National Petroleum Council

Summary of Study
Findings and Recommendations

Columbia University

March 4, 2015
# National Petroleum Council (NPC)

<table>
<thead>
<tr>
<th><strong>Origins</strong></th>
<th>Continuation of WWII government / industry cooperation</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>Sole purpose of NPC is to advise U.S. Secretary of Energy and Executive Branch by conducting studies at their request</td>
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<tr>
<td><strong>Organization</strong></td>
<td>A Federally chartered, self-funded Advisory Committee; not an advocacy group, does not lobby</td>
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<tr>
<td><strong>Membership</strong></td>
<td>Broad and balanced. Approximately 200 members from all segments of the oil and gas industries and many outside interests</td>
</tr>
<tr>
<td><strong>Study Participants</strong></td>
<td>Diverse interests and expertise relating to the topic being addressed</td>
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<td><strong>Study Reports</strong></td>
<td>All NPC advice is provided in reports approved by its members and is available to the public. Reports can be viewed and downloaded at no cost from the NPC website – <a href="http://www.npc.org">www.npc.org</a></td>
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Secretary’s Request

- What vulnerabilities have recent storm activity exposed in U.S. energy infrastructure?
- What legal, procedural, and physical gaps need to be addressed by industry and government to improve response to disruptions?
- What strategies should be pursued to increase energy system resilience to storms and other potential disruptions?
- What actions can be taken to address the interdependencies between oil and natural gas systems and other critical infrastructure?
**Overview of Study Scope**

*Enhance communication / interactions between Government (local, state, federal) and Industry to prepare for, respond to, and recover from emergencies (natural disasters)*

**DOE topics of interest:**

Actions by government and industry to improve their interactions to prepare for and respond to emergencies that can disrupt oil and natural gas supplies, e.g.:

- Institutional frameworks for improved communication and collaboration
- Education and Outreach.

Data, technologies, or other capabilities that are pivotal to:

- Understand the nature and severity of emergencies as these are identified and occur
- Assess damage to oil and natural gas infrastructure and system-wide impacts
- Support informed decision-making / actions to best manage and more expeditiously recover.

Legal, procedural, or physical challenges that can be addressed, or other strategies to improve emergency preparedness and resiliency, e.g.:

- Potential regulatory waivers, process for seeking / obtaining
- Support required for emergency supplies, resources (people, equipment) to speed recovery
- Policy changes to enable expeditious recovery in the fuel distribution system.

Strategies to address interdependencies among oil and natural gas and other critical infrastructure.

**Study areas:**

- **Oil, NGL, and Natural Gas Supply Chains**
  - Key insights / lessons from recent storms
  - Educate on supply chains, market dynamics
  - Identify inter-dependencies and strategies to address
    - Across each supply chain, between regions
    - Between O&G and other sectors (electricity, transportation, communications)
  - Delineate roles, capabilities, and needs (industry, government) during emergencies

- **Communications & Coordination** (industry with local/state/federal and, as needed, other industries)
  - Institutional frameworks for improved communication / collaboration
  - Clarify information needed before, during, after an event
  - Mechanisms to transmit information
  - Data, technologies, or other capabilities pivotal to decision-making
  - Outreach and education opportunities

- **Legal / Regulatory**
  - Actions, under existing laws, to facilitate protection and restoration of critical services, e.g.:
    - Antitrust limitations / implications; safe guards
    - Processes for seeking and obtaining regulatory waivers
    - Support required for emergency supplies, resources
  - Identify policy changes to enable expeditious recovery in the fuel distribution system.
EP Study Organization Structure

NATIONAL PETROLEUM COUNCIL

NPC STUDY COMMITTEE
Chair – Odum, Shell
Government Cochair – Poneman / Sherwood-Randall, DOE
Vice Chairs – Armstrong, Williams
– Heminger, Marathon Petroleum
– White, Lazard
Secretary – Nichols, NPC

COORDINATING SUBCOMMITTEE
Chair – Montana, Shell
Government Cochairs – Gant, Bryan/Roston, DOE
Secretary – Slutz, NPC

ANALYSIS & PLANNING SUBGROUP

COMMUNICATION & INFO MGMT
Robson, Marathon Petroleum

OIL & NAT GAS SUPPLY CHAINS
Rorick, API & Lawson, Williams

LEGAL & REGULATORY
Mares, RFF

Focus Area for Supply Chains

Crude, NGL, and Natural Gas Supply

Logistics  Manufacturing  Logistics

Retail

Consumer
Study Approach

Two main components:

• After-action reports from previous natural disasters were reviewed, and key findings and lessons from these reports were identified.

• Four engagement sessions were held to solicit thoughts, concerns, and advice on ways to improve preparation, response, and recovery in the event of natural disasters.
  
  – **Federal Government:** 40 participants from 8 Cabinet Agencies
  
  – **State Government:** 16 participants from 14 states (New Jersey, North Carolina, Ohio, Kentucky, Washington, Alaska, California, Arizona, Georgia, Louisiana, Virginia, Massachusetts, Texas, and South Carolina)
  
  – **Local:** 1 participant
  
  – **NGO:** 1 participant (American Red Cross)
  
  – **Utilities:** 4 participants (1 electric, 1 gas, 2 both)
  
  – **Oil and Gas Industry:** 34 participants (not including study team members)

In addition, the Oil and Natural Gas Sector Coordinating Council (24 trade associations) was engaged in the development of recommendations to address study findings.
Findings

⦁ Understanding of Oil & Gas Supply Chains is critical.

⦁ Improved Situational Awareness enables more effective response.

⦁ Effective Communication is a major challenge during emergencies.

⦁ Maintenance of Response Organizations should be a priority.

⦁ Leadership Commitment & Funding for continuous improvement is required to ensure a state of readiness.
Study Recommendations

• Operational Framework
  - Harmonize DOE’s emergency response team structure with the NIMS Incident Command System (ICS).
  - Leverage EIA’s subject matter expertise within DOE’s energy response team to improve supply chain situational assessments.
  - Establish company liaisons and direct communication between DOE’s energy response team to improve situational assessments.
  - Streamline and enhance processes for obtaining temporary regulatory relief to speed up recovery.

• Sustaining the Process
  - States should increase engagement with oil and gas industry in their energy assurance plans, and industry members should assist states in such efforts.
  - Both DOE and states should establish routine education and training programs for key government emergency response positions.
  - Both DOE and states should improve their comprehensive drill and exercise program and include industry participation.
Operational Framework

- **Harmonize DOE’s emergency response team structure with the NIMS Incident Command System (ICS).**
  - Adopt scalable model from Local / Regional / National – Stafford Act enacted or not
  - Develop DOE culture and knowledge of ICS

- **Leverage EIA’s subject matter expertise within DOE’s energy response team to improve supply chain situational assessments.**
  - Staff situation unit from EIA (most knowledgeable on industry supplies)
  - Develop situation assessment via two communication paths
    - Bottom up through government ICS structure (ESF-12 contact, PSAs, JFO, etc.)
    - Direct one-on-one communications and coordination with Industry Supply Chain Liaison / experts
  - Summarize overall fuel supply situation and cascading events and timelines
  - Aggregate industry support requirements
  - Support DOE continuing to assess and implement social media information gathering

- **Establish company liaisons and direct communication between DOE’s energy response team to improve situational assessments.**
  - For DOE ICS Liaison to gather one-on-one information prior to or during supply chain disruptions
  - Oil and Natural Gas Sector Coordinating Council (ONG SCC) to support DOE in maintaining two-way contact roster (regional / national)
  - Establish contacts in advance of emergency event
Operational Framework/Sustaining the Process

• **Streamline and enhance processes for obtaining temporary regulatory relief to speed up recovery.**
  - Develop best practice language and standardized templates for key temporary regulatory relief
  - Key improvements:
    - Improve existing EPA process for federal fuel waivers to reduce delays and decrease uncertainty
    - Identify CAA provisions/restrictions on EPA waiver authority that may create uncertainties that hinder response activities
    - Improve state fuel waiver processes
    - Improve Jones Act waiver process

• **States should increase engagement with oil and gas industry in their energy assurance plans, and industry members should assist states in such efforts.**
  - DOE / states to assess comprehensiveness of state energy assurance plans
    - States to increase industry involvement with plan development (Role for ONG SCC, trades)
    - Includes assessment of vulnerabilities and risk assessments of supply chains
    - Ensure resiliency considered in permitting process (i.e., gas vs. electric for natural gas compression)
    - Address interdependencies (cross-regional and cross-industry)
  - Industry to verify plans for ensured fuel supply and distribution points for first responders
  - Industry to ensure interdependencies are addressed in Business Continuity Plans
Sustaining the Process

- Both DOE and states should establish routine education and training programs for key government emergency response positions.
  - Use / maintain Oil and Natural Gas Industry Preparedness Handbook as a key reference
  - DOE and states to hold regular education sessions
    - Conduct annual refresher education on supply chains in advance of hurricane season
    - Leverage existing federal, state, local, and industry forums for education
    - Engage the correct level of decision-makers and stakeholders (e.g., local decision-makers)
  - DOE and states to establish Management of Change processes for key positions

- Both DOE and states should improve their comprehensive drill and exercise program and include industry participation.
  - DOE emergency preparedness program needs an assigned process owner
  - DOE with states to establish frequency and scope (local, state, and federal)
  - DOE to develop and implement a comprehensive drill and exercise program that fully tests their response plan to supply chain disruptions
    - Engage with other federal agencies and interdependent private sectors
    - Ensure right level participation (senior decision-makers, first responders, etc.)
    - Test understanding of roles, communications, priorities, interdependent infrastructure.
  - Industry to invite DOE participation in their drills and exercises
  - Adjust plans based on lessons learned from past drills/exercises and incidents
## Implementation

### Communications

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<tr>
<th>Activity</th>
<th>Timing</th>
<th>Responsible Parties</th>
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<tbody>
<tr>
<td>Communicate Study Findings, Recommendations and Implementation to Targeted Audiences</td>
<td>1Q’2015</td>
<td>NPC &amp; DOE</td>
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### Operational Framework

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<tr>
<th>Activity</th>
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<tr>
<td>Harmonize DOE’s Energy Response Team (ERT) Structure with the National Incident Management System</td>
<td>2Q’2015</td>
<td>DOE</td>
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<tr>
<td>Define EIA’s role in DOE ERT and Identify Resources to Fill Supply Chain Expertise</td>
<td>2Q’2015</td>
<td>DOE</td>
</tr>
<tr>
<td>Establish Direct Communication Between DOE ERT and Company Liaison Officers to Improve Situational Assessments</td>
<td>2Q’2015</td>
<td>DOE &amp; Industry</td>
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  - Establish Senior Industry Contact List with DOE                        |
| Support interagency processes for streamlining regulatory relief          | Ongoing| States, DOE, Industry        |

### Sustaining the Process

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<tr>
<th>Activity</th>
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<th>Responsible Parties</th>
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<tr>
<td>Increase engagement in state energy assurance plans</td>
<td>Ongoing</td>
<td>DOE, States, Industry</td>
</tr>
<tr>
<td>Establish Routine Education and Training Programs for Key Government Emergency Response Positions including a Management of Change process</td>
<td>4Q’2015</td>
<td>DOE/States</td>
</tr>
<tr>
<td>Conduct a Joint Exercise Before the End of 2015 that Tests Key Recommendations</td>
<td>4Q’2015</td>
<td>DOE &amp; Industry</td>
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Questions and Discussion


National Petroleum Council
Recommendation Graphics

BACK-UP SLIDES
Issue Management: Management of the cascading effects resulting from a single event

Incident Management: Management of response to a single event
Incident Command System (ICS)

**COMMAND STAFF:**
The Command Staff provides information, safety, and liaison services for the entire organization.

**PUBLIC INFORMATION OFFICER:**
A single person responsible for all interaction between Command and the media and who coordinates the release of information on the incident situation and response efforts from Command to the media.

**LIAISON OFFICER:**
A position that acts as the contact point for representatives of agencies and organizations assigned to the incident.

**GENERAL STAFF:**
The General Staff is assigned functional authority for Operations, Planning, Finance, and Logistics.

**OPERATIONS:**
- Develops strategies and tactics to carry out the goals and objectives set by Incident Command
- Executes the tactics in the field and directs resources
- Maintains span of control (Branches, Divisions, and Groups)

**PLANNING:**
- Responsible for collection, evaluation, dissemination, and use of incident information and maintaining status of assigned resources
- Information is needed to:
  1. Understand the current situation;
  2. Predict probable course of incident events;
  3. Prepare strategies, plans, and alternative strategies for the incident;
  4. Submit required incident status reports.

**FINANCE:**
- Manages financial, administrative, and cost analysis aspects of an incident
- Responsible for daily cost estimates

**LOGISTICS:**
- Responsible for providing facilities, services, and materials in support of the incident
- Manages communications
Interdependencies
(Dependencies)

- Identify and address in State Energy Assurance Plans
  - Involve various industries in plan development
  - Includes assessment of vulnerabilities and risk assessments of supply chains
  - Address interdependencies (cross-regional and cross-industry)
- Addressed in industry Business Continuity Plans
- Expand appendix in O&G Handbook to provide considerations and examples
- Enhance Drills and Exercises to test plans / interdependencies and priorities
- Prioritize / resolve through effective execution of ICS and NRF (Request for Assistance Process)
  - Joint Field Office focal point for resolving conflicts

**Process to resolve interdependency issues.**

- Federal government response with assistance to State and local authorities
- Joint Field Office focal point for resolving and acting upon RFAs
- Processing Paths
  - Primary path – Local and State Government Officials
  - Alternate – National Infrastructure Coordinating Center
  - Alternate – Established Relationships with Sector-Specific Agencies and ESFs