

**DOE Award Number:** DE-FC26-06NT42835  
**Project Title:** Building Stronger State Partnerships With the US Dept. Of Energy (Energy Assurance)  
  
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**Date:** December 25, 2011  
**Deliverable:** Close-Out Report (Technical)  
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## Summary

From 2007 until 2011, the National Association of Regulatory Utility Commissioners (NARUC) engaged in a partnership with the National Energy Technology Lab (NETL) to improve State-Federal coordination on electricity policy and energy assurance issues. This project allowed State Public Utility Commissioners and their staffs to engage on the most cutting-edge level in the arenas of energy assurance and electricity policy.

Four tasks were outlined in the Statement of Performance Objectives:

- Task 1: Training for Commissions on Critical Infrastructure Topics
- Task 2: Analyze and Implement Recommendations on Energy Assurance Issues
- Task 3: Ongoing liaison activities & outreach to build stronger networks between federal agencies and state regulators
- Task 4: Additional Activities

Although four tasks were prescribed, in practice these tasks were carried out under two major activity areas: the critical infrastructure and energy assurance partnership with the US Department of Energy's Infrastructure Security and Emergency Response office, and the National Council on Electricity Policy, a collaborative which since 1994 has brought together State and Federal policymakers to address the most pressing issues facing the grid from restructuring to smart grid implementation.

On Critical Infrastructure protection, this cooperative agreement helped State officials yield several important advances. The lead role on NARUC's side was played by our Committee on Critical Infrastructure Protection. Key lessons learned in this arena include the following:

- Tabletops and exercises work. They improve the capacity of policymakers and their industry counterparts to face the most challenging energy emergencies, and thereby equip these actors with the capacity to face everything up to that point as well.
- Information sharing is critical. Connecting people who need information with people who have information is a key success factor. However, exposure of critical infrastructure information to bad actors also creates new vulnerabilities.

- Tensions exist between the transparency-driven basis of regulatory activity and the information-protection requirements of asset protection.
- Coordination between states is a key success factor. Because comparatively little federal authority exists over electricity and other energy infrastructure, the interstate nature of these energy grids defy centralized command and control governance. Patchwork responses are a risk when addressed at a state-by-state level. Coordination is the key to ensuring consistent response to shared threats.

In Electricity Policy, the National Council on Electricity Policy continued to make important strides forward.

Coordinated electricity policy among States remains the best surrogate for an absent national electricity policy. In every area from energy efficiency to clean coal, State policies are driving the country's electricity policy, and regional responses to climate change, infrastructure planning, market operation, and new technology deployment depend on a forum for bringing the States together.

A summary of the activities under this cooperative agreement follows. It is divided into a narrative by year, with 2007-2011 including a summary of the activities under Energy Assurance, and 2008-2011 including a summary of the National Council. (In 2007 the National Council was funded under a different cooperative agreement, and when this came to a conclusion the federal support for this activity was transferred to DE-FC26-06NT42835.

A supplementary CD is also being submitted to the NETL project officer, including all meeting materials, reports, papers, and other resources created with the support of this grant.

#### Activities Performed:

#### 2007

##### **Critical Infrastructure Protection**

In 2006, NARUC developed a series of reports that provide public utility regulators and other participants in the regulatory policy community with introductory overviews, suggested protocols, and additional resources on critical infrastructure protection issues. These reports include:

1. Issue Paper on Critical Infrastructure Protection.
2. Utility and Network Interdependencies: What State Regulators Need to Know.
3. A Primer on Energy Assurance for Public Utility Commissions.
4. State Government Organizational Issues, Roles, and Policy.
5. Regional Coordination and Intergovernmental Communication in the Energy Sector.
6. Critical Infrastructure Information Sharing Rules: Model Protocols for States.
7. NARUC Survey on State Energy Assurance Planning.
8. NARUC Survey on Gas Curtailment Planning.

NARUC turned these papers into a training curriculum that highlights issues such as regional coordination, cost recovery, interdependencies, and States' emergency natural gas curtailment policies. In 2007 NARUC

conducted five trainings –for the Mid-Atlantic Conference of Regulatory Utility Commissioners, for the New England Conference of Public Utility Commissioners, and at the NARUC meetings in Miami, San Francisco, and Washington, DC. Forty-one states received critical infrastructure protection training through these meetings. At each of these meetings a CD with critical infrastructure-related resources has been distributed to training participants and meeting attendees.

Additionally, NARUC's Grants & Research Department held several web-based "Train the Trainers" sessions for staff on the Staff Subcommittee on Critical Infrastructure and for Commissioners on the Committee on Critical Infrastructure. These sessions provided participants with a more in depth look the training materials so that they have the tools and resources necessary to conduct trainings for their respective commissions on their own as serve their commissions and regions as experts in critical infrastructure protection.

NARUC's Grants & Research Department has developed an online tool ([www.naruc.org/gascurtailment](http://www.naruc.org/gascurtailment)) to support State commissions' coordination on emergency natural gas curtailment policies. The analysis tool takes the form of an interactive map, allowing users to scroll over every State to view a profile of the State's emergency natural gas curtailment plans. Based on information presented in this tool, NARUC's Grants & Research Department has begun a series of dialogues among states to explore opportunities to improve coordination on this issue. NARUC's Grants & Research Department and the Department of Energy conducted such a dialogue at the MACRUC Commissioners Only Retreat in Washington, DC in March. Additionally, the tool was used at a DOE exercise on disaster preparedness in June in New Jersey.

The Grants & Research Department supported members' participation in Department of Energy exercises such as the Water / Electricity interdependencies exercise in Atlanta in April 2007. NARUC also conducted a tornado preparedness session at the MACRUC Convention in Williamsburg, VA in early June 2007. NARUC helped facilitate and run the June 2007 "Dark Storm" emergency exercise in Princeton, New Jersey for Mid-Atlantic and New England stakeholders.

## 2008

In 2008, the National council on Electricity Policy was added to the funded activities under this award. National Council activities were reported along with Critical Infrastructure (ISER) activities as part of the Energy Assurance activities of this agreement.

### **National Council on Electricity Policy**

National Council on Electricity Policy Conference Calls in 2008 included five calls for the Executive Committee to review business items and upcoming activities. The NCEP's Demand Response paper was featured on the October 10<sup>th</sup> call and included two speakers, Dan Delurey of the Demand Response Coordinating Committee and David Kathan of the FERC. One week later, NCEP hosted a call to discuss interstate transmission siting coordinating, focusing on the paper that was completed over the summer.

*Southeast Regional Resource Planning Meeting, November 2008*

On November 19, 2008 between noon and 4:00 PM the National Council on Electricity Policy conducted the first of a series of executive dialogues focused on regional resource planning. This dialogue was targeted at the southeast and was held in New Orleans, LA. Over the course of the afternoon participants identified barriers to regional coordination as well as strategies for maximizing regional electricity resources through interstate and intrastate cooperation. The afternoon was moderated by Richard Sedano of the Regulatory Assistance Project and attended by representatives of various state agencies, federal partners, and industry representatives. The agenda can be accessed through [http://www.ncouncil.org/EventDocuments/NCEP\\_Executive\\_Dialogue\\_V3.pdf](http://www.ncouncil.org/EventDocuments/NCEP_Executive_Dialogue_V3.pdf).

#### *Demand Response and Smart Metering Paper, Fall 2008*

The National Council on Electricity Policy released a report, Demand Response and Smart Metering Policy Actions Since the Energy Policy Act of 2005: A Summary for State Officials. This report represents a review of policy developments on demand response and other related areas such as smart meters and smart grid. The report focuses on State and Federal policy developments during the period from 2005 to mid-year 2008. It is an attempt to catalogue information on policy developments at both the federal and state level, both in the legislative and regulatory arenas. A special focus of the report is on State implementation of the demand response and smart metering provisions—Section 1252—of the Energy Policy Act of 2005 (EPACT). The report can be found at [http://ncouncil.org/documents/NCEP\\_Demand\\_Response\\_1208.pdf](http://ncouncil.org/documents/NCEP_Demand_Response_1208.pdf).

#### *Interstate Electric Transmission Siting Coordination, July 2008*

In July, the National Council published, "Coordinating Interstate Electric Transmission Siting: An Introduction to the Debate" for Commissioners, staff, and other officials who are new to the transmission siting issue. This publication provides government officials with an overview of State, regional, and Federal transmission siting issues; key State siting statutes; regional entities that could enable greater interstate cooperation; and recommendations to enhance the interstate transmission siting process. This publication is one of four papers dedicated to educating government officials on a range of electric transmission and distribution issues. The report can be accessed through [http://ncouncil.org/documents/Transmission\\_Siting\\_FINAL\\_41.pdf](http://ncouncil.org/documents/Transmission_Siting_FINAL_41.pdf).

#### *Face to Face Annual Planning Meeting, April 2008*

Each year the National Council on Electricity Policy (National Council) meets to review current projects and examine the strategic needs of electricity policy officials. This year the annual planning meeting will focus on the nexus between electricity policy and emerging climate change issues. Day one brought in experts to frame emerging electricity and climate policy issues. Day two explored a National Council strategy for improving coordination between state, federal and regional electricity/climate change programs.

### **Critical Infrastructure**

#### *Energy Assurance and Emergency Preparedness Tabletop Exercise, November 2008*

NARUC's Domestic Grants and Research department developed a new means of educating its members on the issues of energy assurance and emergency preparedness – a tabletop exercise for state utility commissions. A trial run of a few tabletop scenarios was held at the 2008 NARUC Annual Convention in New Orleans, LA. The workshop was attended by more than 25 commissioners and staff from around the country. Materials used during the tabletop exercises can be found at <http://www.naruc.org/resources.cfm?p=245>.

### *Cyber Exercise, July 08*

The NARUC Committee on Critical Infrastructure has endeavored to learn about the vulnerabilities to cyber attacks embedded in our utility systems, and developing ways of proactively addressing these concerns. These ongoing efforts became the basis for a workshop on state public utility commissions' cyber security practices that was held in Portland, OR in July 2008. Experts from the U.S. Department of Energy's national research laboratories and the North American Reliability Council discussed the threats that States and utilities face as well as actions that are being taken at the State and Federal levels to secure utility infrastructure. Prior to the workshop, participants were required to research their commission's cyber security policies. A list of 6-8 questions was circulated to those attending the workshop and a matrix of responses was developed to analyze any trends, patterns, or notable difference among state practices.

## 2009

### **Critical Infrastructure**

NARUC conducted energy assurance and emergency preparedness tabletop exercises in the West, Midwest, and Mid-Atlantic in the Summer of 2009 and has developed a beta-version of a "tabletop-in-a-box" scenario exercising tool for use in the States. Complete details of the attendees, materials, and resources are included in the "Tabletop In A Box" toolkit CD. NARUC collaborated with NASEO to expand the resources and tools available to States to develop their own tabletop exercises. All of resources are included with the CD accompanying this report, are online on [www.naruc.org](http://www.naruc.org), and will continue to be updated as needed. Other organizations, such as PTI, used these resources to conduct their own tabletop exercises and several State Commissions have expressed interest in inviting NARUC to develop tailored scenario exercises in their State. NARUC worked with NASEO to complete the Energy Assurance Guidelines 3.0.

### **The National Council on Electricity Policy**

In January 2009, the Council chose not to renew its contract with the Executive Director, and NARUC staff have subsequently facilitated the logistics for this collaborative. The NCEP released 2 documents: Alternatives to Electric Transmission: An Introduction for Policymakers, and 8 Steps Towards Energy Efficiency: a quick-start guide to energy efficiency programs for State agencies. In addition to these publications the NCEP holds alternating bi-monthly Executive Committee and Policy Conference Call hosted by NARUC. Policy calls brought in experts to brief members on topics such as ARRA stimulus funding opportunities and goals, a discussion of the Waxman-Markey bill (also known as ACES), briefings on recent reports from climate and efficiency experts, and an update on EPRI's 2009 PRISM/MERGE analysis. In December, NCEP is co-sponsored a joint NARUC/NCEP Climate Change Conference on *The Utility of the Future in a Carbon-Constrained World* in Dallas, TX. The NCEP also held its face-to-face planning workshop for state government officials in conjunction with the Climate Change Conference.

## 2010

### **Critical Infrastructure**

Monthly informational calls were held to educate the CI Committee on key topics such as interdependencies, cybersecurity, emergency response, and interdependencies. conducted a national planning session at the NARUC Winter meeting in February 2010 to prepare for energy assurance and

emergency preparedness tabletop exercises in States in the West, Midwest, and Mid-Atlantic in the Summer of 2010 and has developed a beta-version of a “tabletop-in-a-box” scenario exercising tool for use in the States. In May, The Grants & Research Department worked with the Committee on Critical Infrastructure to plan, facilitate and run tabletops for five States: Texas, Ohio, and Pennsylvania in August 2010, and Maine and Michigan in September 2010.

NARUC, with NASEO, completed the Energy Assurance Guidelines Version 3.0, available on the NARUC website. NARUC also contributed comments to the rewrites of the National Infrastructure Protection Plan’s Energy sector plan, and to a guide for states on Smart Grid Cybersecurity.

The Grants & research Department participated in a two-day High Impact Low Frequency planning event hosted by the North American Electric Reliability Corporation and reported back findings to NARUC members on pandemic, cyber-attacks, and other low-probability events. The Department also facilitated NARUC member participation in national emergency exercises such as Secure Grid 2010 and Cyberstorm 2010.

### **The National Council on Electricity Policy**

The NCEP executive committee held its annual Face to Face planning meeting in December 2009 in Dallas, TX, where speakers presented on transmission and renewable energy delivery. The NCEP co-sponsored the NARUC/NCEP Climate Change Conference: The Utility of the Future in a Carbon-Constrained World in December 2009 in Dallas, TX. The conference brought together over 150 State regulators, policymakers, utilities, and other industry leaders for a 2-day panel driven discussion on climate change and the potential opportunities and challenges ahead for the electricity sector.

The National Council hosted two webinars, Non-Transmission Alternatives and Eastern Interconnection Transmission planning, and Carbon Capture and Storage Technological and Regulatory Considerations. Both webinars were well attended at over 100 people per webinar. All materials are archived on the Council website at [www.ncouncil.org](http://www.ncouncil.org). At the NARUC Summer Meeting 2010, NCEP co-hosted the climate workshop, Financing the Decarbonized Power Sector, with sessions focused on both large-scale and distributed resource financing.

In addition to these meetings the NCEP held alternating bi-monthly Executive Committee and Policy Conference Call hosted by NARUC and focused on National Council strategic planning and operations.

## **2011**

### **Critical Infrastructure**

The NARUC Grants & Research Department conducted a national planning session at the NARUC Annual Convention in Atlanta in November 2010 and has been engaged in follow-up efforts in this arena. Leveraging the emergency preparedness tabletop exercises NARUC held in States in the West, Midwest, and Mid-Atlantic in the Summer of 2010 NARUC developed the final version of a “tabletop-in-a-box” scenario exercising tool for use in the States.

NARUC provided detailed comments and contributions to a new NASEO document on energy assurance and smart grid, and disseminated it broadly.

The Grants & Research Department worked with the Department of Energy to deploy a number of regional exercises, the first of which was held in April 2011 in North Carolina, with follow-ups in Boston, Chicago, and the West. Leveraging the emergency preparedness tabletop exercises NARUC held in States in the West, Midwest, and Mid-Atlantic in the Summer of 2010 NARUC developed the final version of a “tabletop-in-a-box” scenario exercising tool for use in the States, and supported State use of the tool. NARUC’s Grants & Research Staff has also begun work on a new tool called a “tabletop in a blog” online exercise tool that will allow tabletop exercising to be used without the expense of travel, as a compliment to in-person based tabletop exercises.

NARUC provided detailed comments and contributions to a new NASEO document on energy assurance and smart grid, and will be disseminating this at the NARUC Winter Meetings in DC and will make it available on the NARUC website.

### **The National Council on Electricity Policy**

Commissioner Jeanne Fox stepped down as the chair of the National Council in January 2011. NASEO’s Dub Taylor took over the Council, and NARUC transitioned new leadership.

The National Council co-hosted (with NARUC’s Energy Resources Committee and Climate Task Force) two webinars on EPA rulemaking and the electric grid in November and December 2011. In January a webinar was held on “Air Regulation 101”. On July 27, 2011 the National Council hosted a webinar on Energy Efficiency and Job Creation Through Innovative Finance Policies. These webinars were well attended with over 80 people per webinar.

The National Council hosted a face-to-face meeting April 20, 2011 prior to its Transmission Technologies Workshop in Denver Colorado. At the face-to-face it was agreed there was a need to repopulate the Policy Committee of the National Council, so each N group is working to refresh their membership on the Policy Committee. After the face-to-face NCEP hosted the Transmission Technologies workshop that included several educational presentations followed by a transmission implementation exercise – “The Grid Game”. Over 40 participants took part in the exercise and the feedback was extremely positive.

On June 16-17 2011, the Grants & Research team joined with the National Conference of State Legislatures to host a site visit and dialogue with 40 State Legislators and Commissioners in West Virginia at the AEP Mountaineer facility. The group discussed carbon capture and storage technology, policy, and finance, and visited Mountaineer to see a CCS facility first-hand.

The National Council helped assisted to organize and supported travel for attendees to a collaborative Energy, Air and Regulatory Policy meeting between NARUC, NASEO and NACAA on June 23-24, 2011 in Baltimore Maryland. All materials are archived and available here:

<http://www.naruc.org/committees.cfm?c=58>

All other materials are archived on the Council website at [www.ncouncil.org](http://www.ncouncil.org).

In addition to these meetings the NCEP held alternating bi-monthly Executive Committee and Policy Conference Call hosted by NARUC.

The NARUC Grants & Research staff serving the National Council followed up on its successful June meetings on air / utility regulator dialogue, and proposed a new cooperative agreement with the US DOE. More information is available online at [www.ncouncil.org](http://www.ncouncil.org).

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