the relationships they have developed to help members work through the process of reporting information and requesting assistance and/or resources during an event.

Know What Not to Do

Federal and state antitrust laws limit what kinds of information associations and companies are permitted to share, even during an emergency. It must be recognized that members have faced antitrust actions stemming from response activities in the past, despite representations or promises by government agencies. Just as association staff and member company representatives do in the normal course of business, there should be no sharing or discussing among company representatives, or soliciting by associations, of a company's confidential or proprietary information during an event. Such information relevant in an event may include, but is not limited to, locations of supplies, delivery schedules, pricing, or refining operations. This prohibition applies even where a government official may request it from an association or from a group of members. If you receive such a request, decline it and explain that an official may obtain this information directly from an individual company on an individual basis (without trade associations or other companies involved). If you are unsure about the implications of information received from a member company or requested by a government official, please consult with legal counsel.

Know What Matters

During normal business operations, associations can communicate with oil and gas companies in their regions to ensure there is an understanding of assets and resources, and their importance to the reliable operations of the system. This knowledge is critical to maintain at least minimal system operations, assets which have been designated for priority restoration by State and local governments, and assets that are critical to public needs when an event occurs. Owners and operators, as well as public officials, need to be aware of the critical services in their regions, the products needed to maintain those services, and the impacts of not receiving those products and services. For example, interruptions to product deliveries can affect the ability of first responders to fuel vehicles, the ability of citizens to heat their homes, and the ability of hospitals to keep generators running. In a crisis, impacts to the fuels system can have impacts throughout the area and can potentially hinder the restoration process.

Governments, particularly at the State and local levels, should be provided information and education about purchasing fuels and fuel contracts. Stakeholders are often unaware of what is needed to purchase fuel, which may already have contracts in place for available supplies, and what laws and regulations apply to purchases in their States. For example, The National Association of State Energy Officials (NASEO) has identified one of the critical issues that must be considered in advance of an emergency:¹

“Experience from several states indicates that supply may be sustained during shortages through careful attention to how fuel is purchased and fuel purchasing contracts. Some large consumers, including some public entities with critical petroleum fuel using agencies such as police, fire, and public transit, may have opted to reduce the cost of fuel through spot market-based contracts or by contracting for fuel from spot-market dependent vendors. However, spot-market fuel availability diminishes rapidly during a shortage. This is because fuels supplies that are available in excess of that needed to meet contractual obligations are treated as a surplus and sold at a discount. In a shortage, contractual needs are served first and there is little or no surplus. Hence, vendors who rely solely on the spot market may be unable to supply critical needs customers during a shortage.”

It is important to highlight that these practices and regulations can vary greatly from State to State and by municipality and it is critical that decision makers have the information in advance of an event. While it is

¹ http://www.naseo.org/data/sites/1/documents/publications/Petroleum_Shortage_Supply_Management.pdf

acknowledged the Federal government may have the authority under certain circumstances to acquire and redistribute certain resources, it is critically important that all parties understand contracting processes and that Federal intervention is used only as a last resort in emergency situations. It is also important for governments at all levels to understand that 95% of retail gas stations are independently owned and operated, that is, they are not owned by refiners. Further, nearly 60% of all of stations are owned by a single store owner. This means that during an event, identifying power status, supply availability and operational capability across such a broad and diverse ownership pool will be extremely challenging. Therefore, governments should focus on system-level restoration to ensure power and supplies are available to those who can receive them.

Understanding of the availability of resources and the needs of stakeholders, combined with on-the-ground situational awareness, will facilitate member companies' abilities to respond to requests for information across governments and receive assistance should they need it. Preparing effective processes which facilitate the delivery of critical information during an event, whether through official working groups or informal networks, could be a valuable service provided by the industry associations. Clear communication by members of damages, restoration activities, and potential needs can facilitate restoration when it is received and understood by affected stakeholders. Industry associations can promote an understanding between partners which supports response operations during an event, enabling the appropriate allocation of resources, movement of personnel, and public messaging. As priorities are addressed, associations should facilitate communication between members and governments to promote appropriate consumer behaviors and to inhibit those behaviors that can impede timely, efficient restoration.

Practice, Practice, Practice!

The best way to ensure the correct relationships have been established, the correct information has been collected, and the correct mechanisms are in place is to test the process through drills and exercises. Exercises should be taking place routinely at the organizational, local, State and regional levels and participants should be incorporating lessons learned into their operations and business continuity and response plans. As members of a critical stakeholder community, associations can engage those public sector participants who have roles in preparedness, response, and recovery. Exercises and drills should be part of a consistent feedback loop that informs current operations, response plans and future infrastructure planning.

Stakeholders need to be aware of the various natural and manmade events that could affect them, and should therefore build realistic scenarios to test their response and resilience to those events. Associations can inform that process, bringing industry-specific expertise during the design phase, as well as during the exercise. This can ensure when a crisis happens, government partners in particular have an understanding of how systems function, how response is carried out, and what their expectations of restoration should be. Exercises will also educate industry as to the capabilities of their government partners, the validity of their own plans, and critical interdependencies they need to be aware of. If exercises are not occurring at the State or local level, industry associations and their members should suggest exercises to their public sector partners. Preparedness on both sides is essential to the recovery process, as governments can as easily impede as they can support if they are not prepared or informed.

Exercises, whether table tops, functional, or full-scale, allow participants to understand the various needs and issues that could emerge during a real world event. Typically, many questions will arise that most would not have thought of without the stimulus of an exercise. For example, some important questions include:

- Who, at the State level, is responsible for requesting waivers?
 - From EPA?
 - From Agriculture?
 - From Transportation?
- Who is the relevant contact at the State Emergency Management Agency?
 - Do they have a role in energy restoration?
 - Do they have fuel needs that industry can assist with?
- Who is the State ESF-12 liaison?

There is much that stakeholders would not know or not ask themselves during normal operations that can become critical during an event. Exercises help tease out this information, create the relationships that lead to the answers, and define the responsibilities of all stakeholders. Preparing for an event takes dedicated, persistent work at the State and local levels, with both public and private partners. Industry associations should ensure they are sharing the information they gather and the lessons they learn throughout these processes back with their members. A concerted effort by industry associations and members can help establish a baseline of education for stakeholders regarding the structure of the oil and gas industry, the requirements for basic operations, and the functions of markets. The end result, if an event occurs, should be a stronger partnership between industry and stakeholders, improved resilience, and more efficient recovery.

Potential Waivers

Oil and Natural Gas Industry Preparedness Handbook



Introduction to Potential Waivers to be Requested During an Incident

The oil and natural gas industry operates under a myriad of regulations to ensure safe operations, environmental quality and fair market competition. The industry has a deep commitment to complying with all regulations, all of the time, regardless of external conditions. However, during the response to an event affecting system integrity, some regulations can impede the quick restoration of services when access to specific resources is limited or workers and equipment are needed from other areas. Governments understand this paradox and the value of quickly restoring critical services when events affect their communities. Waivers, where government temporarily suspends regulations so that companies can, continue operations that will help alleviate the emergency and restore normal operating conditions, are the solution to this problem. The following document identifies many of the statutes, related issues and waivers that can be requested during an event to speed recovery and a return to compliance.

Potential Waivers to be Requested during an Incident

The following is a “checklist” of all federal regulatory waivers needed to ensure the most efficient functionality of the fuel distribution system possible during a state of emergency (i.e. hurricane, blizzard, etc.). The checklist is organized by administrative department/agency, listing all necessary regulatory waivers within the department/agency’s jurisdiction underneath.

Environmental Protection Agency (EPA)

✓ RFG Requirements

- **Issue:** Reformulated gasoline (RFG) is a cleaner burning gasoline blend required in areas that are not meeting certain air quality standards. During times of emergency, it is imperative that distributors have the flexibility to get any available fuel into the affected area in any way possible, regardless of whether or not it is RFG.
- **Waiver Needed:** 40 CFR 80.78(a)(7), prohibits persons from combining any reformulated gasoline blendstock for oxygenate blending with any other gasoline, blendstock, or oxygenate.

✓ ULSD Requirements

- **Issue:** Ultra Low Sulfur Diesel (ULSD) is a cleaner fuel, with a maximum 15 parts per million (ppm) sulfur specification, required by EPA for vehicles and equipment. During times of emergency, it is imperative that distributors have the flexibility to get any available fuel into the affected area in any way possible, regardless of the sulfur content.
- **Waiver Needed:** 40 CFR 80.510 and 80.520, which set ULSD standards. This waiver would allow the use of high sulfur heating oil in model year 2006 and older vehicles, generators and as home heating oil during the emergency.

✓ Vapor Recovery Regulations

- **Issue:** Fuel terminal loading and unloading systems and tank trucks that transport fuels are required to use specified vapor recovery equipment, which can differ from state to state. In the case of an emergency, it is imperative that fuel can get from jurisdiction to jurisdiction by any transport means available. The states include these regulations in their state implementations plans (SIPs), which are approved and enforced by EPA.
- **Waiver Needed:** 40 CFR Part 60 Subpart XX and Part 63 Subparts R, Y and BBBB, which set the standards for loading applicable to Bulk Gasoline Terminals, Pipeline Breakout Stations and Marine Tank Vessel Loading Operations, respectively.

✓ Tank Roof Landing Emissions

- **Issue:** During an emergency, when more fuel may be needed to pass through a facility’s tanks faster than normal operations, the emptying and filling of tanks may result in higher air emissions due to the tank roof landing emissions in floating roof tanks.
- **Waiver Required:** Air emission regulations are enforceable by EPA and air emissions for specific facilities are limited by their air permits. If EPA provides a waiver (or no-action assurance) during an emergency, each state may also waive the permit limits for an appropriate time during and following the emergency.

Department of Transportation (DOT)

✓ General Administrative Requirements

- **Issue:** The DOT's Federal Motor Carrier Safety Administration (FMCSA) sets general standards and requirements that apply to vehicle labeling, record keeping, etc. They also require transporters to follow all applicable state and federal requirements. Waiving this section could expedite shipments of fuel to recovery areas and to allow for other federal and state waivers to be effective.
- **Waiver Needed:** 49 CFR 390, which provides the general basis for federal motor carrier safety regulations.
- **Issue:** The DOT Pipeline & Hazardous Materials Safety Administration sets requirements on operator qualification training for certain hazardous liquid and gas pipelines transportation functions or "covered tasks" that meet the components of the "four-part test". This set of regulations is commonly referred to as Operator Qualification, and an example of a covered task is manual closure of valves. Due to the diversity of hazardous liquid and gas pipeline infrastructure across the Nation, operators train to satisfy the requirements as they apply specifically to their company's equipment and infrastructure. These requirements, which may be appropriate under regular operating circumstances, hinder the effort for mutual aid from other hazardous liquid and gas pipeline companies in time-sensitive circumstances.
- **Waiver Needed:** 49 CFR Part 192 and 195, subpart N lists the requirements of Operator Qualification, including 'covered tasks' and 'four-part test' in §192.801(b) and §195.505.

✓ Driver Qualification Regulations

- **Issue:** The FMCSA has certain rules requiring a driver's physical fitness, fluency in the English language, level of fatigue, the thorough inspection of cargo, ensuring lighting and cargo standards are met and inspection repair and maintenance requirements, which may be appropriate under regular operating circumstances, hinder the effort to get as many loads into the disaster area as possible in a short amount of time.
- **Waiver Needed:** 49 CFR Parts 391-3, and 396, which set driver standards, load standards, inspection standards.

✓ Hours of Service Regulations

- **Issue:** The FMCSA sets requirements on how many hours a truck driver can drive or be on duty in a given day and week. There are also certain rest time requirements between on duty periods. These requirements, which may be appropriate under regular operating circumstances, hinder the effort to get as many loads into the disaster area as possible in a short amount of time.
- **Waiver Needed:** 49 CFR Part 395, which sets hours of service regulations.

✓ Vehicles Not Meeting HazMat Specifications

- **Issue:** DOT's Pipeline and Hazardous Materials Safety Administrations (PHMSA) sets strict specifications on which vehicles can carry gasoline and other hazardous materials, and how they need to do it (i.e. shipping papers, markings, placarding, etc.). To get the needed quantities of fuel into the disaster area as quickly as possible, more vehicles are needed as long as they are fit to carry gasoline and diesel fuel, even if they do not meet the strict specifications.
- **Waivers Needed:** 49 CFR Parts 173.242 and 172 Subparts C, D, F and I, which govern vehicle specifications and other shipping standards for tank trucks. These waivers will also affect 49 CFR Parts 106, 107 and 171-180.

✓ Jones Act

- **Issue:** The Merchant Marine Act, also called the Jones Act, requires only U.S. built and flagged vessels carry goods from U.S. ports to other U.S. ports. During times of emergency it is imperative that disaster relief items, including fuel, get to the disaster area as quickly as possible regardless of country of origin. More eligible vessels mean that more disaster relief supplies arrive in a more timely fashion. Coastwise waivers can be granted in two ways: (1) waivers shall be granted automatically on request of the Secretary of Defense to the extent considered necessary in the interest of national defense; and (2) when the “head of an agency responsible for the administration of the navigation or vessel-inspection laws” (in this case the Secretary of DHS) considers it necessary in the interest of national defense, if the Administrator of MARAD determines that no U.S.-flagged vessels are available for the proposed transportation. CBP has direct responsibility for enforcing the Jones Act and processes requests for waivers for the Secretary of DHS. Prior to granting the waiver, CBP must seek MARAD’s advice regarding U.S.-flag vessel availability before the Secretary of DHS makes a decision by law (see 46 U.S.C. § 501).
- **Waiver Needed:** 46 USC 551, which codifies the restriction on non-U.S. flagged vessels delivering from U.S. ports to U.S. ports.

✓ Foreign Oil Spill Response Vessels

- **Issue:** The Maritime Administration entered into a Memorandum of Agreement with the U.S. Coast Guard, the Environmental Protection Agency and the State Department to expedite requests for exemptions for foreign oil spill response vessels (oil skimmers, etc.).
- **Waiver Needed:** 46 U.S.C. § 55113. This MOU essentially memorializes the process that these agencies created will continue to expedite allowances for foreign oil spill response vessels in the future.

✓ Anchor Handling Waiver Program

- **Issue:** Similar to the Launch Barge Program, MARAD is authorized to make determinations under 46 U.S.C. § 501 allowing the use of foreign anchor handling vessels (used to position mobile offshore drilling units) if no U.S.-flag vessels are available, and if the companies that want to use foreign vessels have contracts in place to bring in replacement U.S.-flag vessels.
- **Waiver Needed:** 46 U.S.C. § 501 allowing the use of foreign anchor handling vessels (used to position mobile offshore drilling units) if no U.S.-flag vessels are available.

Internal Revenue Service (IRS)

✓ Diesel Fuel Penalty

- **Issue:** The IRS imposes 24.4 cents per gallon tax on diesel fuel sold for on road use, while dyed diesel fuel used for farming purposes, home heating use and etc. are not ordinarily subject to the tax. Typically, if a diesel fuel that was not subject to this excise tax was converted to use for on road purposes, the IRS would require that use to be reported and the tax paid accordingly. In the case of emergency, the goal is to get as much transportation fuel into the market as possible to make up for supply shortages, and as such, this reporting and tax requirement becomes an impediment to bringing that fuel into the transportation mix.
- **Waiver Needed:** Requirements under Publication 510, which governs excise taxes, of the Internal Revenue Code.

Other Federal Government Assistance Options

✓ Vessel Movement Control

- The Coast Guard has authority to control vessel traffic in areas subject to the jurisdiction of the United States which are determined to be hazardous or under other hazardous circumstances through enactment of safety and security zones. Coordination efforts with the U.S. Coast Guard and Department of Homeland Security (DHS) to provided exclusive access to ports in the disaster area to those bringing fuel and other necessary supplies in an effort to expedite barge movement.
- **Waiver Needed:** Captain of the Port Order waiver under Ports and Waterways Safety Act (33USC 1221 et seq.).

✓ Fuel loans and distribution assistance from the Department of Defense's (DOD) Defense Logistics Agency (DLA) and DHS's Federal Emergency Management Administration (FEMA).

✓ Fuel Loans from the Department of Energy (DOE).

State Specific Waivers Needed to Transport Fuel Interstate

✓ Reid Vapor Pressure (RVP) Requirements

- **Issue:** Many states allow a variance, up to 1 lb. RVP, from the most recent version of ASTM D4814 for gasoline blended with ethanol. NIST Handbook 130 also provides for this variance.
- **Waiver Needed:** States that do not allow for an RVP variance may waive the applicable state law or regulation to allow fuel from states that do allow the variance to be used interchangeably across state lines during the emergency.

✓ Biofuel Blending Requirements

- **Issue:** Some states require a minimum amount of biofuels to be blended into all gasoline and/or diesel sold within the state.
- **Waiver Needed:** States with minimum biofuel blending requirements may waive the applicable law or regulation to allow fuel that does not contain the specified volume of biofuels to be carried across state lines and sold in the state during the emergency.

✓ Stage I Vapor Recovery Requirements

- **Issue:** Fuel terminal loading and unloading systems and tank trucks that transport fuels are required to use specified vapor recovery equipment, which can differ from state to state. In the case of emergency, it is imperative that fuel can get from jurisdiction to jurisdiction by any transport means available. The states include these regulations in their state implementation plans (SIPs), which are approved and enforced by EPA.
- **Waiver Required:** SIPs are enforceable by the EPA and during the case of an emergency, if EPA provides a waiver (or no action assurance) during the emergency, each state requiring Stage I Vapor Recovery may waive the applicable law or regulation to allow trucks and terminals without vapor recovery equipment to operate and move fuel from the terminal to intrastate or interstate destinations.

✓ Weight Limits

- **Issue:** All states set weight restrictions (maximum weights allowable) for trucks that travel on their roadways. Because federal law allows each state to set their own weight requirements, not all states set the limits at the same weight. Additionally, these state specific weight limits typically require fuel tankers to be filled at levels below their capacity in most, if not all, states.

- **Waiver Needed:** States may waive their typical weight limits and set temporary limits for trucks carrying emergency relief supplies (including fuel) to allow rapid movement of the largest amount of fuel that can be moved safely intrastate and across state lines. A typical waiver may allow trucks weighing from 92,000 lbs. to 100,000 lbs.

✓ Distributor License

- **Issue:** Many states require a carrier to pay a fee and obtain a Distributor's License to transport motor fuel within the state.
- **Waiver Needed:** States may waive the applicable fees and license requirements to ensure that all drivers, trucks and resources within the state, or brought across state lines to provide support, are available to contribute to the disaster relief effort.

✓ Hours of Service

- **Issue:** Some states have driver Hours of Service requirements that are more restrictive than the U.S. DOT's.
- **Waiver Needed:** States with hours of service regulations that are more restrictive than the federal governments may waive those requirements in kind with the DOT effort to get as many loads into the disaster area as possible in a short amount of time.

✓ Retail Gasoline Label Requirements

- **Issue:** States that have specific biofuel blending requirements may require labels that say things like "contains 10% ethanol," while some fuel transported interstate may not have exactly 10%, but rather "up to 10% ethanol."
- **Waiver Needed:** States with content specific labeling requirements may waive those requirements to allow fuels that may not be blended with the exact volume depicted on the dispenser to be sold in the state during the emergency.

✓ Importer/Exporter Licenses

- **Issue:** State revenue departments require fuel importers and exporters to pay a fee and obtain a license from the state to move fuel across state lines. Without these licenses, the fuel merchant cannot legally buy gasoline from one state and move it to another.
- **Waiver Needed:** Each individual state within the disaster region may allow fuel to be bought and sold within or outside their state by any merchant, whether or not they have paid the proper fee and obtained an importer/exporter license, regardless of where the fuel is purchased and where it will be delivered. States who have allowed this in the past have taken different approaches, with some expediting licenses during the emergency and others waiving the requirements entirely or requiring the merchant to remit taxes to the state despite not being properly licensed and registered.

✓ IRP/IFTA

- **Issue:** The International Registration Plan (IRP) is an agreement among states of the US, the District of Columbia and provinces of Canada providing for payment of commercial motor carrier registration fees. To operate in multiple states or provinces, motor carriers must register in their base jurisdiction (state or province). The International Fuel Tax Agreement (IFTA) is an agreement among states to report fuel taxes by interstate motor carriers.
- **Waiver Needed:** These tax structures, which act as interstate fuel taxes, may be waived in agreement with all states that are affected by the emergency or that are participating in the emergency relief effort to ensure that fuel can move freely from one state to another without being bogged down with tax bureaucracy.

POTENTIAL GOVERNMENT WAIVERS AND THE NATURAL GAS SUPPLY CHAIN

DHS/CBP/USCG

 • Jones Act
 DOT
 • Foreign Oil Spill Response Vessels
 EPA
 • Fuel Specs (RFG, ULSD)
 State
 • Vapor Recovery

DOT/FMCSA

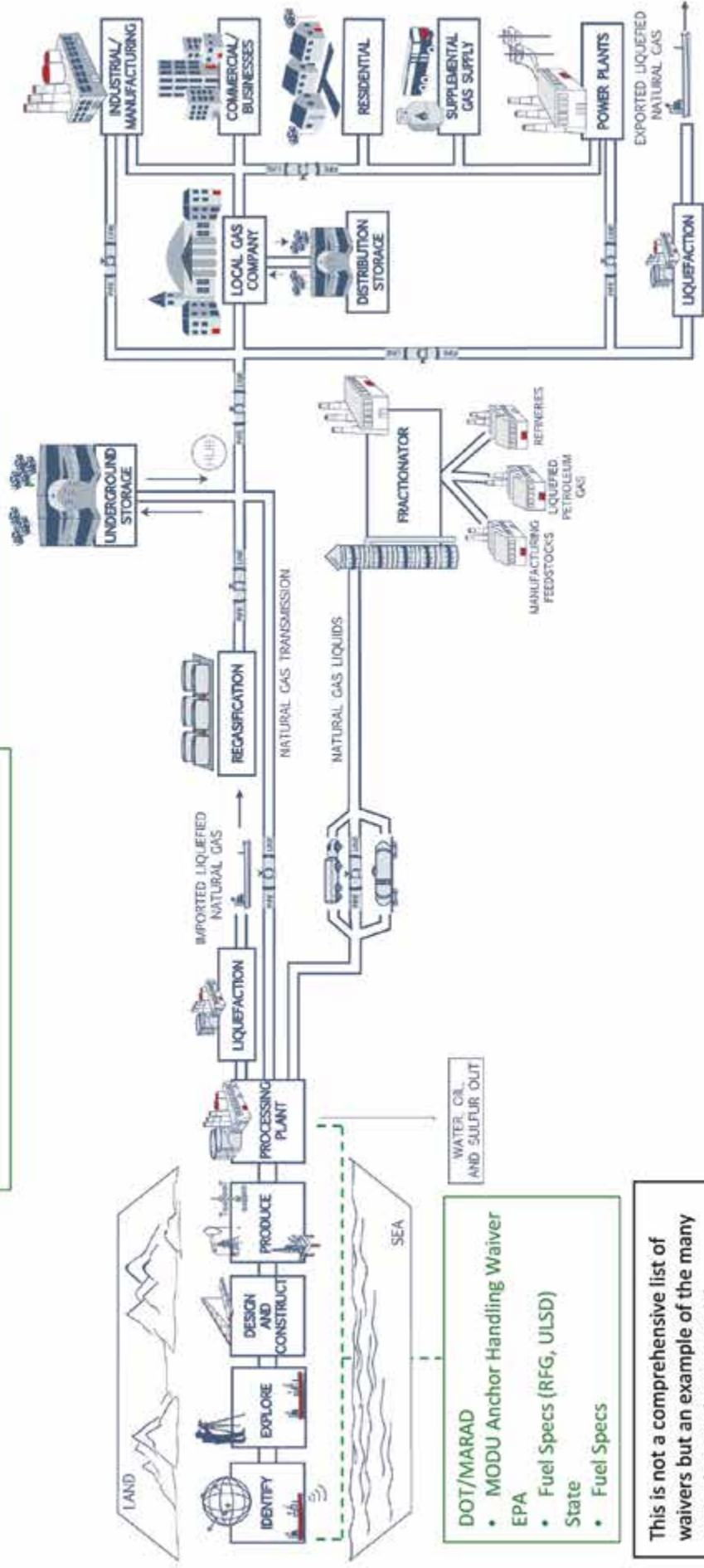
 • Declaration of Regional Emergency
 • Safety Regulations (Hours of Service, Record Keeping, Driver Qualifications, Inspections)
 • Non-Hazmat Spec Trucks
 EPA
 • Fuel Specs (RFG, ULSD)
 State
 • Comm. Truck Weight Limits & Registration
 • Vapor Recovery
 • Importer/Exporter License
 • Interstate Fuel Taxes (IFTA, IRP)

DOT/PHMSA

 • Variance to Company Operations and Maintenance Plan
 EPA
 • Fuel Specs (RFG, ULSD)
 • Tank Roof Landing Emissions
 State
 • Fuel Specs
 • Air Quality Startup Emission, Vapor Containment Units
 • Tank Roof Landing Emissions

DOT/FRA

 • Shared Use of Track/Rights-of-Way
 • Track and Signal Waiver (BSAPs)
 EPA
 • Fuel Specs (RFG, ULSD)
 • Tank Roof Landing Emissions
 State
 • Importer/Exporter License
 • Vapor Recovery
 • Interstate Fuel taxes (IFTA, IRP)



DOT/MARAD
 • MODU Anchor Handling Waiver
 EPA
 • Fuel Specs (RFG, ULSD)
 State
 • Fuel Specs

This is not a comprehensive list of waivers but an example of the many types that can be requested.

Appendix A

Oil and Natural Gas Industry Preparedness Handbook



Introduction to Distribution and Ownership of Retail Stations

It is important to understand that the marketer purchases the fuel from the refiner who owns the product. The terminal is often not the product owner and thus is not in a position to decide whether or not to load a particular truck; that decision remains in the purview of the product owner. If supply disruptions result in local outages, petroleum marketers, through their relationships with the refiners/product owners, are often in the best position to locate and purchase product from alternative supply points. This is only effective, however, if (1) interstate commerce laws allow and (2) the market creates the right incentives for distributors and retailers. The following Appendix A will delve into the complexities of these systems and relationships in greater detail.

Distribution and Ownership of Retail Stations

As depicted in this Oil and Natural Gas Industry Preparedness Handbook, retail fuel stations are the final link to the consumer in the distribution supply chain. Appendix G, “Hydrocarbon Liquids Supply Chain,” of the National Petroleum Council (NPC) report, “Enhancing Emergency Preparedness for Natural Disasters,” published December 18, 2014, describes the supply chain for the distribution of finished fuels to retail stations. The sections identified by blue headers below have been incorporated directly from that excellent resource. Where additional information may be useful in better understanding the end of the supply chain, the Oil and Natural Gas Industry has added supplementary information in italics. Further, a new graphic **Figure 1**, Competitive Gasoline Distribution System, is incorporated to further explain some of the different business arrangements below the terminal rack.

Distribution and Blending of Biofuels

As a result of the Renewable Fuel Standard 2 (RFS2) program, almost all of the gasoline sold at retail contains 10% by volume ethanol. Where diesel contains biodiesel, it typically contains up to 5% by volume. Biofuels are usually transported and stored separately from gasoline and diesel fuels and blended together with gasoline at distribution terminals as it is loaded onto trucks before being transported to distributors and retail stations. This is because ethanol and biodiesel are not compatible with the pipeline properties that can result in pipelines becoming more susceptible to internal stress corrosion cracking, which is difficult to detect and manage. Additionally, ethanol is water soluble and can pick up water in the pipeline, causing the blended product to “phase separate” resulting in off-specification product. Ethanol is typically added to gasoline (CBOB or RBOB) and biodiesel is typically added to diesel fuel at the terminals as the fuel is loaded on to the tanker truck that will deliver the fuel to the local retail stations.

The product flows of biofuels are different from petroleum fuels. For the most part, biofuel production is located near their agricultural feedstocks. Given that most biofuel in the United States is currently made from corn or soybeans (i.e., corn-based ethanol and soy-based biodiesel), the predominant flow of biofuels is from the Midwest outward to other regions. In contrast, the major flow of gasoline and diesel is from the U.S. Gulf Coast to other regions.

¹ http://www.npc.org/reports/2014-Emergency_Preparedness-Ir.pdf, with permission from NPC.

² The NPC allows the reproduction of text: “The text and graphics herein may be reproduced in any format or medium, provided they are reproduced accurately, not used in a misleading context, and bear acknowledgment of the National Petroleum Council’s copyright and the title of this report.”

Delivering Finished Fuel to Retail Stations

The last link in the distribution system is from the terminal to the retail gasoline station by tanker truck. At the terminal, gasoline blendstock is typically blended with ethanol as it is loaded onto the tanker truck. Fuel additives are also blended at this time. From there, the finished gasoline is trucked to the local retail station where it is transferred to underground storage tanks until dispensed to consumers.

Although the majority of gasoline is blended with ethanol and purchased at the terminal rack, some marketers own their ethanol at the terminal and have it blended to their own specifications, while other marketers may store unblended gasoline and ethanol at their bulk plant and blend a “finished” fuel there before trucking it to the retail station for sale to the consumer. The same approach can be applied to diesel and biodiesel fuels.

Regardless of where the products are “finished” for sale to the consumer, there are two specifications that are of particular importance in gasoline: octane and vapor pressure. Blendstocks do not by themselves meet the regulatory requirements and performance specifications of a finished gasoline. For example, a regular-grade gasoline blendstock may have an octane (anti-knock index (AKI)) rating of 84 and must be blended with both ethanol to meet the minimum 87 octane requirement in most areas and an additive package to meet the EPA detergent requirements. Use of the gasoline blendstock without ensuring that the gasoline meets these and other federal and state requirements could result in the assessment of substantial fines and penalties for failure to meet regulatory requirements and also could potentially degrade vehicle performance and/or damage the engine.

One of the federal and state requirements is the Reid Vapor Pressure (RVP) of the fuel. The RVP is seasonally dependent and must be aligned with the final product to meet the environmental requirements set by the U.S.EPA and/or the state environmental agency. For example, a specific area may have a 7.8 RVP requirement while another area within the same state may require a 9.0 RVP fuel. While the 7.8 RVP product can substitute for the 9.0 RVP fuel, the opposite is not true. As discussed earlier in this document, waivers would be required to distribute a 9.0 RVP gasoline in an area that requires the lower RVP gasoline. With the exception of where government mandates require the addition of biodiesel, biodiesel is not required to be added to diesel to “finish” the fuel for sale to the consumer.

Product Ownership and the Supply Chain

The fungibility of hydrocarbon products is a primary factor in the efficient operation of the U.S. fuels distribution system. This essential characteristic of fuels in the distribution system allows for more efficient and cost-effective transportation of fuels to market and provides the system with significant flexibility. The majority of liquid hydrocarbon fuels are transported from refineries to terminals in common carrier pipelines. These pipelines have custody of the product in their system, but they do not own (i.e., hold title to) the product. The actual ownership of the product can change hands many times as the product moves through the system. As a result, the common carrier pipeline operator has limited decision-making authority regarding the product. Common carrier pipeline operators, and in many cases terminal operators, work under strict regulatory restrictions regarding the disclosure of customer, volume, and scheduling information to third parties.

At fuel distribution terminals, a company may own and operate a terminal, but it does not necessarily own the product that is stored in its tanks. Thus, as with the common carrier pipelines, the owner/operator of the terminals may not have decision-making authority with regard to the disposition of the products held in its storage tanks. Similar to common carrier pipelines, the terminal operators are not permitted to divulge the identity of the parties that own the product stored at the terminal.

The terminal owner/operator may not be able to divulge the volume and/or scheduling of the product on site.

Nationally, 97% of existing gas stations are independently owned. While many of the retail gasoline stations operate under a major brand label (approximately 60%), the major oil companies do not own or manage the product in the retail tanks at these independent retail locations. These independent owner operators are the decision-makers with regard to the disposition of the products in their retail tanks.

In most instances the major (i.e., branded refiner) does not have a contractual relationship with the branded independent operator, but relies on a branded wholesale distributor to maintain the contractual relationship with the retail station and to deliver the product to the retailer. The branded refiner will transfer custody of the product to the wholesale distributor when the tank truck is loaded with product at the terminal.

The fungible product supply chain brings efficiency, flexibility, and resiliency into the system, enabling fuel suppliers to meet shifting market demand. It is common in the industry for companies to have exchange agreements with other companies whereby one company agrees to supply a second company in a particular city, while the second company supplies the first company in another city. It is also common for a company with supplies stored at a terminal to engage in the buying or selling of fuel supplies with other companies storing fuel at the terminal. These arrangements are possible because the fuel remains fungible until it crosses a loading rack and is blended with ethanol and the proprietary additives in the tanker truck. This arrangement provides considerable flexibility to adjust supply sources during normal day-to-day operations, and also in the aftermath of natural disaster.

Normal business arrangements may be impacted during a fuel supply emergency. When supplies are short due to a supply disruption, the various parties in the distribution system must first honor their contractual arrangements. This means that parties that do not have contractual relationships may not be able to readily obtain supplies from their typical suppliers. In addition, during supply disruptions, even parties with a contractual relationship could have their supplies curtailed. During supply emergencies, it is typical for various parties along the supply chain to allocate supplies to equitably distribute limited supplies amongst their customers. For example, during a supply emergency, a supplier may set the allocation level at 100%, which means that a customer cannot receive more than the amount they typically received before the emergency. If the situation is more severe, the supplier might, for example set the allocation level at 50%, which means that a customer can only receive half as much supply as they would typically receive before the emergency. Such allocations can be applied at all levels of the distribution system.

The implication of the allocation concept and contractual relationships is particularly important to understand as it relates to wholesale distributors and retail fuel marketers. There are many different business models employed by marketers and distributors. Approximately 97% of retail fuel stations are independently owned and operated. Approximately 60% of those retail stations are branded while the other 40% are unbranded. Unbranded retailers may or may not have binding supply contracts with the wholesale distributors that supply them.

Figure 1, Competitive Gasoline Distribution System, shows some of the different business arrangements between suppliers, wholesale distributors, and/or retailers.

As discussed above, in the event of a supply disruption, supplies are often allocated and parties along the supply chain must first honor their contractual relationships. Regardless of whether a wholesaler or retailer has a supply contract with the party that supplies them, their supplies may be reduced due to allocations, as determined by the terms of their supply contracts. Wholesalers and retailers without supply contracts will likely have their supplies curtailed in such situations. These issues can therefore affect fuel availability at retail locations, and consumers that rely on those retail fuel locations.

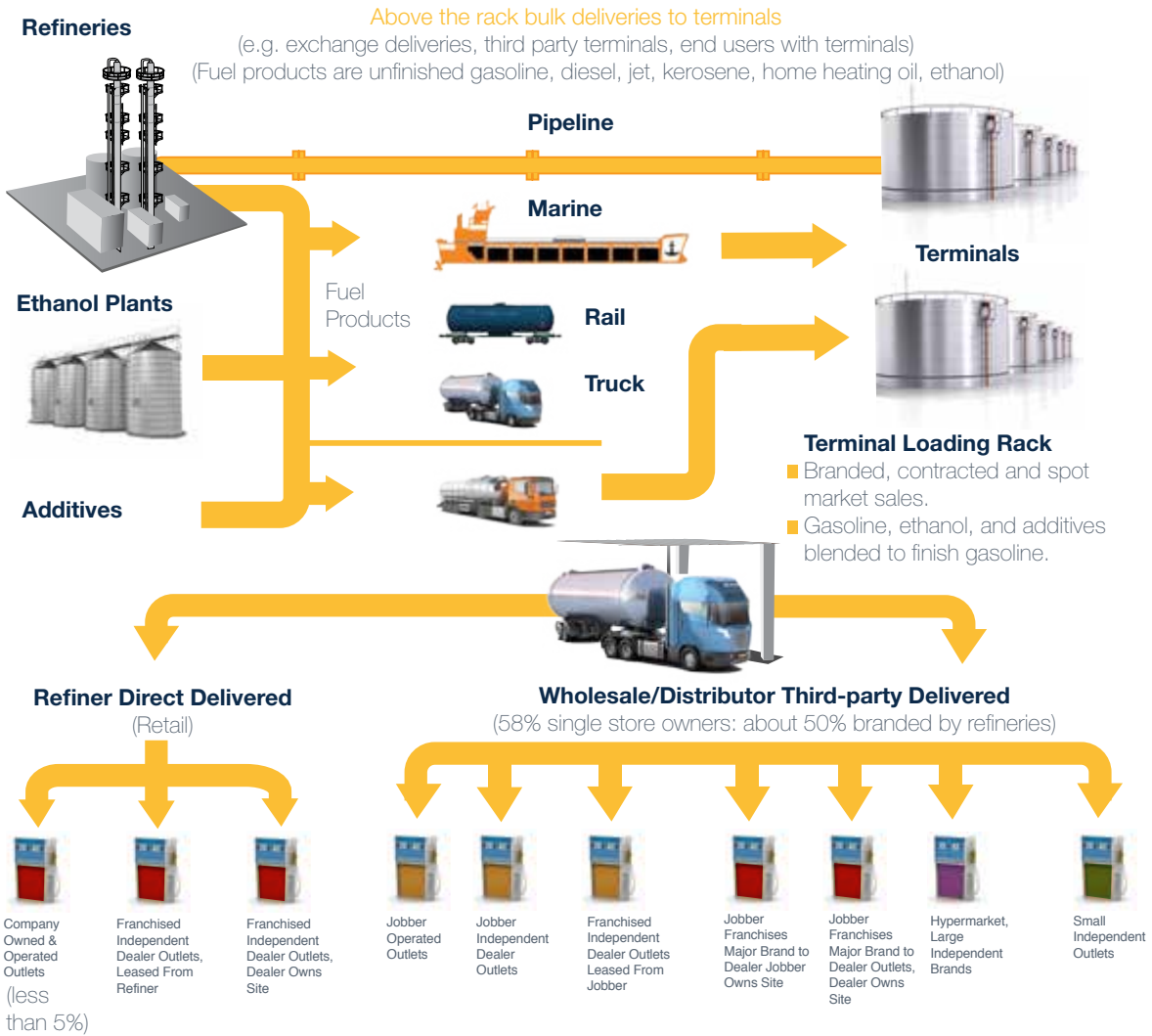
The implications of these commercial terms also affect restoration of fuel supply after a supply disruption. For example, even if regulatory relief has been granted and alternative supply modes are being utilized, contractual relationships affect restoration of fuel supplies to retail locations.

As a general matter, a company that has a contract for fuel will have an easier time obtaining fuel during an emergency event. A contractual relationship between a wholesale distributor (wholesaler) and a major brand may require a “ratable fuel volume,” meaning that the wholesaler purchases a certain volume of gasoline and diesel from that supplier evenly throughout each month. The wholesaler may also require a ratable supply agreement with the retail station. Such supply agreements allow each supplier to independently plan on the volume of fuel that should be scheduled and transported by pipeline, barge or ship to that regional market. Unbranded retailers may have similar agreements with refiner/suppliers and wholesalers. Another common approach for an unbranded wholesaler or retailer is to forgo a contractual agreement with an upstream supplier and instead purchase product from the spot market. However, during an emergency the spot market can “dry up” resulting in no fuel being made available to those without contracts.

As described above and shown in Figure 1. below, there are a large number of owners that have different contractual obligations that are supplying transportation fuel to the end consumer. This competitive market system operates extremely well to ensure that the consumer has fuel. And individual suppliers and retailers have significant incentives to restore their supply as quickly as possible following either manmade or natural disaster emergencies. But the pace at which fuel logistics and distribution system responds to an emergency situation within a given geographic area can be impacted by the speed and extent of government actions. For example, if the government has not waived the fuel property specifications and air quality regulations following a natural catastrophe in a given area, the legal risks for delivering product that is potentially “off-spec” could significantly delay the ability for suppliers and retailers to restore operations. Similarly, if the roads are impassable, the DOT regulations are not waived (e.g., hours of service, weight restrictions) and the terminals and retail stations are without power, they cannot effectively deliver fuel. Therefore, the best use of government resources for facilitating the restoration of economic activity following an emergency situation is to ensure that waivers are granted as expeditiously as possible, that electric power is online and that roads are re-opened, thus allowing suppliers and retailers to open their businesses and make fuel available to the consumer.

Figure 1

Competitive Gasoline Distribution System



For more information, please visit
www.api.org



AMERICAN PETROLEUM INSTITUTE