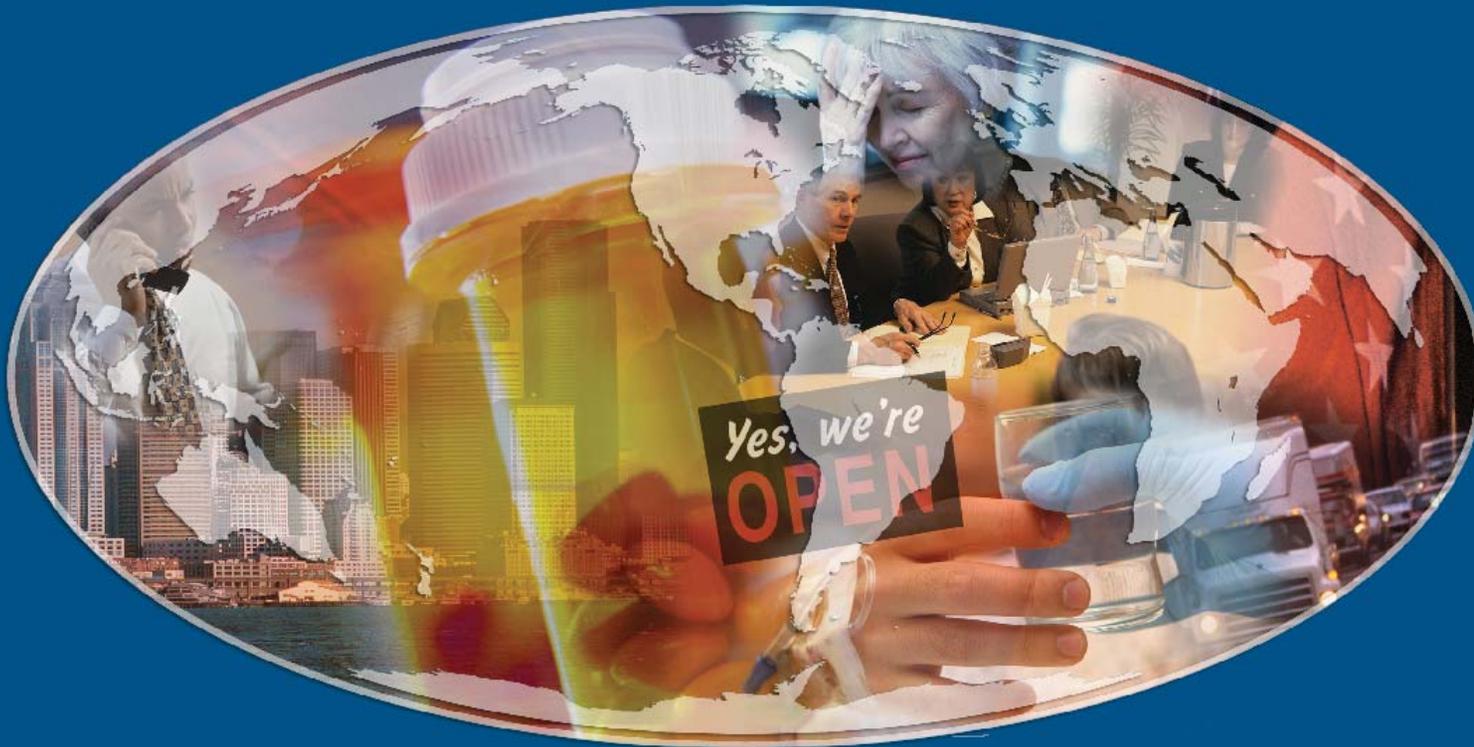


# PANDEMIC INFLUENZA

## Preparedness, Response, and Recovery

### GUIDE FOR CRITICAL INFRASTRUCTURE AND KEY RESOURCES



Homeland  
Security

Annex:  
Oil and Natural Gas  
Sub-Sector Pandemic  
Guideline



## ANNEX: Oil and Natural Gas Sector Pandemic Influenza Planning Guideline

**Purpose:** This Sector-specific guideline is an annex to the *Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources (CI/KR Pandemic Influenza Guide)* and intends to assist the Oil and Natural Gas (ONG) Sector plan for a catastrophic influenza pandemic. Companies that fail to prepare for such a prolonged catastrophic event may find themselves without the staff, equipment, or supplies necessary to continue providing oil and natural gas to their customers and the nation. For a copy of the complete CI/KR Pandemic Influenza Guide, please see [www.pandemicflu.gov/plan/pdf/cikrpandemicinfluenzaguide.pdf](http://www.pandemicflu.gov/plan/pdf/cikrpandemicinfluenzaguide.pdf).

**How to Use Guidelines:** The guideline serves as a non-prescriptive reference for owner-operators and a practical tool that business planners can use to augment and tailor their existing emergency response plans given the unique challenges a pandemic influenza presents. **It is important to integrate your pandemic influenza plan with your existing business continuity and emergency response plans and/or the CI/KR Pandemic Influenza Guide's comprehensive framework for pandemic influenza catastrophic planning.** This annex addresses the major challenges the ONG Sector may face and should assess in its pandemic influenza planning within the seven key areas of vulnerability highlighted in blue boxes in the Guideline. While not necessarily applicable to all businesses or entities in a given sector, each relevant *Action*, *Supporting Action*, and *Question* in this Guideline can be integrated and managed as a separate checklist item during the planning process.

- **Actions:** These are primary checklist items with numerous related supporting actions and questions to consider.
- **Supporting Actions:** Expanding on the overarching action, these supporting actions offer suggestions for further study.
- **Questions to Consider:** These questions are designed to focus on the main and supporting actions. The questions are not comprehensive; they are designed simply to represent a starting point to stimulate thinking about further actions and options.

**Planning Assumptions:** Influenza pandemics are unpredictable events; it is impossible to forecast their characteristics or severity accurately. The Centers for Disease Control and Prevention define a severe pandemic influenza as a Category 4 or 5 with case fatality ratio of 1 percent or higher. Given today's highly mobile population, if a severe pandemic influenza emerges, outbreaks may occur nearly simultaneously across the country making reallocation of resources more difficult than in other emergencies. Therefore, each sector must rely primarily on its own internal resources and workers, for protection (including security) and response. While an influenza pandemic will likely affect a given community for six to eight weeks, nationally a wave may linger for up to 12 weeks. Thus, even though a community outbreak may have subsided, businesses in those communities that depend on a national supply chain may find themselves without the necessary materials, supplies, and workforce because other communities across the country may still be affected by an outbreak. The guidance, which is based on disease impact assumptions ([pandemicflu.gov/plan/pandplan.html](http://pandemicflu.gov/plan/pandplan.html)) from the CDC, includes the following:

- *Susceptibility to the pandemic influenza virus will be universal.*
- *Once sustained person-to-person transmission begins, the disease will spread rapidly around the globe.*
- *The clinical disease attack rate will likely be 30 percent or higher in the overall population during the pandemic influenza.*
- *Rates of absenteeism will depend on the severity of the influenza pandemic. In a severe pandemic influenza, absenteeism attributable to illness, the need to care for ill family members and fear of infection may reach 40 percent during the peak weeks of a community outbreak.*
- *Epidemics will last 6-8 weeks in affected communities.*
- *Multiple waves (periods where community outbreaks strike across the country) will likely occur with each lasting 2-3 months.*

For detailed information on the complete set of planning assumptions and the pandemic influenza context, see Section 3 of the *CI/KR Pandemic Influenza Guide* and the other Federal guidance at [www.pandemicflu.gov](http://www.pandemicflu.gov).



## ESSENTIAL SERVICES AND FUNCTIONS

Industries in all sectors of the American economy will experience influenza pandemic impacts - the ONG Sector is no exception. Effective coordination with public safety officials and community leaders will facilitate the integration of ONG businesses into community emergency operations plans. The essential services and functions of the petroleum portion of the ONG Sector include the production, transportation and storage of crude oil and natural gas; the processing of crude oil into petroleum products; the transmission, storage and wholesale retail distribution of petroleum products; and control systems to coordinate storage and transportation. The essential services and functions of the natural gas portion of the ONG Sector include the production, processing, transportation, distribution, and storage of natural gas; liquefied natural gas facilities; and gas control systems. All CI/KR sectors depend on fuel, and the Chemical Sector is dependent on ONG as feedstock. Any interruption in the supply of petroleum or natural gas would do significant damage to the U.S. economy and the American people.

<b>ACTION Identify and assess your company's essential products, services, and functions.</b>		
✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>Identify essential services that must keep operating and identify the critical functions needed to support those services (e.g., control rooms, plant operations, key systems support, scheduling, etc).</p> <p>Identify services and functions (e.g., meter reading, training, etc) that you can suspend.</p> <p>Prioritize essential services and functions given their value to your critical customers and the community.</p> <p>To ensure continuity of products and services, assess remote connectivity and accessibility options for workers.</p>	<ul style="list-style-type: none"> <li>• What functions and processes must you sustain to produce, distribute, and maintain critical services and functions?</li> <li>• Who are your critical customers? Can you prioritize essential services and functions specifically to serve critical customers (e.g., hospitals)? If so, can you deliver fuel to them independently of your other customers?</li> <li>• Have you communicated with your service providers, suppliers, government entities, health care providers, and critical customers about the need to jointly plan for a pandemic influenza?</li> <li>• Have you revised your incident management capabilities to address a pandemic influenza threat?</li> <li>• Have you devised plans to accommodate for the resulting impact of suspending or restaging (e.g. split shifts) certain operations?</li> <li>• Have you established alternatives to limit cash transactions with the public? If outside service provides for bill payment or collections, are there plans for continuity of service?</li> <li>• Have you communicated with your financial institutions on how they will support your continued need and ability to make appropriate fund transfers should the pandemic influenza affect usual mechanisms for funding suppliers and paying employees?</li> </ul>



## ESSENTIAL SYSTEMS AND EQUIPMENT

Unlike other disasters, an influenza pandemic will not physically damage infrastructure. However, emergency planners should assess the affect absenteeism could have on essential equipment operations. In addition, a pandemic influenza's impact on the supply chain (i.e., "just-in-time" delivery, warehousing, and logistics) could significantly impact your ability to procure replacement parts and supplies, or to conduct routine maintenance. Planners should have contingency plans that address the lack of parts and supplies for operating essential equipment and assets. Essential systems and equipment include, but are not limited to: wellheads, gas and oil separation plants, oil/gas dehydration units, oil/gas sweetening units, compressor stations, emulsion breaker units, water treatment units, pipelines, port facilities, unloading facilities, storage facilities, refineries, ocean tankers, barges, trucks, railroad tank cars, storage fields, tank farms, natural gas processing plants, liquefied natural gas (LNG) facilities, natural gas control systems, gas market centers, and information systems/SCADA systems.

### **ACTION** Review systems and equipment critical to support each essential function.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>	Identify equipment that must operate continuously and/or at key periods to sustain essential functions and processes.	<ul style="list-style-type: none"> <li>How will you maintain and repair essential equipment given potential supply chain issues?</li> <li>Can typical processes be modified temporarily to sustain essential systems and equipment?</li> <li>Is your equipment clearly mapped and marked so it can be located in case of emergency repair or replacement by non-regular staff?</li> <li>Do you have pre-established contracts with multiple equipment vendors for emergency replacement and repair during an influenza pandemic?</li> <li>Has a full assessment been conducted for all critical systems to identify potential failures based on the pandemic influenza planning assumptions?</li> <li>How will concern about public contact and disease transmission affect demand or delivery for oil products, LNG, propane, and natural gas? Will it affect your essential systems and equipment?</li> <li>Have standard operating and emergency procedures (e.g. entering properties to discontinue or establish service) been developed for all essential processes and equipment? If so, have they been distributed broadly to managers and staff?</li> <li>When assessing potential critical system failures, what are the possible primary/supporting system and equipment challenges (e.g., maintenance technician availability; standard replacement and repair part accessibility; operation of SCADA and information systems)?</li> </ul>
<input type="checkbox"/>	Identify and prioritize safety and security requirements for maintaining essential equipment and assets.	
<input type="checkbox"/>	Review primary and supporting components of critical equipment to identify potential critical system failures and possible cascading consequences.	
<input type="checkbox"/>	Consider how each action relates to those actions you have already developed in your organization's contingency plans to address other emergencies.	
<input type="checkbox"/>	Consider a plan with regulators to suspend or extend non-essential compliance deadlines	

### **ACTION** Prepare to sustain essential systems and equipment for a wave lasting up to three months.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>	Prioritize the options available to address demands on your essential resources.	<ul style="list-style-type: none"> <li>What is the frequency for routine maintenance on essential primary/secondary assets and equipment? How critical is it to perform on this schedule? How easily can scheduled maintenance be deferred or accelerated on short notice?</li> <li>Is your regular routine maintenance on your essential equipment up-to-date, and how much routine maintenance is required for this equipment during a pandemic influenza wave?</li> <li>Is there excess operational capacity for your essential equipment to sustain functions while alternating and reducing demands on specific equipment and workers (e.g., using alternate</li> </ul>
<input type="checkbox"/>	Plan to rely on in-house or available local maintenance and repair/replacement support for 2-3 months during a pandemic influenza wave.	
<input type="checkbox"/>	Assess recurring and preventative	



<p>maintenance requirements.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Assess implications if essential assets fail early on during the pandemic influenza outbreak.</li> <li><input type="checkbox"/> Consider establishing a pandemic influenza mutual aid program among similar small/medium and even large businesses to assist each other with sustaining essential assets.</li> </ul>	<p>modes of transport for delivery of oil, LNG, diesel or gasoline)?</p> <ul style="list-style-type: none"> <li>• Do you have replacements available for all essential equipment either on-site or locally?</li> <li>• Do you have emergency equipment available (e.g., generators) if you lose equipment or its fuel supply?</li> <li>• Do you have updated standard operating procedures for this equipment, and have you changed them to address pandemic influenza conditions (e.g., social distancing strategies)?</li> <li>• Have you considered how you would maintain essential services and functions if another disastrous event (such as a hurricane or ice storm) affected your critical systems and equipment during the pandemic influenza wave?</li> <li>• Without sufficient replacement parts on-site or locally, could a mutual aid pact be formed with other similar facilities to sustain operations?</li> <li>• Are there updated emergency operating plans for all assets/equipment to address an influenza pandemic ? Can you incorporate social distancing strategies, disciplined personal hygiene, personal protective equipment (PPE), and equipment decontamination be effectively?</li> </ul>
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### ESSENTIAL RAW MATERIALS AND SUPPLIES

While a pandemic influenza “wave” may linger in a community for six to eight weeks, it will likely linger nationally for eight to 12 weeks. The negative impacts on individuals, businesses, and the nation from the illness and disease mitigation strategies will have an impact over a much longer duration than typical disasters. A severe influenza pandemic may disrupt the access to your essential materials and supplies, necessary to function, for up to 12 weeks. Given an increased reliance on “just-in-time” delivery and potential impacts that could shut down the supply chain, you may consider stockpiling food, water, fuel, replacement and maintenance parts, personal protective equipment (PPE) (e.g., masks, gloves) and other infection control supplies (cleaning supplies, tissues, hand sanitizer) on-site or locally.

**ACTION Identify materials and supplies to sustain essential functions and equipment for up to 12 weeks.**

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
	<ul style="list-style-type: none"> <li><input type="checkbox"/> Identify critical materials to ensure distribution capacity.</li> <li><input type="checkbox"/> Prioritize essential material and supplies necessary to operate equipment and sustain essential functions.</li> <li><input type="checkbox"/> Identify options to reduce demand for essential supplies and materials.</li> <li><input type="checkbox"/> Explore options for expanding stockpiles and close-by storage.</li> <li><input type="checkbox"/> Assess all internal and external supply-chain support operations and contracts.</li> </ul>	<ul style="list-style-type: none"> <li>• How much of which materials/supplies (e.g. chemicals, electricity, fuel, etc.) are required to sustain the most essential operations for up to three months?</li> <li>• What can the business afford to stockpile and what must it stockpile? How can these additional extraordinary costs be funded (e.g., retained earnings, special disaster fund, and/or government support)?</li> <li>• Will advance notice of supply-chain disruption be available? Will it be sufficient to switch suppliers or take plants offline?</li> <li>• Can you expand storage capacity temporarily for unused oil/gas to ensure continuity of extraction?</li> <li>• Have you identified the availability and need to stockpile critical systems’ replacement and normal maintenance parts in sufficient quantities to sustain operations for three months?</li> <li>• What available supplies might you substitute temporarily for preferred essential ones?</li> <li>• Do you have sufficient PPE and cleaning supplies to ensure high levels of hygiene in common work areas that will be used by personnel required to maintain essential services?</li> </ul>



**ACTION Determine the most effective ways to ensure an adequate supply of essential materials.**

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>Assess costs to procure, stock, and/or ensure delivery of essential materials.</p> <p>Identify physical or safety limitations in stocking sufficient critical supplies locally.</p> <p>Identify a formal chain of command to ensure someone is available to authorize major emergency procurements.</p> <p>Identify additional security needs for increased high-value material stockpiles.</p> <p>Coordinate with supply-chain vendors, and identify secondary sources for critical supplies.</p>	<ul style="list-style-type: none"> <li>• How long is the supply chain from order to delivery for essential supplies (pipes, drill bits)? Have you asked suppliers about changes to delivery timelines during an influenza pandemic?</li> <li>• What happens if the supply chain cannot provide critical materials or supplies? How quickly would that affect the business' ability to provide essential services? How will customers, vendors, and government emergency response officials be notified of impacts?</li> <li>• How can you provide incentives for essential suppliers and support contractors to become better prepared? For example, can the business collaborate on planning, integrate preparedness training, and stipulate pandemic influenza certification in all supply contracts?</li> <li>• To improve availability options, are there pre-established contracts with multiple vendors of essential supplies? Who do the business' vendors rely on for their supply and transport services; are they different or the same providers?</li> <li>• Where can additional supplies be stored if on-site capacity is limited?</li> <li>• If you cannot stockpile critical materials or your "just-in-time" supply chain fails, do you have backup plans (e.g., pre-negotiated contracts with new suppliers for priority delivery)?</li> <li>• Are there additional security constraints with off-site storage of supplies?</li> <li>• Have you integrated your planning with your local/regional suppliers to understand what priority level your company has in receiving products and services support?</li> </ul>

**ESSENTIAL WORKERS**

A severe pandemic influenza may cause extended absences for essential workers, which might affect you and your supply chain. During a severe influenza pandemic, workforce absenteeism may range from 25 to 40 percent. Complicating matters, the disease will strike randomly among employees from the boardroom to the mailroom. Implementing disciplined workplace personal hygiene and appropriate social distancing strategies may reduce absentee rates for illness and other related reasons. Organizations may consider stockpiling certain medical (e.g., antiviral medications, see [www.pandemicflu.gov/vaccine/medantivirals.html](http://www.pandemicflu.gov/vaccine/medantivirals.html)) and non-medical countermeasures (e.g., hand disinfectants, gloves, and masks). Essential workers in the ONG Sector perform functions in the following areas: oil and natural gas extraction, processing (refineries and natural gas plants), petroleum manufacturing, petroleum merchant wholesalers and retailers (e.g. gasoline stations), oil/natural gas pipeline transportation, and natural gas distribution (utilities).

**ACTION Identify the types and numbers of workers critical to sustain essential functions.**

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>  <input type="checkbox"/>	<p>Identify essential workers based on their position/skills necessary to sustain essential functions and equipment.</p> <p>Define the roles and responsibilities of employees, labor organizations, staff,</p>	<ul style="list-style-type: none"> <li>• Have the worker categories and essential workers been formally identified and communicated to the business' workers and appropriate unions and other organizations?</li> <li>• Are there constraints in employing union contract workers and/or for specific local worker contracts in non-standard ways during an emergency temporarily (e.g., can a skilled maintenance technician temporarily serve as an operator)?</li> <li>• Do you have a cross-training plan to prepare workers for non-standard positions?</li> </ul>



<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>supervisors, managers, and staff medical personnel during an influenza pandemic.</p> <p>Assess impacts from short-term and extended absences by essential workers.</p> <p>Assess requirements given differences in operational demands for essential workers</p> <p>Assess the options to obtain contractor backup support on essential operations and determine how quickly that can be started.</p>	<ul style="list-style-type: none"> <li>• Are there differences in your workforce by age and/or family status (e.g., employees with younger children may be affected more by school closures and self-quarantine)?</li> <li>• What are the different workforce challenges for on-site vs. off-site and full vs. part-time contractors to perform critical functions?</li> <li>• What are the potential effects of changes in demand and adjustments in scalable operations on essential worker requirements and numbers?</li> <li>• Have those workers who might not typically be considered “essential” in most disaster scenarios (e.g., janitors) but will become so in an influenza pandemic been assessed?</li> <li>• Are there ways to automate or electronically augment certain essential workforce functions?</li> <li>• What essential operations might you need to maintain temporarily through contract support?</li> <li>• Have you developed plans to modify work schedules to reduce exposure to critical workers?</li> </ul>
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<b>ACTION</b>	<b>Identify policies and procedures to ensure a safe workplace.</b>
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✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>Emphasize worker/workplace disease control/protection. See: <a href="http://www.pandemicflu.gov/plan/workplaceplanning/index.html">www.pandemicflu.gov/plan/workplaceplanning/index.html</a>.</p> <p>Determine the types of PPE that may be best for various worker types and worksites. For information on suggested PPE use, see: <a href="http://www.osha.gov/Publications/influenza_pandemic.html">www.osha.gov/Publications/influenza_pandemic.html</a>.</p> <p>Develop protocol (i.e., seek medical attention, avoid workplace, notify supervisor) for employees to follow if they contract the virus, show symptoms, or have ill family members.</p> <p>Consider screening employees and visitors at the entrances to your critical facilities.</p> <p>Consider limiting workplace access to visitors and other non-essential workers.</p>	<ul style="list-style-type: none"> <li>• Has stockpiling emergency supplies such as food and water been considered for workers who may be retained at the worksite (e.g., control or emergency operations centers) for extended shifts/periods?</li> <li>• What are your plans to enhance worksite cleaning procedures (e.g. increase frequency of routine cleaning of high risk, high traffic areas)?</li> <li>• How will you fund costs associated with stocking worker protection items such as masks, cleaning materials, and, with appropriate medical oversight and support, antivirals?</li> <li>• If anticipated for use, have worker preparedness tasks such as mask and respirator training and fit testing been reviewed and incorporated in the plans based on OSHA requirements (<a href="http://www.osha.gov/Publications/influenza_pandemic.html">www.osha.gov/Publications/influenza_pandemic.html</a>)?</li> <li>• What impact will requirements for maintaining social distancing, equipment decontamination and worker personal protection have on normal and emergency operations and services for your business (e.g. delay inside building meter reading by LDCs)?</li> <li>• Has closing non-critical common areas, such as break and lunch rooms, and ensuring that shifts do not commingle during shift changes been considered in the plans?</li> <li>• Do you need to update your security plan to ensure the security of your workplace from potential incursion, and protect the transfer of assets?</li> </ul>

<b>ACTION</b>	<b>Identify policies and procedures to protect and sustain workers during an influenza pandemic</b>
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✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>Reduce demands on essential workers.</p> <p>Temporarily augment essential worker ranks.</p> <p>Consider plans to increase the number of employees who work off-site (i.e., home).</p>	<ul style="list-style-type: none"> <li>• Are there practical temporary options that can be exploited to increase worker availability (e.g., extending shifts to 12 hours, adding overtime, and using other non-essential workers)?</li> <li>• Could less essential staff work from home to reduce disease transmission at the workplace?</li> <li>• Has the need for and conditions requiring more extreme measures, such as sequestering</li> </ul>



<input type="checkbox"/>	<p>Develop protocols (i.e., seek medical attention, stay away from work, notify supervisor) for employees to follow if they contract virus, show symptoms, or have ill family members.</p>	<p>repair technicians, or scheduling and dispatch workers on-site been considered?</p> <ul style="list-style-type: none"> <li>• Are your telecommunications and information technology infrastructure capable of shifting calls, data and other services off-site?</li> <li>• Can technicians who largely work alone (e.g., measurement, corrosion, pipeline, etc) get their work assignments without coming to the area plant or office?</li> <li>• What contingency plans are in place to replace helicopter pilots who transport offshore workers to platforms?</li> <li>• Do you have plans to limit exposure to offshore workers who share living quarters during long shifts?</li> <li>• Have wholesale and retail station protocols been developed to encourage social distancing from customers while maintaining adequate service?</li> <li>• Can inside work/maintenance by local distribution companies (LDC's) that requires contact with residents or business customers be delayed until the threat is reduced? Have procedures been developed to protect workers who must enter a residence for emergency response purposes (e.g., leak) in situations where an ill person is in the home?</li> <li>• Will the appropriate regulatory authority allow continued "estimation" of meter reading during pandemic influenza conditions?</li> </ul>
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**ACTION Identify Human Resource (HR) protective actions and policies to sustain essential workforce.**

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Assess standard HR policies and procedures.</p> <p>Develop additional HR policies specific to pandemic influenza response.</p> <p>Identify likely legal considerations that may arise from these new HR actions.</p> <p>Develop plans and procedures that provide support and assistance to employees' families.</p> <p>Provide regular communication to all staff on the latest health advisories and recommendations regarding the influenza pandemic.</p>	<ul style="list-style-type: none"> <li>• Have you adapted existing and/or developed new sick leave policies to support ill workers and their ill family members (<a href="http://www.pandemicflu.gov/plan/community/commitigation.html">www.pandemicflu.gov/plan/community/commitigation.html</a>)?</li> <li>• Have you met with union leaders to discuss possibly implementing new temporary policies?</li> <li>• Have you communicated with workers and their families about potential HR policy changes?</li> <li>• Have you identified the legal ramifications of employing emergency HR policies (e.g., costs associated with leave policies)?</li> <li>• Has your company considered using professional health authorities to discuss with essential staff their understanding and willingness to receive antiviral medications and/or vaccines?</li> <li>• Have you consulted with health authorities to understand confidentiality policy issues in working with employees who may or have been potentially been exposed?</li> <li>• Have you developed/updated workforce deployment policies regarding teams and crews working together and potential need to keep employees separated?</li> <li>• Have you developed a staff travel policy (for work and non-work related travel), including possible provisions for quarantine after returning from an infected area ?</li> <li>• Have you considered relevant Federal, State, or local laws (e.g., FMLA <a href="http://www.dol.gov/esa/whd/fmla/">www.dol.gov/esa/whd/fmla/</a> ) that govern extended leave for employees?</li> </ul>



## ESSENTIAL INTERDEPENDENCIES

When a pandemic influenza strikes, it will affect all sectors of society. Preparedness and response requires a coordinated national response, including Federal, State, and local governments and most importantly the private sector. To facilitate a swift pandemic influenza response and recovery, the ONG Sector, and the businesses therein, must identify and sustain its essential interdependencies within and across sectors. The nation's critical infrastructure relies on the ONG Sector for fuel. Conversely, the ONG Sector depends on the Transportation, Banking and Finance, and Communications sectors, among others, to sustain its essential services and functions. The interdependent nature of the Sector presents challenges and opportunities for coordinating public and private sector preparedness activities.

### **ACTION** Identify interdependent relationships and take actions to sustain this support.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>Identify and assess, as needed, sector and external cross-sector essential service support requirements.</p> <p>Identify and assess, as needed, the viability of the various modes of transportation (e.g. rail, barge, trucks) used to deliver raw materials and finished products.</p> <p>Identify and assess, as needed, the capability of communication channels to function under stress of pandemic influenza environment.</p> <p>Develop joint operational plans with key service providers, suppliers and customers in the public and private sectors.</p> <p>Assess capability of mutual aid and assistance networks to reduce vulnerabilities.</p>	<ul style="list-style-type: none"> <li>• Within the ONG Sector and other sectors (e.g., Transportation, Communications, Finance), which entities do you depend on most to sustain its essential operations, and vice versa?</li> <li>• How are your raw materials and supplies delivered to you, and will these transportation systems continue a reliable supply of materials during an influenza pandemic?</li> <li>• How are your raw materials and supplies delivered to you, and will these transportation systems continue a reliable supply of materials during an influenza pandemic?</li> <li>• What steps have you taken to ensure continuity of water and electrical power for your essential services?</li> <li>• If communications networks fail or become unreliable or slow, how will you maintain contact with other suppliers, public sector partners, your customers or other essential parties?</li> <li>• If IT networks are impaired, will monitoring of pipeline integrity be compromised?</li> <li>• What safety or security requirements will pandemic influenza necessitate and how should you coordinate with public safety officials (e.g., local police, fire departments) and local government officials?</li> <li>• Are there payment collection alternatives if a influenza pandemic disrupts typical payment options (e.g., electronic payment instead of cash)?</li> <li>• Are the organization's pandemic influenza plans integrated with other key sector and cross-sector business continuity plans?</li> <li>• Does the organization participate with other stakeholders in public and private pandemic influenza planning and response training exercises?</li> <li>• Has the LDC integrated its plan with the local government's pandemic influenza response plan in relation to PPE, vaccine distribution, and other local health department planned actions?</li> <li>• How can the LDC's and municipal governments coordinate their planning efforts to ensure a reliable supply of products and services?</li> </ul>



## REGULATORY ISSUES

In response to an influenza pandemic, the government may provide direct support in the form of vaccines, antiviral medications, and personal protection supplies for essential workers; priority and clearances for a business' supply deliveries; on-site public safety and physical security augmentation. Indirect support may come from governmental relief such as waivers for key regulatory issues specific to a sector. However, companies should not count on possible regulatory relief and/or waivers in their pandemic influenza planning. Early discussions with regulatory officials can best identify issues needing to be addressed before an influenza pandemic.

### **ACTION** Identify Federal/State/local regulatory regulations that may affect your operations.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>Identify regulations that, if temporarily modified, would reduce impacts on critical functions, resources, and workers.</p> <p>Identify direct/indirect government support options you may need to remain operational.</p> <p>Coordinate possible direct and indirect support and specific regulatory constraints and relief options with your appropriate Federal/State/local officials and trade associations.</p> <p>Communicate potential relief actions in advance to workers, supporting entities, insurers, and customers.</p>	<ul style="list-style-type: none"> <li>Are there direct/indirect impacts on business operations that should be addressed, such as enacting temporary safety policies, and enhancing enforcement of existing regulations?</li> <li>What impacts could result from government response actions and cross-jurisdictional differences in response (e.g., quarantine, widespread or localized travel restrictions)?</li> <li>Are there temporary regulatory waivers to consider in sustaining essential operations (e.g., extended hours of service, adjusting routine inspection schedules, extending compliance deadlines, OQ regulation by DOT)?</li> <li>What temporary government actions (e.g., regulatory relief, financial or material assistance, or information) may help with continuity and delivery of essential services and functions?</li> <li>Have you coordinated with federal, local and state officials to raise awareness of possible regulatory relief and/or waivers that may arise during an influenza pandemic?</li> <li>Are there potential temporary worker and workforce regulatory challenges specific to pandemic influenza that should be considered?</li> </ul>

## IMPACTS FROM COMMUNITY DISEASE MITIGATION STRATEGIES

To reduce pandemic influenza impacts, Federal, State, and local governments, as well as private entities, may implement strategies, including voluntary isolation; voluntary home quarantine; school closures; and community and workplace social distancing. The public health and social distancing strategies may ultimately contain the disease and reduce the risk of infection and death, but they may generate significant costs for businesses. For more information on possible community mitigation strategies, see [www.pandemicflu.gov/plan/community/commitigation.html](http://www.pandemicflu.gov/plan/community/commitigation.html), particularly Appendix 4, and Section 3 of the *CI/KR Pandemic Influenza Guide*.

### **ACTION** Identify effects from mitigation strategies; take actions to reduce negative impacts.

✓	SUPPORTING ACTIONS	QUESTIONS TO CONSIDER
<input type="checkbox"/>  <input type="checkbox"/>	<p>Calculate effects of Centers for Disease Control's Community Mitigation Strategies (<a href="http://www.pandemicflu.gov/plan/community/commitigation.html">www.pandemicflu.gov/plan/community/commitigation.html</a>) on your company.</p> <p>Consider the need to separate the workforce, establish independent locations, and/or preserve a clean work site.</p>	<ul style="list-style-type: none"> <li>What effects will the strategies have on worker absentee rates (e.g., how will it affect your workers if schools/childcare facilities close for weeks at a time)?</li> <li>What are the costs associated with altering your sick leave policies?</li> <li>How can you survey employees to identify who may need to stay home, telework, or work an alternate schedule to care for children because they are dismissed from school/childcare?</li> <li>What workplace social distancing measures can you implement (e.g., work-at-home options, split working/meal shifts, remote monitoring, reduced travel, and increased use</li> </ul>



<ul style="list-style-type: none"><li><input type="checkbox"/> Determine the strategies that your State/community may/can employ.</li><li><input type="checkbox"/> Discuss with workers the potential impacts from strategies.</li><li><input type="checkbox"/> Familiarize yourself with your community's trigger points and the CDC's Pandemic Influenza Severity Index to determine the timing and use of mitigation interventions. For more information, see: <a href="http://www.pandemicflu.gov/plan/community/commitigation.html#IV">www.pandemicflu.gov/plan/community/commitigation.html#IV</a>.</li></ul>	<p>videoconferencing and teleconferencing)?</p> <ul style="list-style-type: none"><li>• Have you met with your local leaders on the timing of measures, alerts, and implementation they are considering for the community at-large as well as potentially for your business, and on the complementary triggers for your operational response?</li><li>• What are the demand changes to your company when schools and/or businesses close?</li><li>• Do you have plans and procedures to provide support and assistance to employee families?</li><li>• Have you compiled a list of employee contact numbers and email addresses to ensure communications during the pandemic influenza?</li><li>• Has your organization established call-in numbers where employees can uniformly receive updates from management on the current situation?</li><li>• Have you worked with local public health regarding the availability of antivirals or vaccines for staff members who perform critical functions?</li><li>• Have you considered contracting with a Pharmaceuticals Distribution Manager (PDM) to help manage the legal and logistical aspects of procuring, storing and distributing any PPE, hygienic products or vaccines that your organization secures?</li><li>• In the event of travel restrictions, have your critical facilities (e.g., refineries, storage tanks) and workers been issued travel authority to ensure continuity of operations?</li></ul>
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**For more useful pandemic influenza preparedness information, including a PDF copy of the complete *Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources*, visit [www.pandemicflu.gov](http://www.pandemicflu.gov) or email your questions to [dhspandemic@dhs.gov](mailto:dhspandemic@dhs.gov).**