

Regional Energy Assurance Plans & Initiatives

Workshop on Building Resiliency into Energy Assurance Planning

April 23, 2008

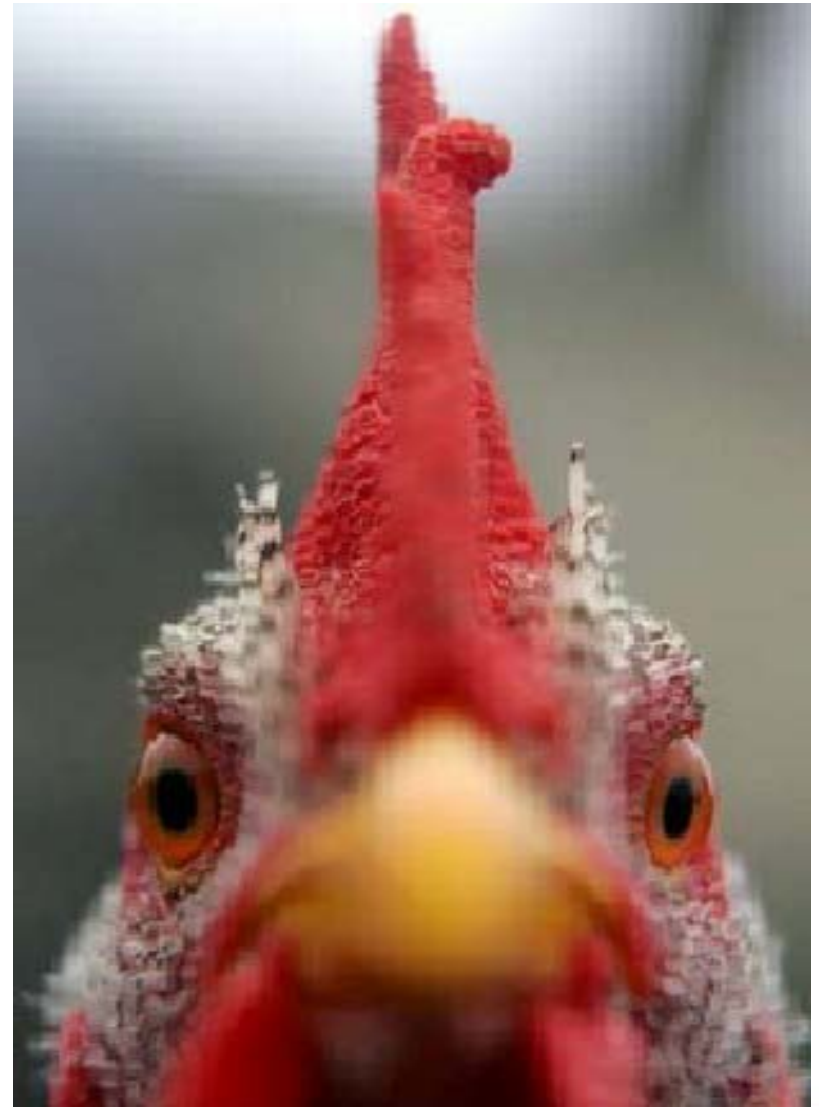


PUGET SOUND ENERGY

The Energy To Do Great Things

Mary Robinson

What Keeps Us Awake At Night?



Hanukkah Eve Windstorm of 2006

December 14-15, 2006



December 9 thru 14, 2006

- ◆ Weather Watch issued by NWS on 12/09/2006
- ◆ 1st windstorm December 11-12
 - ◆ Hood Canal Bridge closed
 - ◆ 41,000 customers without power
- ◆ 2nd windstorm December 13
 - ◆ 71,000 customers without power
 - ◆ 40 line crews brought in from outside region



December 13-14, 2006

- ◆ National Weather Service (NWS) issues “Weather Warning 9:30 p.m. on 12/13
....”powerful storm system will move across the area Thursday afternoon and night...resulting in storm force winds across parts of the area...”
- ◆ NWS convenes conference call with stakeholders across Region.

Friday, December 15

- ◆ 90 state highways closed
 - ◆ Evergreen Point Bridge
 - ◆ Hood Canal Bridge
 - ◆ Tacoma-Narrows Bridge
- ◆ Minimal interruption of ferry service
- ◆ 80+ PSE transmission lines damaged (>50%)
- ◆ 1.8 million customers w/o power in region
- ◆ 200+ out of area line crews



Saturday, December 16

- ◆ State proclamation (all counties)
- ◆ State EOC to phase III (full operations)
 - ◆ State emergency support functions activated
- ◆ First cases of carbon monoxide poisoning
- ◆ 527,346 customers without power in region
- ◆ 31 shelters open
 - ◆ 10 counties



By Thursday, December 21

- ◆ EOC's closed or reduced activation
- ◆ 81,000 customers without power
- ◆ 260 carbon monoxide cases
 - ◆ 7 deaths due to carbon monoxide poisoning
- ◆ Proclamations: 12 county; 11 city; 1 tribe
- ◆ 8 counties with shelters still open
 - ◆ Bellevue special needs shelter
 - ◆ Seattle humane society pet shelter



Aftermath ...



Photo Courtesy of Seattle Times, Steve Ringman

- ◆ 15 deaths total
 - 4 falling debris
 - 1 drowning
 - 1 energized power line
 - 1 fire due to alternate heat
 - 8 carbon monoxide poisonings



After Action Reviews



- ◆ Governor's after action review
- ◆ After action reviews (AAR) – internal
- ◆ 3rd party independent reviews and AAR

KEMA 

**davies
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PSE

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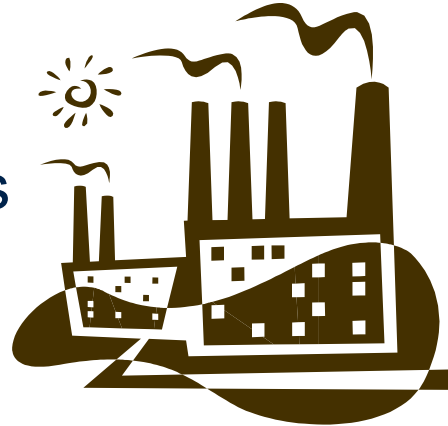
Interdependencies of Critical Infrastructure



Sector Specific Impacts

- ◆ **Business**

- ◆ Production slow downs
- ◆ Revenue losses



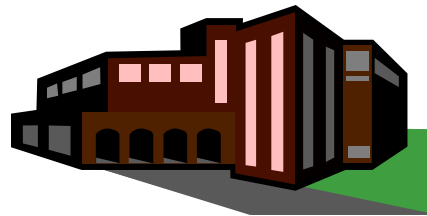
- ◆ **Telecommunications**

- ◆ Back-up generator fuel
- ◆ Loss of cell service



- ◆ **Education**

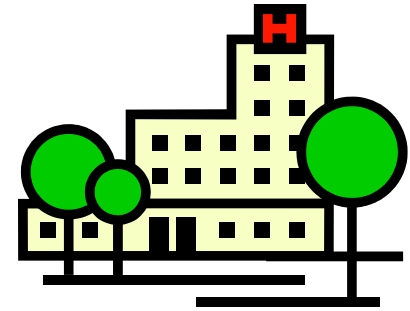
- ◆ School closures



Sector Specific Impacts

- ◆ **Healthcare**

- ◆ Partial hospital operations
- ◆ Regional care center needs



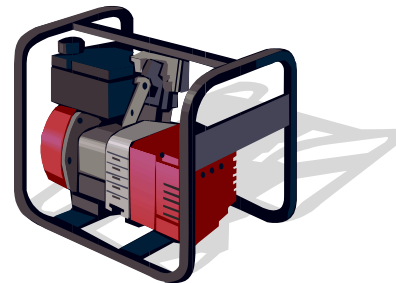
- ◆ **Agriculture**

- ◆ Back-up generator fuel
- ◆ Food refrigeration



- ◆ **Water/Wastewater**

- ◆ Back-up generator fuel



What we're doing to build "resiliency"

- ◆ **Partnerships – National**
 - ◆ Industry Associations
 - ◆ Edison Electric Institute
 - ◆ American Gas Association
 - ◆ NERC Critical Infrastructure Protection Committee (CIPC)
 - ◆ Spare Transformer Equipment Project (STEP)



Building resiliency....

◆ **Partnerships - Regional**

- ◆ Pacific Northwest Economic Region
- ◆ Blue Cascades Exercises
- ◆ Northwest Warning Alert & Response Network (NW-WARN)
- ◆ Partners in Emergency Preparedness Conference
- ◆ Pacific NW Center for Regional Disaster Resilience
- ◆ Energy Sector NW (E-SEC NW)
 - ◆ Informal networking sharing cyber security best practices.



Building resiliency...

- ◆ **Partnerships - State & Local**
 - ◆ State and Local Critical Infrastructure Protection Committees
 - ◆ Emergency Management (State, County, City)
 - ◆ Regional Disaster Planning Task Force & Signatory
 - ◆ Terrorism Early Warning Task Forces
 - ◆ ***WA State Utility Collaboration (public/private)***
 - ◆ Energy Emergency Plans
 - ◆ Critical Infrastructure Identification & Prioritization
 - ◆ Mutual Assistance



Regional Initiatives

- ◆ Blue Cascades I, II, III and IV – Interdependencies
- ◆ “Ah Ha’s” for PSE:
 - ◆ The dependence others have on electricity – lack of back-up generation or contingency plans for long-term power outages.
 - ◆ Who we’re dependent on...transportation, telecommunications, emergency services, law enforcement, water, information technology, etc.



What's changed for us ...

- ◆ MOU with State of WA
- ◆ Utility Road Clearing Task Forces
- ◆ Contacts across all infrastructure sectors
- ◆ Sharing of information with State and County emergency management
- ◆ Developing communications contingencies:
 - ◆ GETS /WPS
 - ◆ Amateur Radio
- ◆ Recognition by emergency services and public health as first responders in the electric/natural gas business.



Questions ?



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