

U.S. DEPARTMENT OF
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National Energy Assurance Planning Conference

June 28–29, 2012



2012 National Energy Assurance Planning Conference

June 28–29, 2012

Gaylord Hotel and Convention Center, National Harbor, MD

After-Action Report

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U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability
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National Energy Assurance Planning Conference

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2012 National Energy Assurance Planning Conference

After Action Report

I. Purpose & Objectives

On June 28–29, 2012, the Infrastructure Security and Energy Restoration (ISER) Division within the U.S. Department of Energy (DOE)'s Office of Electricity Delivery and Energy Reliability (OE), in coordination with the National Association of State Energy Officials (NASEO), held the National Energy Assurance Planning Conference. The conference culminated three years of DOE's ongoing American Recovery and Reinvestment Act of 2009 (ARRA) State and Local Energy Assurance Program (SLEAP). SLEAP seeks to develop new—or refine existing—energy assurance and emergency preparedness plans, which contribute to the resiliency of the energy sector by focusing on the entire energy supply system.

This conference served as an important venue for State and local energy assurance planners to share experiences, learn from other stakeholders, and obtain insights from experts in the field on how to improve energy assurance planning. It also provided opportunities to recap the results of the program, partake in a wide range of discussions on energy assurance issues, and share ideas for continued improvements and sustainability of energy assurance at national, State, and local levels.

The conference agenda is included below as Appendix I. Additionally, conference presentations from the exercise can be found at <http://doe-oe-regionalexercises2011.govtools.us/National>.

II. Participants

The conference was attended by more than 250 people, including representatives from 46 States, Washington D.C., and Puerto Rico. There were also more than 30 localities represented. Participants represented Federal agencies, State energy offices, public utility commissions, State emergency management agencies, governors' offices, and local jurisdictions. In addition, representatives from the electricity, oil, and natural gas industries, as well as nonprofit organizations, were in attendance. A full list of attendees is in Appendix II.

III. Conference Summary

A. Welcome & Introductions

David Terry, Executive Director of NASEO, welcomed participants to the National Energy Assurance Planning Conference. In his brief remarks, he described the conference as the culmination of a series of four regional energy assurance exercises that were held as part of SLEAP.

Mr. Terry explained that during energy emergencies, the on-the-ground activities of industry, as well as State and local government, save lives and help return communities to normal operations. Yet, due to the increasing number of high-impact energy events, the Federal role in energy assurance planning has expanded. An important focus of this involvement has been to foster partnerships with State and local government. Stressing the importance of energy assurance planning, he stated that it is a team effort, requiring the involvement of Federal, State, local, and private-sector participants to be successful.

Mr. Terry then introduced Patricia Hoffman, Assistant Secretary for OE, who provided opening remarks. Assistant Secretary Hoffman thanked everyone for attending and provided participants with an overview of OE's organization and focus, which includes conducting research and development to modernize the power grid, providing technical expertise to support electric transmission development and siting activities, supporting infrastructure security, and carrying out other efforts to prepare U.S. energy infrastructure for continuing increases in energy demand.

OE is investing resources and expertise to advance technology and performance in all areas of electricity generation, transmission, and distribution. For example, OE is making investments to modernize the grid and mitigate impacts to our nation's energy infrastructure. This includes investments in transmission system upgrades, development and placement of sensors to enable wide-area visualization of the system, load management, distribution systems, outage management systems, and more. OE is also fostering development of micro-grids to optimize the portfolio mix of generation resources.

OE also provides technical assistance during energy emergencies. Timely and accurate information is critical during energy emergency events, and OE coordinates information at the national level and provides updated situation reports. The reports help stakeholders better understand the event and mitigate the impacts while aiding the overall response. As evidenced by SLEAP, OE supports planning, mitigation, and response efforts across stakeholder communities.

Finally, OE is increasingly involved in addressing cybersecurity vulnerabilities. The energy sector and Federal government need to build capabilities in this area to understand the cyber threat and plan for cyber attacks as much as it plans for natural disasters and other threats.

Assistant Secretary Hoffman asked participants to help OE by actively working together, in partnership with State and local government and the private sector, to help prepare our energy infrastructure for the future.

B. Keynote Address – Michael Daniel

In his keynote address, Michael Daniel, Special Assistant to the President and Cybersecurity Coordinator, focused on the Obama Administration's efforts to address the cyber threat. As part of its cybersecurity initiatives, the Administration is making grid security a top priority.

Mr. Daniel gave a special thanks to Assistant Secretary Hoffman and the OE team for their work in energy emergency preparedness. In particular, he thanked them for their work on the

*Electricity Sector Cybersecurity Capability Maturity Model.*¹ The maturity model was a pioneering effort that does not exist in other sectors; it is serving as a template for public-private approaches to addressing cybersecurity in other sectors. Moreover, smart grid investments are helping to address both performance and security issues, while promoting collaboration between owners and operators for grid security.

C. Energy Assurance Lessons Learned from Planning and Exercises

Alice Lippert, Senior Technical Advisor to OE, welcomed attendees and provided a review of major activities performed since launching SLEAP. Ms. Lippert has managed the grant program since its inception in 2009.

Included in activities State and local governments participated in was a series of regional energy assurance exercises held throughout 2011. The exercises were as follows:

- Southern Regional Energy Assurance Exercise – *Red Earth*, Raleigh, NC, March 2011
- Northern Regional Energy Assurance Exercise – *Amber Borealis*, Boston, MA, June 2011
- Midwestern Regional Energy Assurance Exercise – *White Prairie*, Chicago, IL, August 2011
- Western Regional Energy Assurance Exercise – *Red Wave*, Phoenix, AZ, November 2011.

These events were designed to help States comply with the requirement to participate in an interstate exercise. Each included informational presentations and panels to educate participants on topics that included interdependencies, cybersecurity, and Federal authorities. Each exercise also featured energy emergency scenarios to help participants work through a situational assessment and examine the capabilities of their plans and response measures. The scenarios included man-made disasters and regionally specific natural disasters, including droughts, winter storms, hurricanes, and solar events. The exercise scenarios were intense; in both large group sessions and breakouts, participants worked through a large number of emergency events to determine how they would respond. Each exercise had strong participation from State and local government and industry, and they generated a number of lessons learned for participants in each region.

Jeff Pillon, Director of Energy Assurance at NASEO, reviewed lessons learned that had been collected since the start of the grant program, as well as the key elements learned across each of the exercises. These takeaways include the following:

- **Communications** – Know who the key points of contact are and establish relationships in advance of emergencies; have robust communication technologies and protocols in place; and develop plans for communicating with the public.

¹ The Electricity Subsector Cybersecurity Capability Maturity Model (ES-C2M2), U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, May 2012.
<http://energy.gov/oe/services/cybersecurity/electricity-subsector-cybersecurity-capability-maturity-model>

- **Interdependencies** – State and local governments need to understand energy industry interdependencies and prepare for them; this will improve recovery time.
- **Roles & Responsibilities** – Plans should clearly define roles and responsibilities.
- **Collaboration & Coordination** – Federal, State, and local government and the private sector need to work together, share information, and communicate effectively in both preparation and response.
- **Resource Allocations** – Identify and establish resource priorities and maintain strong situational awareness so allocations can be made effectively if and when they are needed.

Mr. Pillon asked participants to understand and plan for risks while recognizing that political decisions may be a factor as plans are implemented. State and local governments must be prepared to adapt to the particulars of the situation and plans must be flexible. Understanding the interdependencies between the energy sector and other sectors is critical to help avoid unintended consequences. To understand the consequences that response decisions and actions can have on the energy sector, one must work with other sectors and State agencies. It is recommended that each State and locality review their Energy Assurance Plans with industry and other agencies and offer them an opportunity to provide input to help ensure that plans are coordinated.

Ms. Lippert provided participants with a few key takeaways, including the recommendation to incorporate State Energy Assurance Plans into State Emergency Response Plans. Additionally, respondents need to be flexible and adaptive to a wide range of potential emergencies and response requirements. State and local governments must analyze and assess each situation and then adapt their response to that situation. Communication with stakeholders is critical to energy assurance planning and response. Finally, Ms. Lippert recommended that States and localities regularly review and implement lessons learned.

D. Successful Approaches in State Energy Assurance Planning

Objective: *A State government panel highlighted energy assurance methods and innovative planning elements that have been successfully incorporated in State Energy Assurance Plans.*

Moderator: Jeff Pillon, Director of Energy Assurance, NASEO

Panelists:

- Regina Erales, Reliability and Emergency Management Coordinator, State of Texas
- Robert Mielish, Energy Assurance Program Manager, State of North Carolina
- Duane Fournier, Utilities Regulation Engineer, State of Iowa
- Mark Anderson, Senior Energy Policy Advisor, State of Washington
- Pat Bersie, Emergency Preparedness Planner, State of Utah

Discussion

State panelists discussed many positive impacts resulting from SLEAP and stressed the desire to continue energy assurance efforts after the grant program is completed. Panelists stressed the

importance of establishing relationships across agencies, in the energy sector, and with local government.

The State panelists recommended integrating Energy Assurance Plans with other agencies and sectors, such as transportation, and agriculture. Having these agencies involved in exercises can be beneficial.

Some States were able to build off of capabilities and lessons learned from past events, such as the 2002 Olympics in Utah. In Washington, the Energy Supply Tracking System and the geographic information system (GIS) developed by the State with grant funds proved to be very beneficial during the major winter storms in 2011. Other States, including North Carolina, used the grant funding to develop a comprehensive fuel distribution picture for the State, including the locations of fuel stations that help in situational assessment and response.

The State of Iowa created an ‘energy assurance roundtable’ with multiple agencies and sector participation. Utah integrated its Energy Assurance Plan with the overall State energy plan. The point was made that due to potentially frequent leadership changes, continuity is an important aspect to consider, and States must conduct regular training to keep leadership and staff apprised of energy assurance.

In Texas, exercises proved to be very valuable. One important outcome was a realization of the need for the oil and gas industry to better understand the electric power sector and vice versa. The State Energy Office started “Oil and Gas 101” and “Electricity 101” courses to help industry learn more about the other sectors.

Because State agencies often need sensitive information during an energy emergency, it is important to determine how to protect sensitive private-sector data on critical infrastructure. Some States have been able to protect this data through a Memorandum of Understanding. Other States have exceptions under their Freedom of Information Act. However this is handled, developing trusted relationships and collaboration is vital.

Another key lesson discussed was the importance of developing and implementing procedures, templates, and other resources ahead of any actual emergency. Some States have gotten helpful ideas by reviewing the plans and procedures from other States.

Many State participants explained that cybersecurity and information security were important learning elements from the SLEAP grant and regional exercise. States are investigating further to determine how they can build a better capability in this area.

EXAMPLES OF EFFECTIVE APPROACHES IN STATE ENERGY ASSURANCE PLANNING

- **Utilize State Energy Offices as *connectors*.**
 - They can help build relationships to implement plans.
- **Coordinate Energy Assurance Plans with other State plans (e.g., EOPs and hazard mitigation plans).**
 - Reduces conflicting roles and procedures.
- **Modify plans based on lessons learned after energy disruption events.**
- **Build templates and procedures for communications and information requests ahead of time to save time and paperwork during an actual event.**
- **Invite the private sector to participate in both planning and exercise design.**
 - Opens dialogue and provides a clear value proposition for both parties.
- **Gather proprietary information on critical energy infrastructure, which requires established *trust and security*.**
 - Establish memoranda of understanding (MOUs) with State homeland security offices to help protect information.
 - Make use of the U.S. Department of Homeland Security (DHS) [Protected Critical Infrastructure Information Program](#).
- **Work with State fusion and information-sharing and analysis centers.**
- **Consider geo-based outage tracking services, which can take situational awareness to the next level.**

E. Successful Approaches in Local Energy Assurance Planning

Objective: *This session focused on local Energy Assurance Plans and highlighted best practices that have been used by local governments.*

Moderator: Ronda Mosley, Deputy Executive Director for Research and Government Programs, Public Technology Institute

Panelists:

- Michael Licata, Emergency Management Director, Windham, Connecticut
- Josh Human, Director of the Center for Hazards Research and Policy Development, University of Louisville
- Lori Herrick, Energy Management Administrator, Virginia Beach, Virginia

Discussion

Virginia Beach, Virginia, has seen positive results from SLEAP, including increased communication within the State. For example, Virginia Beach is working with other localities and collaborated with the State government to expand the grant program's overall impact. They conducted an assessment of generator availability, location, and operability; identified generator needs and held an annual meeting on them; and tested communications. The grant provided value by integrating a local perspective into energy assurance planning activities.

Louisville, Kentucky, performed a gap analysis and integrated its Energy Assurance Plan into other local plans, such as its emergency operations plan. Louisville listed and evaluated critical energy assets and will now expand the facility list to identify the most critical assets and develop worksheets for each. The city held a summit and table-top exercise and began working with first responders to identify fuel prioritization, which was a key outcome of the table-top exercise. The city is currently looking into a Web-based emergency operations center and developing a means to integrating information into one system.

Through its ARRA grant, Wyndham, Connecticut, became a coordinating entity for several jurisdictions in the region. The area was severely impacted by Hurricane Irene, which was followed by an intense early-season snow storm. These events demonstrated the need for better Emergency Support Function (ESF)-12 preparations. The city has made significant improvements in the communications field, with a specific emphasis on energy and interdependencies.

EXAMPLES OF EFFECTIVE APPROACHES IN LOCAL ENERGY ASSURANCE PLANNING

- **Examine assets, capabilities, and risks in assessments of mission-critical facilities.**
 - Reveals gaps that can provide the business case for additional funding.
- **Coordinate energy assurance plans with State plans and other cities.**
 - Team with adjacent towns to coordinate planning.
 - Integrate data from the local Energy Assurance Plan into State emergency operations centers and ESF-12 functions.
 - Use State Emergency Operations Plan and Energy Assurance Plan as a template.
- **Coordinate generator maintenance, testing, and fuel delivery across responsible agencies.**
 - Identify characteristics of each generator and repair/replacement priorities prior to capital improvement requests.
 - Determine which critical operations depend on each generator.
 - Examine generator contracts for a single point of failure (e.g., one contractor).
- **Coordinate during an event, which is just as critical as relationship building before one.**
 - Enables effective prioritization of critical facility restoration, which can speed power line repairs, for example.
- **Coordinate during planning and exercises; this reveals previously unknown capabilities of local partners and options to leverage them.**

Open discussion on generators highlighted the U.S. Army Corps of Engineers as a good resource for information on generators. Many of these resources are located on its website.² The supply chain for generators and whether or not supply could be sustained during an emergency were highlighted as areas that are frequently overlooked during planning. Companies supplying generators may not have the resources to fulfill requirements during a major event.

² <http://www.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/219/Article/93/emergency-power.aspx>

F. Private Sector Energy Assurance Initiatives

Objective: *This session highlighted energy-sector planning efforts in coordination with State and local governments.*

Moderator: Joanne Shore, Senior Operations Research Analyst, Office of Policy and International Affairs, DOE

Panelists:

- Fred Walas, Fuels Technology Manager, Marathon Petroleum Company
- Doug Belden, Vice President and General Manager of Operations, Colonial Pipeline Company
- Tom Bowe, Executive Director Reliability and Compliance, PJM Regional Transmission
- Keith Alexander, Emergency Operations Coordinator, Louisville Gas and Electric
- Caryn Bacon, Director of Emergency Preparedness and Business Continuity, PEPCO Holdings

Discussion

The interface between government and industry is critical. Government depends on industry for data to perform situational assessments, and industry depends on government to provide the status of the sector at large.

An important issue facing industry is high turnover. Institutional memory and lessons learned from past emergencies can be lost. Strong planning and collaboration will help offset the impacts of turnover.

Panelists discussed the most important energy assurance problems that need to be addressed, including the following:

- Educating political leadership so they can make informed decisions.
- Improving preparedness for cyber threats. In the electric sector, the DOE/OE maturity model is proving to be very valuable.
- Public preparedness must be improved, as most end use customers expect electric power to be restored within six hours. The general public does not understand the challenge of restoring power and are not prepared for long-term outages.
- Planning is critical. Response plans need to empower employees to perform their responsibilities in an emergency—even if communications are down.
- Credentialing to gain access to impacted areas for restoration efforts continues to be an issue.

Pipelines have removed facility location information from websites and have restricted pinpoint data to avoid them from getting into the wrong hands. It is important, however, to make sure that the right people can access this important information when needed. One possibility could be for industry to work with fusion centers to share information. Trust needs to form between emergency management and the private sector. Industry panelists also described how they have

responded during energy supply disruptions. Mr. Walas explained that Marathon will coordinate with the American Petroleum Institute (API) when anticipating a supply issue. The company will also work with DOE and the U.S. Environmental Protection Agency (EPA) if it expects to request waivers.

Mr. Belden of Colonial Pipeline noted the company’s highly interconnected pipeline system that runs from the Gulf Coast to the Northeast through 27 different power company suppliers. Colonial tries to maintain relationships with those companies to prepare for emergencies and facilitate restoration efforts. It also brings local-level first responders to visit its facilities and performs one to two local drills each year, which helps involved stakeholders gain an understanding of roles and responsibilities. This year’s drill, for example, will be held in conjunction with the U.S. Coast Guard.

EXAMPLE ENERGY ASSURANCE ACTIVITIES IN THE PRIVATE SECTOR

- **Conduct local drills to help cities understand pipeline capabilities and clarify roles and responsibilities.**
- **Leverage industry information.**
 - Agency turnover means that industry may have more historical knowledge than States.
 - Work with multiple States and have regional situational awareness to help inform States in an emergency.
- **Educate city, county, and State officials on private-sector operations, capabilities, and interdependencies to manage expectations and develop effective responses.**
- **Communicate with customers before an expected outage (e.g., severe weather), if possible, to manage expectations and share safety information.**
- **Ensure that fuel contracts are guaranteed supply contracts.**
 - Contractors may be “spot purchasers,” buying fuel at the lowest price; these customers are the first to be cut off from available supplies.
- **Increase cybersecurity planning; industry has limited experience in responding to *major* cyber attacks.**
 - Plan for multi-phase, multi-sector attacks.
 - Recognize interdependencies: an attack on the communications infrastructure equals an attack on the power infrastructure.
- **Plan, drill, evaluate, learn, repeat.**

Mr. Alexander of Louisville Gas and Electric stressed the importance of coordination and relationship building. Due to high rates of turnover, there is a need to constantly develop relationships with new emergency managers. Ms. Bacon of Pepco explained the importance of sustained preparedness. The key aspects of sustained preparedness include maintaining lists of critical facilities and building and maintaining relationships, and drills & exercises. The Mutual Assistance Program is a valuable tool in moving resources where they are needed. Pepco also emphasized the importance of educating local leaders on the electric power sector.

Mr. Bowe discussed how his company, PJM Interconnection, has Unity of Command. The company will establish priorities and re-dispatch personnel as needed. It also has robust

procedures and technologies, an emergency operations manual, and templates that use common language. The company also performs regular training and semi-annual emergency drills.

G. Keynote Address- Richard Reed

Richard Reed, Vice President of Preparedness and Resilience Strategy at the American Red Cross, delivered the keynote luncheon address for the Conference. Each year the Red Cross responds to thousands of natural and man-made disasters such as hurricanes, floods, hazardous material spills and other emergencies. The Red Cross is at the front line of providing direct assistance to citizens affected from these events. Energy supplies are critical to the responses services they provide and the restoration of energy services directly impacts the length and nature of their response activities. Mr. Reed provided real-world examples of the impact of energy assurance in Red Cross response measures and the importance emergency preparedness in general as well as the importance of energy assurance planning as a component of emergency preparedness.

H. Infrastructure Interdependencies & Building Community Resiliency

Objective: *This panel discussed infrastructure interdependencies and the need to incorporate energy assurance into “whole community,” all-hazards resiliency planning.*

Moderator: Paula Scalingi, President, The Scalingi Group

Panelists:

- Lenny Sharpe, Manager of Business Continuity, Target Corporation
- J. Alan Roberson, Director of Federal Relations, American Water Works Association
- John Contestabile, Assistant Program Manager for Homeland Security, John Hopkins University
- Prudence Parks, Director of Government Affairs and Legislative Counsel, Utilities Telecom Counsel

Discussion

The Infrastructure Interdependencies and Building Community Resiliency panel addressed the wide-ranging interdependencies between the energy sector and other sectors. It stressed the importance of incorporating the “whole community” and integrating energy assurance planning into broader homeland security planning. As with State, local, and private-sector participants, these panelists highlighted the importance of building relationships and developing processes and procedures for sharing information which is critical to getting the data needed to perform a situational assessment.

APPROACHES FOR ADDRESSING INTERDEPENDENCIES IN ENERGY ASSURANCE PLANNING

- **A cross-agency/cross-State process that involves input from cities, counties, nonprofits, and industry can clarify, validate, and improve emergency planning.**
- **Risk assessments of critical assets conducted with utilities can reveal unknown or unforeseen interdependencies.**
- **Preparedness and response efforts need to expand as the event becomes more complex.**
- **A better understanding among the public and policymakers about how the energy sector works is needed to inform responses that addresses interdependencies.**
- **Know which operations are powered by backup generation and which sectors could be disrupted by power outages.**
 - Do generators power all critical functions at a facility? For how long?
 - Do highly interdependent sectors (e.g., water and transportation) have the backup power needed to continue operating? If so, for how long?
- **Plan for disaster preparedness with a community engagement team.**
 - Engage police, emergency responders, healthcare workers, energy organizations, and non-traditional businesses to plan for disasters.
 - Test interoperable communications between the private sector and local responders.

As events increase in complexity and scope, the number of organizations involved also increases. Many of these organizations are not well prepared for emergency response, nor do they have the resources to participate in emergency exercise. For example, the American Water Association explained that there are more than 53,000 water utilities in the United States. Many of these are small companies with minimal resources available for analyzing interdependencies and emergency response, although they are highly interdependent with other sectors.

Private-sector companies, such as retailers and the food services industry, need accurate information on energy outages to support their planning and response. For example, retailers will not supply a store with perishable goods if they know power could be out for an extended period of time. On the other hand, certain retail outlets are a key component in recovery, serving as providers of ice, bottled water, generators, and other supplies, and they will be replenished to the degree possible to aid the community during an energy disruption. Retailers like Target coordinate with the Federal Emergency Management Agency (FEMA) to understand the impact of major events and determine if and how they can help in the recovery.

I. Table-Top Exercise

A major element addressed at each of the four regional energy assurance exercises held in 2011 was helping participants walk through a series of energy emergencies specific to their region. Participants spent considerable time in both plenary and breakout sessions working through the consequences of the emergencies and identifying their response measures and actions.

As part of the National Energy Assurance Planning Conference, a table-top exercise was designed to provide participants with a national-level energy emergency. Facilitated discussions were held within the plenary rather than in separate breakout sessions so that participants would benefit from hearing the perspectives of all States and localities in attendance, as well as industry and the Federal government.

The multi-stage energy emergency scenario for the table-top exercise focused on a hypothetical situation involving increased tensions in the Strait of Hormuz, which, in turn, impacted oil supplies and increased prices. The second stage of the scenario included tanker explosions that exacerbated price impacts and concern over supply uncertainties.

Through facilitated discussion, participants at the conference deliberated how their organizations would evaluate and respond to the situation, and their own level of preparedness.

When State and local organizations were asked the actions they would take in response to these events, participants indicated that they would do the following:

- Track retail and wholesale prices
- Project the impacts of potential shortages and identify contingency plans
- Monitor inventories for petroleum products and crude oil
- Provide updates to their Governors' offices
- Contact utilities to evaluate adequacy of coal, natural gas, and other energy supplies, and the near-term ability to withstand a potential petroleum shortage
- Increase security at ports, airports, and fuel-storage depots
- Check their Energy Assurance Plans for guidelines and take actions as appropriate and provided for in the plan
- Review Energy Assurance Plans for guidelines on communications
- Educate the public on taking conservation measures (some participants feared that too much public outreach could cause panic).

Because of the severity of the petroleum shortage under this scenario, States were asked to identify contingencies they had in their plans to manage supplies to meet essential public safety and other critical emergency needs. States identified the following contingencies:

- Sixteen States use State Petroleum Set-Asides that set aside a percentage of monthly fuel supplies to be allocated to priority needs.
- Ten States have identified priority end users designated by an emergency declaration to receive current fuel requirements, which are typically public safety and recovery efforts.
- Five States have contracts for emergency fuel supply, which can be developed for State and local governments to provide additional fuel in a disaster.
- Three States manage fuel in storage and develop and maintain additional fuel inventories as emergency reserves.
- Few States have maximized use of alternative-fuel vehicles for priority needs.

The discussion suggested State fleets are an area that some States may wish to more fully address in their plans.

Federal participants provided examples of Federal agency responses, including the following:

- Federal government would be collecting and evaluating information for situational assessment, as well as providing information to the public.
- DOE would be providing other agencies with a situational assessment, conducting due diligence regarding regulatory waiver requests, if requested, and coordinating with other agencies on response actions.
- As part of its situational assessment, DOE would be contacting industry, obtaining data on refinery inventories, assessing fuel supplies, and determining if there was a need to use supplies from the Strategic Petroleum Reserve. This may involve loaning crude oil to refineries in exchange for replacing supplies later or issuing a sale of crude oil, if warranted.
- DOE would be coordinating with the International Energy Agency (IEA).
- FEMA's focus would be on identifying possible cascading impacts and interdependencies.
- It is very unlikely that the Federal government would get involved in fuel markets, supply allocations, or price controls.

When asked if Energy Assurance Plans do address a situation like the one presented in the scenario, the majority of participants indicated that theirs do. Many plans outline the steps to take and contacts to initiate in such an event. Others have established thresholds for when and how to respond. For example, if the emergency could impact 5%–10% of jurisdictional supply, the situation would be monitored. If a higher level of supply is impacted, increased action would be taken. Participants felt as if they were more prepared to address this type of emergency as a result of the energy assurance activities they have implemented over the past two years.

J. Keynote Address – Hank Kenchington

Hank Kenchington, Deputy Assistant Secretary for Research and Development at OE, opened Day 2 of the conference with an update on the progress of smart grid deployment and demonstration activities funded under ARRA, and the strategies that will help to sustain those efforts when Recovery Act funding ends. By 2015, the total combined cost-shared investment in smart grid ARRA projects will be \$7.9 billion, and project leads have already spent about half on technology deployment and demonstration with promising results. But DOE recognizes that this investment would be only a small fraction of the total amount needed to transition to smart grid; simply funding technology development wouldn't make a lasting impact.

From the outset, DOE developed a holistic approach to smart grid development that focused ARRA investments on technology deployment and demonstration, interoperability standards, workforce development, transmission planning, and enhancing state and local energy assurance. By taking a holistic approach to removing barriers to smart grid technologies and deployment within the sector, DOE is helping to build a platform for sustained investment well beyond the ARRA projects.

OE is now beginning to collect data on smart grid program results to help utilities build a business case for future investments. For example, though advanced metering demonstration projects are still early in deployment, some utilities are showing peak load reduction of more than 40 percent, average customer savings of \$200, and reduced outage time following storms.

To continue the momentum in this area, DOE continues to support needed standards development activities and peer-to-peer workshops across the country to share best practices and lessons learned. New projects will also make smart grid data meaningful for the average consumer. Examples include the Green Button Initiative, which provides an interoperable tool that allows customers to view home electricity usage data on their computers, and an "Apps for Energy" challenge that encourages developers to design applications that make this data useful and understandable to the average consumer.

K. Sustaining Energy Emergency Preparedness

Objective: *This panel discussed steps State and local governments needed to take in order to sustain plans and outlined specific efforts to achieve this goal.*

Moderator: Glen Andersen, Director of the National Conference of State Legislatures Energy Program

Panelists:

- Mike Kenel, Homeland Security Specialist, Michigan Public Service Commission
- Jan See, Energy Assurance Manager, Arizona Governor's Office of Energy Policy
- Kevin Kille, Emergency Planner, Delaware Emergency Management Agency
- Leslie Luke, Program Manager, San Diego Office of Emergency Services

Discussion

A concern among SLEAP grantees is the ability to sustain energy assurance efforts once the SLEAP grant program is complete. Panelists discussed their efforts to build sustainable energy assurance activities.

Increasing communication and education on the importance of energy assurance is one method for sustaining awareness. Newsletters, blogs, websites, and social media are all tools that can inform others on energy assurance and build a wider base of people knowledgeable about its importance.

The ability to provide for ongoing training is important to sustain the energy assurance capability. Mr. Kenel from Michigan mentioned that they developed a short interactive training program that is available on a CD and can be used to train new staff.

SUSTAINING PREPAREDNESS

- **Educate the public on energy assurance measures through various media: newsletters, blogs, Facebook pages.**
- **Make energy assurance capabilities an intentional part of staff development and promote them to management.**
 - Make EA training and exercise development a job description of someone on staff.
 - Develop concise, creative exercises that promote retention (e.g. 30-minute online courses, “treasure hunt” questions that require using WebEOC to respond).
 - Ask at annual evaluations: How have you contributed to EA goals and emergency management?
- **Use predictive analysis to obtain new insight into risk management and battle uncertainty.**
- **Leverage Threat and Hazard Identification for Risk Analysis (THIRA) program to assess risks and use identified gaps as a foundation for future funding.**
 - Put priorities in place regardless of budget.
- **Convene a Lifelines Emergency Coordination Group to help develop energy emergency procedures that address multiple interdependencies.**
 - Build partnerships with other agencies that can attract funding which meets mutual goals.

Outreach to a larger and more diverse partnership base with other sectors will help sustain energy assurance planning. For example, Arizona’s Governor’s Office of Energy Policy is reaching out to the transportation sector to encourage fuel diversity and promote energy assurance being built into transportation planning. Educating decision-makers on the economic impact of energy emergencies can help them understand the importance of making energy assurance planning a priority within their State or locality.

L. Moving Plans to Actions that Build Energy Resiliency

Objective: *This session discussed State and local actions and plans to reduce the risks of energy disruptions by mitigating vulnerabilities and working with the private sector to build a resilient energy infrastructure.*

Moderator: Miles Keogh, Director of Grants and Research, National Association of Regulatory Utility Commissioners (NARUC)

Panelists

- Thom Pearce, Ohio Public Utilities Commission and Chair of NARUC Staff Subcommittee on Critical Infrastructure
- Robert A. Amato, Director of Energy Generation, Transmission, and Distribution, Kentucky Department of Energy Development and Independence
- Dan Stowers, Planning Director, Georgia Emergency Management Agency
- Robbin Dunn, Public Works Program Coordinator, City of Davenport, Iowa

Discussion

Ohio is taking an iterative approach for moving its Energy Assurance Plans into action. State-level energy officials have participated in multi-State regional energy assurance exercises, are working to maintain emergency operations centers, and are increasing their contacts across relevant organizations. They recognize the need to do more information sharing, as well as develop and share resource lists with other States and industry.

Mr. Amato of Kentucky stated that maintaining relationships with industry has helped significantly in managing disruptions and lessening the impact of those disruptions. The State has organized classes on energy emergencies involving various levels of crises, and it has involved cabinet-level appointees in those classes. They are developing methods to respond to cybersecurity concerns, although the State does not have the resources to mitigate all cybersecurity concerns.

The Georgia Emergency Management Agency and the Georgia Environmental Office have increased collaboration as part of the energy assurance planning effort. Together they are working to accomplish several objectives, including establishing a communications network, updating the State energy profile, drafting an Energy Assurance Plan, exercising the plan, developing a common operating platform to display energy production and distribution in a GIS format, and communicating interdependencies.

The City of Davenport, Iowa, engaged greater Scott County at the onset of this program. They are performing a gap analysis and will use a ratings matrix to identify priorities for funding. They have already identified communication, information sharing, and consistent messaging needs as a result of the Midwestern regional exercise.

MOVING FROM PLANS TO ACTIONS THAT BUILD ENERGY RESILIENCY

- **Leverage fusion centers and information-sharing working groups to share information between the State/Federal government and private sector to reduce risks.**
- **Maintain personal relationships; which takes time for all concerned but helps ensure better situational awareness and speeds recovery during an event.**
 - Operate in a continuous state of monitoring. Communicate constantly with energy producers and providers.
- **Update the State's energy profile to accurately reflect how energy is produced, transmitted, and distributed.**
 - Develop a common platform that displays this profile across the State and identifies interdependencies before and during an event.
- **Conduct direct outreach and education to emergency preparedness partners in other Emergency Support Functions.**
 - Don't plan in a vacuum. Incorporate the Energy Assurance Plan into State EOP to raise the importance of energy assurance policies and procedures with partners.
- **Response to cyber disruptions follows the State's all-hazards approach, but cyber risk mitigation requires close coordination with security experts in the energy industry and Federal government.**

M. Open Discussion

Over the course of the one-and-one-half-day conference, several themes became apparent in regard to successful energy assurance planning and implementation, including the following:

- Developing good communication protocols to improve effectiveness of Energy Assurance Plans and operations
- Forming established and trusted relationships so plans can be implemented effectively
- Managing turnover and learning from past events as part of a continuous approach to planning, drills, evaluation, and updating procedures
- Reviewing contracts and authorities during energy assurance planning to ensure that they work as expected in an emergency
- Knowing backup assets and capabilities that can inform restoration priorities and prevent surprises during an emergency
- Using cross-agency and cross-sector planning to reveal and plan for interdependencies.

In addition, an open discussion was held on the challenges to, and strategies for, sustaining momentum in energy assurance planning. A key challenge is the fact that energy assurance planning is competing for resources and attention with numerous other priorities across State and local governments.

To overcome these challenges, participants identified a number of different options:

- Continue the partnership between DOE and NASEO to hold an annual regional exercise on a rotating basis and a national exercise every two years
- Institutionalize energy assurance planning throughout all State planning so that it becomes a matter of procedure
- Establish a link between the Energy Assurance Plans and energy goals within the State
- Link Energy Assurance Plans with ESF-12 functions and better engage with industry
- Develop and use listserv distribution lists to find out how others are performing energy assurance, share lessons learned, and foster collaboration
- Communicate the cost of energy outages to decision makers and how better preparedness can help mitigate these economic impacts
- Involve key stakeholders from the community, local businesses, nonprofits, and others to validate Energy Assurance Plans

- Integrate emergency management and energy assurance into curricula.

SUSTAINING ENERGY ASSURANCE CAPABILITIES

- **Review plans and update every one to two years.**
 - The Governor could issue an executive order to maintain the plans and capabilities. Public Utility Commissions could also take corresponding actions.
- **Require annual updates to State, local, and energy industry contact lists.**
- **Reference the plan in the State’s emergency response plans and part of any ESF-12 Annex.**
- **Include energy assurance-specific duties in position descriptions of staff with those responsibilities.**
- **Require training for new staff and periodic refresher training for existing staff.**
- **Hold annual energy exercises in States, and, if possible, multi-State regional exercise every other year.**

Participants commented on how SLEAP has made a difference in their organizations and jurisdictions. Examples include the following:

- *Arizona* – It helped in developing communications with utilities and improved information sharing.
- *City of Durango, Colorado* – It helped city officials discover how to obtain various types of fuels in an emergency situation; a gap analysis discovered the need for backup power in the sewage system.
- *Iowa* – It helped in the development of relationships and mutual respect among agencies.
- *New York* – It improved communication within State government and coordination with the energy industry.
- *Pennsylvania* – It helped to improve communication and coordination with other State agencies and stakeholders that may not have occurred otherwise.
- *Utah* – It provided resources for a public education campaign (i.e., radio announcements and wraps on buses) and a joint radio announcement with industry. These announcements likely reached two-thirds of the State’s population. Also, it helped to identify interdependencies between ESFs and led to better overall coordination.
- *Washington* – It enabled the State to perform a feasibility study and developed an outage tracking system.

IV. Conclusions & Path Forward

Jeff Pillon and Alice Lippert closed the conference by providing final remarks. In her final remarks, Ms. Lippert stressed the accomplishments of SLEAP recipients over the past three years. They have developed Energy Assurance Plans, outage-tracking mechanisms, State and local energy profiles, and communication protocols. They have participated in energy assurance exercises both at the State and regional levels.

This is the end of one chapter in energy assurance planning and the beginning of another. Now, States and local government participants working together and collectively can apply the capabilities they have developed and implement their planning activities as they move forward. Both DOE and NASEO will continue to support future State and local government energy assurance planning efforts.

Appendix One – Conference Agenda

Thursday, June 28, 2012	
7:00 a.m. – 8:00 a.m.	Conference Registration and Continental Breakfast
8:00 a.m. – 8:30 a.m.	Welcome and Opening Remarks <ul style="list-style-type: none"> ▪ Welcome and Introduction – David Terry, Executive Director, National Association of State Energy Officials ▪ The Honorable Patricia Hoffman, Assistant Secretary, Office of Electricity Delivery and Energy Reliability, U.S. Department of Energy
8:30 a.m. – 8:45 a.m.	Keynote Kick-Off <ul style="list-style-type: none"> ▪ Michael Daniel, Special Assistant to the President and Cybersecurity Coordinator, Executive Office of the President
8:45 a.m. – 9:00 a.m.	Energy Assurance Lessons Learned from Planning and Exercises <ul style="list-style-type: none"> ▪ Alice Lippert, Senior Technical Advisor, Office of Electricity Delivery and Energy Reliability, U.S. Department of Energy ▪ Jeffrey Pillon, Director of Energy Assurance, National Association of State Energy Officials
9:00 a.m. – 10:00 a.m.	Successful Approaches in State Energy Assurance Planning <i>A State government panel will highlight energy assurance methods and innovative planning elements that have been successfully incorporated in State Energy Assurance Plans.</i> Moderator: Jeffrey Pillon, Director of Energy Assurance, National Association of State Energy Officials <ul style="list-style-type: none"> ▪ Regina Erales, Reliability and Emergency Management Coordinator, Public Utility Commission of Texas ▪ Robert Mielish, Energy Assurance Program Manager, North Carolina State Energy Office ▪ Duane Fournier, Utilities Regulation Engineer, Iowa Utilities Board ▪ Mark Anderson, Senior Policy Advisor, Washington Department of Commerce ▪ Pat Bersie, Emergency Preparedness Planner, Utah Department of Emergency Management
10:00 a.m. – 10:15 a.m.	Networking Break
10:15 a.m. – 11:00 a.m.	Successful Approaches in Local Energy Assurance Planning <i>This session will focus on Local Energy Assurance Plans and highlight best practices that have been used by Local governments.</i> Moderator: Ronda Mosley, Deputy Executive Director for Research and Government Programs, Public Technology Institute <ul style="list-style-type: none"> ▪ Michael Licata, Emergency Management Director, City of Windham, Connecticut ▪ Josh Human, Director, Center for Hazards Research and Policy Development, University of Louisville ▪ Lori Herrick, Energy Management Administrator, City of Virginia Beach, Virginia ▪ Patricia Williams, Deputy Director of Emergency Management and Homeland Security, City of Denver, Colorado

<p>11:00 a.m. – 12:00 p.m.</p>	<p>Private Sector Energy Assurance Initiatives <i>This session will highlight energy sector planning efforts in coordinating with State and local governments.</i></p> <p>Moderator: Cherrie Black, Chairman, SLTTGCC and NJ Homeland Security</p> <ul style="list-style-type: none"> ▪ Fred Walas, Fuels Technology Manager, Marathon Petroleum Company ▪ Doug Belden, Vice President and General Manager of Operations, Colonial Pipeline Company ▪ Tom Bowe, Executive Director Reliability and Compliance, PJM Regional Transmission Organization ▪ David Guy, Director, System Restoration and Dispatch, Louisville Gas and Electric ▪ Caryn Bacon, Director of Emergency Preparedness and Business Continuity PEPCO Holdings Inc.
<p>12:00 p.m. – 1:15 p.m.</p>	<p>Lunch & Keynote Speaker</p> <ul style="list-style-type: none"> ▪ David Terry, Executive Director, NASEO: Introduction ▪ Richard Reed, Vice President of Preparedness and Resilience Strategy, American Red Cross
<p>1:15 p.m. – 2:00 p.m.</p>	<p>Infrastructure Interdependencies and Building Communities Resiliency <i>This panel will discuss infrastructure independencies and the need to incorporate energy assurance into “whole community” all-hazards resilience planning.</i></p> <p>Moderator: Paula Scalingi, President, The Scalingi Group</p> <ul style="list-style-type: none"> ▪ Lenny Sharpe, Manager of Business Continuity, Target Corporation ▪ J. Alan Roberson, Director of Federal Relations, American Water Works Association ▪ John Contestabile, Assistant Program Manager for Homeland Security, John Hopkins University ▪ Prudence Parks, Director of Government Affairs and Legislative Counsel, Utilities Telecom Counsel
<p>2:00 p.m. – 3:30 p.m.</p>	<p>Table Top Exercise</p> <ul style="list-style-type: none"> ▪ Scenario Setting – Steve Folga, Senior Manager, Infrastructure Assurance Center at Argonne National Laboratory ▪ Facilitated Discussion - Jack Eisenhauer, President and Chief Executive Officer, Nexight Group
<p>3:30 p.m. – 3:50 p.m.</p>	<p>Networking Break</p>
<p>3:50 p.m. – 5:00 p.m.</p>	<p>Table Top Exercise (cont’d)</p>
<p>5:00 p.m. – 5:30 p.m.</p>	<p>Day One Wrap Up</p> <ul style="list-style-type: none"> ▪ Alice Lippert, Senior Technical Advisor, Office of Electricity Delivery and Energy Reliability, U.S. Department of Energy
<p>5:30 p.m. – 7:00 p.m.</p>	<p>State and Local Energy Assurance Showcase, Demonstrations and Displays</p>

Friday, June 29, 2012

7:30 a.m. – 8:30 a.m.	Continental Breakfast
8:30 a.m. – 9:00 a.m.	<p>Keynote - Importance of Continued Energy Assurance Planning</p> <ul style="list-style-type: none"> ▪ Hank Kenchington, Deputy Assistant Secretary for Research and Development, Office of Electricity Delivery and Energy Reliability, U.S. Department of Energy
9:00 a.m. – 9:45 a.m.	<p>Sustaining Energy Emergency Preparedness <i>This panel will discuss the steps State and Local governments need to take in order to sustain plans, and preparedness capabilities to respond to energy emergencies and outline specific State and Local efforts to achieve this goal.</i></p> <p>Moderator: Glen Andersen, Program Director for Environment, Energy and Transportation, National Conference of State Legislatures</p> <ul style="list-style-type: none"> ▪ Mike Kenel, Homeland Security Specialist, Michigan Public Service Commission ▪ Jan See, Energy Assurance Manager, Arizona Governor’s Office of Energy Policy ▪ Kevin Kille, Technological Hazards Emergency Planner, Delaware Emergency Management Agency ▪ Leslie Luke, Group Program Manager, County of San Diego, California
9:45 a.m. – 10:30 a.m.	<p>Moving From Plans to Actions that Build Energy Resiliency <i>This session will discuss State and Local actions and plans to reduce the risks of energy disruptions by mitigating vulnerabilities and working with the private sector to build a resilient energy infrastructure.</i></p> <p>Moderator: Miles Keogh, Director of Grants and Research, National Association of Regulatory Utility Commissioners</p> <ul style="list-style-type: none"> ▪ Thomas Pearce, Senior Utility Specialist Public Utilities Commission of Ohio ▪ Robert Amato, Director of Energy Generation, Transmission, and Distribution, Kentucky Department of Energy Development and Independence ▪ Dan Stowers, Planning Chief, Georgia Emergency Management Agency/Homeland Security ▪ Robbin Dunn, Public Works Program Coordinator, City of Davenport, Iowa
10:30 a.m. – 10:45 a.m.	Networking Break
10:45 a.m. – 12:00 p.m.	<p>Putting it All Together: Recommendations for Continued Action <i>This facilitated discussion will examine how State and Local governments can sustain their energy assurance capabilities and options for achieving this goal.</i></p> <ul style="list-style-type: none"> ▪ Jack Eisenhauer, President and Chief Executive Officer, Nexight Group LLC
12:00 p.m. – 12:15 p.m.	<p>Conclusions and the Path Forward</p> <ul style="list-style-type: none"> ▪ Alice Lippert, Senior Technical Advisor, Office of Electricity Delivery and Energy Reliability, U.S. Department of Energy ▪ Jeffrey Pillon, Director of Energy Assurance, National Association of State Energy Officials

Appendix Two – Participant List

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