



*Sponsored by the U.S. Department of Energy's Office of Electricity Delivery and Energy Reliability in Cooperation with Puget Sound Region Counties and Municipalities*

**WORKSHOP ON ENHANCING COMMUNITY  
ENERGY ASSURANCE AND RESILIENCY:  
FOCUS—PUGET SOUND REGION**

***SUMMARY REPORT***

***Held June 23, 2009  
Bellevue, WA***

## Executive Summary

Representatives of Puget Sound region local governments, Washington State and Federal agencies, energy service providers and other stakeholder organizations convened on June 23 at Puget Sound Energy to examine issues and challenges associated with energy assurance and resilience with particular focus on better understanding threats, energy infrastructure dependencies and interdependencies and how to develop or improve existing energy assurance plans. The overall goal of the Workshop was to provide information and increase the awareness of local governments of regional energy infrastructure systems and services; energy infrastructure dependencies and interdependencies; to enhance capabilities to prepare, respond, and recover from all-hazards energy emergencies; and to improve coordination and cooperation among all levels of government and regional energy providers. The Workshop was sponsored by the U.S. Department of Energy's Office of Electricity Delivery and Energy Reliability with the assistance of the Pacific NorthWest Economic Region, is a public/private non-profit created by statute in 1991 by the states, provinces and territories of Washington, Oregon, Montana, Alaska, and Idaho, Alberta, British Columbia, Saskatchewan, Northwest Territories and The Yukon.

The Workshop produced the following observations and recommendations:

- Puget Sound local governments have a greater level of knowledge on energy infrastructure, energy emergencies, and energy assurance issues than many other regions in the nation. This is largely due to proactive State and local leadership and a regional public-private Partnership for Regional Infrastructure Security, which has resulted in several cross-jurisdiction cross-sector regional exercises and numerous regional activities developed collaboratively with the assistance of the Pacific NorthWest Economic Region.
- Infrastructure interdependencies are an area of primary interest among local government officials, and they seek great awareness of interdependencies and dependencies that can affect energy assurance and resiliency.
- Local government officials have a high level of interest in improving energy assurance and resiliency, as well as broader disaster preparedness planning and management.
- Localities should:
  - Examine their disaster response and continuity of operations plans to ensure energy assurance needs are addressed and upgrade plans as necessary.
  - Expand outreach and undertake initiatives, such as Neighborhood Program developed by Pierce County, aimed at greater involvement of the community in energy assurance and broader emergency preparedness.

- State and local jurisdictions should work with energy service providers to:
  - o Explore mechanisms for improved regional coordination and information sharing
    - Among energy service providers and
    - Between energy service providers and local government.
  - o Develop a process to provide and update energy infrastructure point-of-contact information for energy emergencies.
  - o Share detailed information on energy assurance plans and energy emergency management/continuity of operations plans, including priorities for service resumption in the Puget Sound Region.
  - o Assess the State of current communications among city, county, State and power providers' emergency operations/coordination centers and identify areas of improvement.
  - o Develop and conduct a tabletop exercise focused specifically on energy assurance and resiliency covering preparedness, response and restoration with an earthquake scenario.

## **WORKSHOP ON ENHANCING COMMUNITY ENERGY ASSURANCE AND RESILIENCY: *FOCUS — PUGET SOUND REGION***

Representatives of Puget Sound region local governments, Washington State and Federal agencies, energy service providers and other stakeholder organizations convened on June 23, 2009 at Puget Sound Energy in Bellevue, Washington to examine issues and challenges associated with energy assurance and resilience with particular focus on better understanding threats, energy infrastructure dependencies and interdependencies and how to develop or improve existing energy assurance plans. The Workshop was sponsored by the U.S. Department of Energy's Office of Electricity Delivery and Energy Reliability with the assistance of the Pacific NorthWest Economic Region, a U.S. and Canada consortium comprised of Washington, Oregon, Montana, Alaska, and Idaho, Alberta, British Columbia, Saskatchewan and The Yukon.

### **Workshop Goal and Objectives**

The overall goal of the Workshop was to provide information and increase the awareness of local governments of regional energy infrastructure systems and services; energy infrastructure dependencies and interdependencies; to enhance capabilities to prepare, respond, and recover from all-hazards energy emergencies; and to improve coordination and cooperation among all levels of government and regional energy providers. Workshop objectives included: increasing understanding of local government officials about cross-jurisdiction, cross-border, cross-sector assurance and resiliency challenges; sharing information and expectations on local jurisdiction plans; and anticipated future planning to address energy assurance and resilience; providing information on State and Federal assistance to local governments in energy emergencies; and providing practical guidance on how to develop, or improve plans to prevent or lessen the impacts of energy disruptions on their communities.

### **Format and Agenda**

The workshop was divided into four sessions that were designed to meet the objectives through a series of educational presentations and extensive participant discussion. Issues questions were utilized to identify key issues and challenges and point to potential useful solutions. Session 1 provided an overview of the regional energy infrastructure (electric power, natural gas, and fuel supply, distribution and storage); key concerns of energy providers on all-hazard threats and interdependencies, and actions they are taking to assure continuity of operations and business. Session 2 highlighted local, State, and Federal energy assurance plans and programs. Session 3 focused on DOE-developed energy assurance guidelines for local governments that could be used by participants to develop or improve their jurisdiction's energy assurance plans. In the final Session 4, participants used issues questions to generate ideas in a facilitated discussion on how they could work with energy service providers to improve regional energy assurance and resiliency. (*For agenda, see Appendix A; for the Issues Questions, Appendix B.*)

### **Highlights of Proceedings**

The Workshop opened with remarks by Steve Reynolds, CEO, Puget Sound Energy, which hosted the Workshop. He observed that for energy providers the "world has changed a lot." It

has been a challenge to find funds for assurance and security. Federal funds are now filtering down to energy providers. But a key question is how energy providers could become involved in activities to improve disaster resilience, given short-term pressures and long-term interests and the need to balance priorities and investments. He noted that the “best tool is to focus on the successes and value of preparedness.”

Alice Lippert, U.S. Department of Energy (DOE) and Workshop sponsor, noted in her initial remarks that DOE has been focusing on energy assurance at the State level, but now wanted to look at how cities and counties undertook energy emergency planning and what they needed to create or to improve energy assurance and resilience plans. She pointed out that DOE had held a similar workshop in San Diego and discovered that their region’s energy emergency plan dated back to 1995. That workshop was successful in bringing together the local jurisdictions and energy providers to talk about a path forward to enhance local plans and develop a region-wide updated plan. DOE was partnering with energy and local government associations and regional organizations such as PNWER to understand local government energy assurance interests and find out how best to help improve their plans and overall energy resilience.

Matt Morrison, Executive Director of the Pacific NorthWest Economic Region (PNWER) followed with a short update on regional initiatives focusing on energy resilience. He noted that PNWER and Puget Sound stakeholders had been focusing on all-hazard threats to energy infrastructure and associated interdependencies for the past several years, and that this had been a major focus in the Blue Cascades regional exercise series. He also described a new PNWER initiative sponsored by DOE involving a Legislative Policy Institute to train State legislators to understand energy infrastructure and how it works.

Paula Scalingi, director of PNWER’s Center for Regional Disaster Resilience, wrapped up the Workshop introductory remarks by providing participants with a working definition of energy resilience. She described resilience as the ability to resist, absorb, recover from, or successfully adapt to adversity or a change in conditions; prevent and mitigate cascading failures, and minimize disruption to life and economies. She added that resilience required anticipating problems and including key community stakeholders in planning, preparedness, and response; reducing vulnerabilities through improving local capacity to respond and recover expeditiously; responding effectively through minimizing loss of life and maintaining economic vitality; and recovering rapidly and safely, focusing on areas that provide the greatest benefits.

### **Session 1: Puget Sound Region Energy Infrastructure Overview and Challenges for Assurance and Resilience**

Puget Sound region energy providers presented an overview of the supply and distribution system, covering electric power, natural gas, renewables, petroleum fuels, as well as challenges posed by energy infrastructure interdependencies and other issues of concern. Presenters included David Mills, Director of Energy Supply and Planning, Puget Sound Energy (PSE), who provided the broad Washington State/Pacific Northwest energy infrastructure overview; and representatives who provided presentations on their respective organizations: Mary Robinson, Puget Sound Energy; Roger Serra, Seattle City Light; Tuan Tran, Tacoma Power; Adelmo de la Cruz, Bonneville Power Administration; and Grant Jensen, Williams Northwest Pipeline. *(For a synopsis of the individual presentations see Appendix C.)*

## **Session 2: High Level Overview and Discussion of Current Local Jurisdiction and State Plans/Capabilities and Future Activities to Address Energy Assurance and Resilience Needs**

Presentations, accompanied by interactive discussion, were provided by: Jody Woodcock, Pierce County Emergency Management; Mark Anderson, Washington State Community Trade Economic Development; Patrick Massey, FEMA Region 10; Alice Lippert and Mary Brown, DOE. The session focused on the plans and “best practices” and other activities of localities, State and Federal government agencies. (*For synopses of presentations see Appendix C.*) The presentations were followed by facilitated discussion addressing three issues—challenges faced by local officials to disruptions of energy services; how they dealt with these challenges and the information they used; and how they would get the assistance they might need to deal with an energy emergency.

***Interactive Discussion.*** Local jurisdiction representatives focused on particular challenges they faced in major emergencies. Regarding the 2006 windstorm, issues raised included: lessons learned and steps taken to deal with energy disruptions and associated interdependencies; the need to have adequate staff available for potential emergencies; locating food distribution centers and the dependency of forklifts on power; cell phone tower disruption due to lack of fuel; limited fuel and few operating gas stations; the need to require pack-up power to pump fuel; energy service providers required to supply their personnel with cash with credit card transaction unavailable; and the need for thresholds for sharing information, determination of who gets notified and when, and what information will be shared; how prioritization of energy restoration is determined; how to get the information to develop a list of emergency contacts; and where to get data on State, Federal and private sector resources that would be available to deal with energy emergencies. Energy representatives noted the importance during an emergency of keeping in communication with the National Weather Service, of having sufficient personnel “on the ground, and in the case of BPA, having “people in the air” to assess the status of transmission lines. Local officials spoke of the difficulty in sharing information, especially among emergency operations centers. One participant referred to “*lack of communication on what is available and where to go to get it.*” Another pointed out that situation reports, if available, need more specificity on expected duration of outages and projected restoration timelines, and be written in language that could be easily understood by non-energy experts. The idea of a regional “disaster wiki” was discussed as a means to share information and serve as a resource. It was noted that there is a preparedness wiki site already developed that could be utilized. Regional energy exercises were also discussed. A Washington State official noted that prior to the mid-1990s, such exercises were conducted, but the practice stopped at that time.

## **Session 3: Guidance to Improve Local Government Energy Assurance Plans**

Participants were briefed by Ronda Mosley of the, Public Technology Institute, on local government energy assurance guidelines developed by DOE for communities across the nation. (*For synopsis of presentation see Appendix C.*)

***Interactive Discussion.*** Participants followed with discussion centered on they might improve their energy emergency plans based on their experiences in past energy emergencies and disruptions. They also addressed the question of what actions they might take if they had the resources now or in the near future to prevent or mitigate future energy disruption impacts. Ideas raised by participants included advanced GIS capabilities to better provide information on impacts for planning and situation awareness during emergencies; an outage management system to mitigate transportation problems; local government contracts with fuel providers for priority deliveries during an emergency; energy assurance community planning standards; identification of infrastructure assets that during an earthquake could be in liquefaction zones and subject to damage; and information for local government officials on the energy infrastructure and how it works focused on individual communities in layman’s language.

#### **Session 4: Next Steps — Continuing the Dialogue and Developing a Proactive Path Forward**

The final session was a facilitated discussion using issues questions to further discuss and prioritize needs and activities to improve Puget Sound Region energy assurance and resiliency. Participants were asked what they wanted as next steps that would be most useful for their jurisdiction on energy assurance planning and how they might strengthen planning to deal with energy emergencies. Ideas raised by participants reflected points raised in the previous interactive discussions—expansion of the Pierce County Neighborhood program to other jurisdictions, focus on energy restoration after a major earthquakes, building on existing energy utility cooperative mechanisms to improve energy assurance/resilience coordination, and gaining a better understanding of what community resilience means in terms of energy assurance and resiliency.

#### **Workshop Utility**

Participants overall found the quality of the Workshop presentations good and useful in better understanding energy assurance and resilience issues, challenges, and avenues for improvement at the local level. Several participants found particularly useful the PNW energy infrastructure overview, while others cited the Tacoma, PSE, Pierce County, Public Technology Institute and energy resiliency definition presentations. Comments from participants in their evaluations included:

*“There was a good variety of topics and I learned a fair amount”*—energy utility official.

*“I thought the workshop was effective and well managed”* —DHS official.

*“Good overview; Good providers panel”*—county emergency management official.

At the same time, several participants expressed the need for more time to discuss issues and potential actions and shorter presentations. As one participant observed, *“A lot of useful information was shared but did we solve anything?”* A city government official commented that more time should have been spent on *“the practical aspects of energy assurance and resiliency planning,”* noting that the Next Steps discussion in the last hour of the proceedings *“was by far the most useful portion of the workshop.”* Regarding the substantive utility of the

workshop, several participants said they had hope for more extensive treatment of infrastructure interdependencies; while another hoped the meeting would result in “*better coordination among participants and include more interactive problem-solving.*” Lastly, some participants expressed their desire for handouts of Workshop presentations to take notes during the proceedings.

## **Workshop Outcomes**

The following observations and recommendations emerged from the workshop discussions and comments by participant on their evaluation forms and comment note cards:

- Puget Sound local governments have a greater level of knowledge on energy infrastructure, energy emergencies, and energy assurance issues that many other regions in the nation. This is largely due to proactive State and local leadership and the existence of a regional public-private Partnership for Regional Infrastructure Security, which has resulted in several cross-jurisdiction cross-sector regional exercises and numerous regional activities developed with the assistance of the Pacific NorthWest Economic Region.
- Infrastructure interdependencies are an area of primary interest among local government officials, and they seek great awareness of interdependencies and dependencies that can affect energy assurance and resiliency in their jurisdictions.
- Local government officials have a high level of interest in improving energy assurance and resiliency, as well as broader disaster preparedness planning and management.
- Puget Sound Region localities should:
  - Examine their disaster response and continuity of operations plans to ensure energy assurance needs are addressed and upgrade plans as necessary.
  - Expand outreach and undertake initiatives, such as Neighborhood Program developed by Pierce County, aimed at greater involvement of the community in energy assurance and broader emergency preparedness.

- Washington State and Puget Sound Region local jurisdictions should work with energy service providers to:
  - o Explore mechanisms for improved regional coordination and information sharing
    - Among energy service providers and
    - Between energy service providers and local government.
  - o Develop a process to provide and update energy infrastructure point-of-contact information for energy emergencies.
  - o Share detailed information on energy assurance plans and energy emergency management/continuity of operations plans, including priorities for service resumption in the Puget Sound Region.
  - o Assess the state of current communications among city, county, State and power providers' emergency operations/coordination centers and identify areas for improvement.
  - o Develop and conduct a regional tabletop exercise focused specifically on energy assurance and resiliency covering preparedness, response and restoration with an earthquake scenario.

## APPENDIX A: AGENDA

### Workshop on Enhancing Community Energy Assurance and Resiliency: Focus—Puget Sound Region

Puget Sound Energy, Bellevue, WA

8:30 a.m. to 2:30 p.m., Tuesday, June 23, 2009

*Sponsored by the U.S. Department of Energy’s Office of Electricity Delivery and Energy Reliability in Cooperation with the Puget Sound Region Counties and Municipalities*

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| <b>Overall Goal</b>          | To help local governments enhance their ability to regularly assess preparedness to respond to energy emergencies from all-hazards and to improve coordination and cooperation among all levels of government and regional energy providers.  |
| <b>Objectives</b>            | <p>This highly interactive workshop is designed to:</p> <ul style="list-style-type: none"> <li>• Raise the awareness of participants on the regional power infrastructure, including cross-jurisdiction, cross-border interdependencies, and assurance and resiliency challenges</li> <li>• Examine and discuss the status of current local jurisdiction plans and future planning to address energy assurance and resilience</li> <li>• Highlight available State and Federal assistance to local governments in energy emergencies — what agencies can and can not currently provide, and share perceptions and expectations</li> <li>• Provide practical guidance and share information on how to develop, or improve existing plans to prevent or lessen the impacts of energy disruptions on other infrastructures and the communities they serve</li> </ul> |
| <b>Targeted Audience</b>     | Participants will be officials from Puget Sound region local and tribal governments, with representatives from relevant Washington State and Federal agencies, regional energy service providers, and other organizations   |
| <b>Format</b>                | The workshop will be highly interactive and structured to enable attendees to receive the information they need while having maximum time for discussion  |
| <b>AGENDA</b>                |   |
| <b>8:15 a.m. – 9:00 a.m.</b> | <b>Registration and continental breakfast</b>   |
| <b>9:00 a.m. – 9:20 a.m.</b> | <p><b>Opening Remarks</b> — <i>Steve Reynolds, CEO, Puget Sound Energy, and Alice Lippert, U.S. Department of Energy (DOE)</i></p> <p><b>Introductions and Overview of Regional Energy Initiatives</b> — <i>Matt Morrison, Pacific NorthWest Economic Region (PNWER)</i></p> <p><b>Energy Assurance and Resiliency – Working definitions</b> — <i>Paula Scalingi, PNWER Center for Regional Disaster Resilience</i></p>   |

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| <p><b>9:20 a.m. – 11:10 a.m.</b></p>   | <p><b>Session 1: Puget Sound Region Energy Infrastructure Overview and Challenges for Assurance and Resilience</b> — <i>David Mills, Director of Energy Supply and Planning, Puget Sound Energy (PSE)</i></p> <p><b>Energy Service Provider Panel with participant discussion to share information and further illuminate key issues and promote relationship building</b> — <i>Mary Robinson, Puget Sound Energy; Roger Serra, Seattle City Light; Tuan Tran, Tacoma Power; Adelmo de la Cruz, Bonneville Power Administration; Grant Jensen, Williams Northwest Pipeline</i></p> <p><b>Participants will be provided descriptions of the regional energy system (electric power, oil and gas production, distribution and storage) with focus on:</b></p> <ul style="list-style-type: none"> <li>• Potential disruption impacts from all-hazard incidents</li> <li>• Infrastructure interdependencies, including multi-state and cross-border; Municipal and Independent Power Producers and Distributors</li> <li>• How Continuity of Operations Plans (COOP) for Energy Providers interface with Emergency Management</li> <li>• Energy emergency mitigation and other measures addressing different scenarios</li> <li>• Mutual aid agreements/mitigation agreements <ul style="list-style-type: none"> <li>◦ Cross-state</li> <li>◦ Canada-U.S. cooperation, including impacts of events in Canada that could limit Canadian energy providers’ ability to respond to a regional disaster</li> </ul> </li> </ul> |
| <p><b>11:10 a.m. – 11:30 a.m.</b></p>  | <p><b>Break</b></p>   |
| <p><b>11:30 a.m. -- 12:30 p.m.</b></p> | <p><b>Session 2: High Level Overview, and Discussion of Current Local Jurisdiction and State Plans/Capabilities and Future Activities to Address Energy Assurance and Resilience Needs</b> — <i>Jody Woodcock, Pierce County Emergency Management; Mark Anderson, Washington State Community Trade Economic Development; Patrick Massey, FEMA Region 10; Alice Lippert and Mary Brown, DOE</i></p> <p><b>This session will focus of the plans and “tools” local jurisdictions, the State and Federal governments have to deal with major energy emergencies with emphasis on managing expectations</b></p> <p>The session will include short presentations followed by interactive discussion on :</p> <ul style="list-style-type: none"> <li>▪ Plans and capabilities of local jurisdictions</li> <li>▪ What Federal and State government can and can’t provide</li> <li>▪ Identifying and getting to know who are the current energy emergency contacts and how to reach them</li> </ul> <p><b>Interactive discussion to share information and point to future planning improvements</b></p>  |
| <p><b>12:30 p.m. – 1:30 p.m.</b></p>   | <p><b>Working Lunch: Cross-Border Energy Assurance and Resiliency Challenges and Preparations for the 2010 Olympics</b> — <i>Seiki Harada, Harada Management Consulting</i></p>   |
| <p><b>1:30 p.m. – 2:15 p.m.</b></p>    | <p><b>Session 3: Guidance to Improve Local Government Energy Assurance Plans</b> — <i>Ronda Mosley, Public Technology Institute</i></p>   |

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|                                 | <p>This session will include provide guidance to develop or enhance jurisdictional plans and a regional strategy for energy assurance and resiliency; the session will include:</p> <ul style="list-style-type: none"> <li>▪ Information on local government energy assurance guidelines and other best practices that have been developed by communities in other parts of the nation</li> <li>▪ Information and types of assistance that local government will need to improve energy assurance and resiliency in their jurisdictions and in the Puget Sound Region, and where/how they can obtain assistance</li> </ul> <p><b>Interactive discussion on current planning and best practices that can be incorporated into future Puget Sound Region energy assurance and resiliency planning</b></p> |
| <p><b>2:15 pm-3:00 p.m.</b></p> | <p><b>Session 4: Next Steps—Continuing the Dialogue and Developing a Proactive Path Forward —</b><br/><i>Participants</i></p> <p>The closing session will be an interactive discussion in breakout group format among participants to further discuss and prioritize needs and activities to improve Puget Sound Region energy assurance and resiliency</p> <p><b>Closing Remarks —</b> <i>Mary Robinson, Alice Lippert, and Matt Morrison</i></p>  |
| <p><b>3:00 pm</b></p>           | <p><b>Adjourn</b></p>   |

## **APPENDIX B: WORKSHOP ISSUES QUESTIONS**

### **Session 2: Puget Sound Region Infrastructure Overview and Challenges for Assurance and Resilience**

- Looking at past energy outages and other energy disruptions ranging from disasters and supply constraints to other causes, what were some of the significant energy assurance and resilience challenges that your jurisdiction, agency or organization faced?
- How do you typically evaluate and assess an event in terms of magnitude and duration? What sources of information do you use?
- What types of assistance would you need in an energy emergency, from what organization would you seek it, and how would you attempt to obtain it?

### **Session 3: High Level Overview, and Discussion of Current Local Jurisdiction and State Plans/Capabilities and Future Activities to Address Energy Assurance and Resilience Needs**

- How would you improve local energy emergency plans based on your experiences in past emergencies/disruptions affecting energy?
- If you had available resources, what actions might you take now or in the near future to prevent or mitigate future impacts to your jurisdiction, agency or organization?

### **Session 4: Next Steps—Continuing the Dialogue and Developing a Proactive Path Forward**

- What do you see as next steps that would be most useful for your jurisdiction on energy assurance planning?
- What regional activities should be undertaken to strengthen planning to deal with loss of energy from natural or manmade events?

## APPENDIX C: SYNOPSES OF PRESENTATIONS

### Session 1: Puget Sound Energy Infrastructure Overview and Challenges for Assurance and Resilience

- **David Mills, Director of Energy Supply and Planning, Puget Sound Energy**, opened with a description of the energy infrastructure in Washington State and the broader Pacific Northwest. He pointed out that about 60% of the region’s electricity comes from hydropower with 16% from natural gas and 13% from coal. He noted that about 8% of the electricity comes from renewal sources (solar and wind), but interestingly, companies are installing additional natural gas capacity, in part, due to the variability in wind energy and the need to assure supply. BPA owns and operates about 70% of the high voltage transmission to deliver electricity throughout the region, but there are only two major transmission lines from the center of the State (the mid-Columbia trading hub) to the major service areas in the Puget Sound region. With respect to natural gas, there is little redundancy in gas pipelines. To supplement supply, several LNG terminals are planned, though an existing terminal in British Columbia is currently a net exporter. Natural gas for power generation and industrial, commercial, and residential use represents 48% of the total energy consumed in the region. During the last 10 years, the consumption of natural gas for power generation has increased from 11 to 21% of the supply. He lastly focused on challenges the energy industry is facing—aging infrastructure, contentious debates on building new transmission lines, increasing demand and potential degradation of loads, and the need for new energy generation resources. He noted that currently there are “all types of restriction and regulations focusing on environmental, conservation, and efficiency, and that the trend of utilities to turn to natural gas is creating interdependencies between electric power and natural gas suppliers. The complexity of the energy system in the PNW makes it hard to coordinate and the reliance on a “couple of lines” has long been an issue.
- **Mary Robinson, Puget Sound Energy (PSE)**, summarized PSE’s operations and said that PSE is Washington State’s largest utility serving over a million electric customers and three-quarters of a million natural gas customers. She provided an overview of PSE’s emergency response planning and its participation in the North American Electric Reliability Corporation (NERC) compliance process to assure the reliability of the bulk electric system. The current efforts to meet the NERC Critical Infrastructure Protection (CIP) Standards are focused on identifying and assuring protection of critical assets, and in particular, critical cyber assets. With 41 standard requirements to meet and significant financial penalties for non-compliance, the NERC CIP compliance requirements are occupying considerable attention and resources by the electricity providers. She pointed out that information on the critical assets and assessment of the impacts of disruptions on these assets are considered sensitive and therefore not communicated to State and local officials.
- **Roger Serra, Seattle City Light**, representing the largest public utility in the State serving three-quarters of a million customers, said that only recently regional power companies have come to focus on security and emergency preparedness primary concerns. Seattle City Light’s continuity plan focuses on a range of threats, including storms, earthquakes, disease outbreaks, and security threats including cyber attacks and how to continue core basic operation functions working with the State within the National Response Plan. Seattle City

Light uses the Incident Command System and has an aggressive ICS training program. The continuity of operations plan has defined trigger points and activation modes to meet threats when they arise, and is coordinated with Seattle Emergency Management. The 2006 windstorm that struck the region made it clear how vulnerable energy systems were and the shortcomings at that time in the operational plan to restore power in 48 hours.

- **Tuan Tran, Tacoma Power**, noted that Tacoma Power’s interdependencies include major interconnections, two with BPA and one with Puget Sound Energy, together with telecommunications and regional water districts. Tacoma Power’s energy emergency focus is on potential disruptions from all-hazard incidents, including lost of interconnection with BPA, major substation outages, dam failure (the service area has seven major hydro dams), and earthquakes. Tacoma Power continuity of operations plan emphasizes business continuity with the City of Tacoma and the company has over 30 mutual aid agreements in and around their service area.
- **Adelmo de la Cruz, Bonneville Power Administration (BPA)**, pointed out that BPA maintains over 75% of the region’s high voltage transmission over 15,000 miles of lines. BPA operates and manages the power system in partnership with the U.S. Army Corps of Engineers and the Bureau of Reclamation for 31 dams on the Columbia and Snake rivers, and with Energy Northwest for the Columbia Nuclear Generating Station. With most of the power generation east of the Cascade Mountains and most of the demand load west of the mountains, maintenance of long transmission corridors is critical. BPA also sells and exchanges power with Canada and throughout the western United States. Treaty obligations that require delivery of power to Canada can sometimes restrict maintenance activities, such as taking elements out of service. BPA has worked to increase preparedness through storm response, pandemic flu, and Cascadia earthquake exercises, and to improve security through increased outreach and partnering with local, State, and Federal law enforcement agencies. Interdependencies and dependencies of concern to BPA include its utilities customers and power markets; telecommunications; water districts; transportation; natural gas, oil, and fuel distribution; law enforcement and first responders. Threats of concern include windstorms, ice storms, rain storms and flooding, high temperatures, security threats, and impacts on customers. BPA focuses on how to adjust and mitigate all hazards and minimize power outages.
- **Grant Jensen, Williams Northwest Pipeline**, noted that Northwest Pipeline has 4000 miles of natural gas pipelines (1400 miles in Washington State) that extend from gas fields and storage facilities from Canada to New Mexico. Northwest Pipeline transports 85-90% of the natural gas used in Washington, delivering to marketers, electric power producers, industrial users, and local distribution companies. The company has 13 compressor stations and storage facilities in 29 or 35 counties. Northwest Pipeline’s continuity planning centered on all-hazards. Secondary effects from earthquakes are of particular concern. To help protect and assure its widely distributed system, Northwest Pipeline has built in considerable system redundancy and tries to balance the “need-to-know” with the “right-to-know”. It generally shares information with customers and suppliers, but shares less with public institutions and local, State agencies, because of freedom of information requirements that could lead to release of sensitive information to the public.

## **Session 2: High Level Overview, and Discussion of Current Local Jurisdiction and State Plans/Capabilities and Future Activities to Address Energy Assurance and Resilience Needs**

- **Jody Woodcock, Pierce County** observed that “energy resilience is community resilience, and is based on sharing information and building partnerships with business entities and the public. Local government and private sector plans need to be coordinating to address business and broader economic recovery. Wind storm lessons learned have shown the need to focus on high risk populations, lack or failure of generators, and people with languages other than English. The county as a result has formed Neighborhood Emergency Teams to engage the public and encourage communities to more help themselves, allowing first responders to be more readily focused on areas of need in an emergency. The focus is on training and annual exercises, and building partnerships at the grassroots level. The County also has formed task forces of first responders to assist in getting maintenance and public works to restore damaged utilities. Pierce County has multiple power providers, and they are difficult to coordinate. The county works with the Washington State Emergency Management Division and is working to identify and focus on mitigation measures, make improvements, test through exercises and start the preparedness “life cycle” again.
- **Mark Anderson, Washington State Department of Community Trade Economic Development (CTED)**, cited energy assurance and resilience as starting at the local level. Power companies, Federal and State agencies have a role to respond to and restore energy systems. He said that CTED serves as a liaison between private sector energy companies and state agencies, and helps tie them into the State Energy plan. In an emergency, the state can provide waivers of gas additive requirements, provide information to agencies and organizations, provide information to organizations on outages and extent of duration and supplies of fuel and where available, estimates of service restorations, and status updates of energy supplies. Washington State has an energy assurance plan and localities need to work with their energy service providers to maintain and update their plans and particularly their energy service provider contact lists.
- **Patrick Massey, FEMA Region 10**, noted that the states provide requirements on emergency response to FEMA and FEMA works with the states through activating Emergency Support Function 12, which focuses on energy. This enables Federal, State, and local agencies to “get a common operational picture” FEMA seeks and prioritizes information on State and local restoration priorities. This is accomplished through use of a request form. Only States can make requires for support, equipment, etc., and through the states, FEMA can support public utilities and non-profits. Under a Federal disaster declaration, FEMA directs Federal agencies like DOE to take actions that can assist response and recovery. FEMA does not normally provide direct assistance to utilities, but could provide it to private entities under special circumstances.
- **Alice Lippert, U.S. Department of Energy, and Mary Brown, Fluor Hanford HAMMER Training Center**, provided an overview on DOE activities and assistance on energy assurance and resiliency, stressing the importance of managing expectations. In an emergency, DOE is the Federal focal point for response and restoration issues and policy decisions related to energy systems. DOE’s role is described in the National Response Plan

in Emergency Support Function (ESF) 12 — energy restoration, local government priorities, and facilitation of coordination to provide services, technical staff, and waiver approvals (e.g., driver hours, weight restrictions, and environmental fuel requirements). DOE works closely with other Federal agencies and has a national ally –based program corresponding to the FEMA regions with a DOE “FEMA Coordinator” in every region of the country. DOE also has a strong volunteer program. Examples of DOE assistance to localities have in the past included: helicopters to do damage assessments, provision of FEMA training opportunities for energy utility staff; assistance in coordination of energy emergency activities, energy infrastructure and associated interdependencies ; the *Energy Assurance Daily* situation reports online; legal authorities and waivers e.g., for fuel requirements; provision of foreign flag vessel, waivers for weight restriction for large equipment carriers; and drivers license waivers; and providing modeling and simulation analysis of energy disruption impacts and interdependencies. The Hammer Training and Education Center, located at the DOE Hanford Site, supports ESF-12 for the DOE Office of Energy Electricity Delivery and Energy Reliability and serves as a reach back capability for technical expertise in the event of an energy emergency. Lastly, DOE provides training, exercises, and lessons learned to State and local energy officials.

### **Working Lunch: Cross-Border Energy Assurance and Resiliency Challenges and Preparations for the 2010 Olympics**

- **Seiki Harada, Harada Management Consulting**, gave a presentation on Critical Infrastructure Assurance for the British Columbia Energy Sector for the 2010 Olympic Games. He said that Canada expects two to three times the normal electricity load in British Columbia during the Olympic Games next February. Examples of critical loads will be lighting at the Olympic venues, media broadcast equipment, and timing equipment for the events, and other non-critical loads are medical and security services. Cross-border cooperation will be important for coordination of power generation and transmission, security of the interties, and preparation for potential weather emergencies.

### **Session 3: Guidance to Improve Local Government Energy Assurance Plans**

- **Ronda Mosley, Public Technology Institute**, briefed participants on information and types of assistance that local governments will need to improve energy assurance and resiliency in their jurisdictions and in the Puget Sound Region, and where/how they can obtain assistance. She outlined the importance of preparing an energy assurance plan and offered a model tool to help officials assess their readiness in case of an energy emergency. These Guidelines, which were developed for the U.S. DOE, assist agencies in building organizational relationships and responsibilities within local government, the private sector, and the region; encouraging coordination; discovering actions that can ease the impacts of short-term energy disruptions; defining long-term strategies and options for dealing with sustained disruptions or outages; providing a tool that can be used to prepare an energy assurance plan; improving all-hazards emergency preparedness through regional collaboration; and learning about innovative and traditional financing mechanisms for energy assurance needs.

## APPENDIX D: PARTICIPANTS

### WORKSHOP PLANNING GROUP

|       |          |                                     |                                  |
|-------|----------|-------------------------------------|----------------------------------|
| Angus | Campbell | Manager, Covington District         | BPA                              |
| Mary  | Robinson | Operations Continuity               | Puget Sound Energy               |
| Mark  | Anderson | Senior Energy Policy Specialist     | WA State CTED                    |
| Roger | Serra    | Director, Security & Emergency Mgmt | Seattle City Light               |
| Jeff  | Parsons  | Plans Section Supervisor            | WA Emergency Management Division |
| Dave  | Behar    | Sr Mgr, Security/Emergency Mgmt     | Snohomish PUD                    |

### WORKSHOP PARTICIPANT LIST

|         |             |                                     |   |
|---------|-------------|-------------------------------------|---|
| Mark    | Anderson    | Sr. Energy Policy Specialist        | WA State CTED                               |
| Mary    | Brown       | DOE ESF#12 Responder                | HAMMER Training & Education Center          |
| Shad    | Burcham     | PPMIII                              | King County Emergency Mgmt                  |
| Adelmo  | de la Cruz  | Snohomish District O&M Manager      | BPA   |
| George  | Hadley      | Mayor Pro Tem                       | City of Normandy Park, WA                   |
| Seiki   | Harada      | Harada Management Consulting        | British Columbia                            |
| Brandon | Hardenbrook | Deputy Director                     | PNWER                                       |
| Dave    | Holcomb     | Protective Security Advisor         | U.S. Dept. of Homeland Security             |
| Eric    | Holdeman    | Director of Port Security           | Port of Tacoma                              |
| John    | Hopfauf     | Street Division Manager             | City of Kirkland                            |
| Ron     | Kessack     | Right of Way Manager                | City of Bellevue                            |
| Gerald  | Kiernan     | Chief Scientist                     | PNWER                                       |
| Mark    | Killgore    | Hydro Security Manager              | Puget Sound Energy                          |
| Alice   | Lippert     | Senior Technical Advisor            | U.S. Dept. of Energy                        |
| Patrick | Massey      | Preparedness Coordinator            | FEMA Region 10                              |
| David   | Mills       | Director, Energy Supply & Planning  | Puget Sound Energy                          |
| Hillman | Mitchell    | Emergency Mgmt Coordinator          | City of Tukwila                             |
| Matt    | Morrison    | Executive Director                  | PNWER                                       |
| Rhonda  | Mosley      | Asst. Exec Director, Research       | Public Technology Institute                 |
| Steve   | Myers       | Homeland Sec. Coordinator           | PNWER                                       |
| Deborah | Needham     | Emergency Mgmt Director             | City of Renton                              |
| Steve   | Reynolds    | Chief Exec. Officer                 | Puget Sound Energy                          |
| Mary    | Robinson    | Manager Operations Continuity       | Puget Sound Energy                          |
| Paula   | Scalingi    | Director                            | PNW Center for Regional Disaster Resilience |
| Roger   | Serra       | Director, Security & Emergency Mgmt | Seattle City Light                          |

|      |            |                            |                    |
|------|------------|----------------------------|--------------------|
| Tuan | Tran       | Power Supervisor           | Tacoma Power       |
| Ute  | Weber      | Emergency Mgt Coordinator  | City of Tacoma     |
| Dee  | Williamson | System Operations Training | Puget Sound Energy |
| Jody | Woodcock   | Director Emergency Mgmt    | Pierce County      |
| John | Hopfauf    | Street Division Manager    | City of Kirkland   |