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A Texas Energy Reliability Exercise

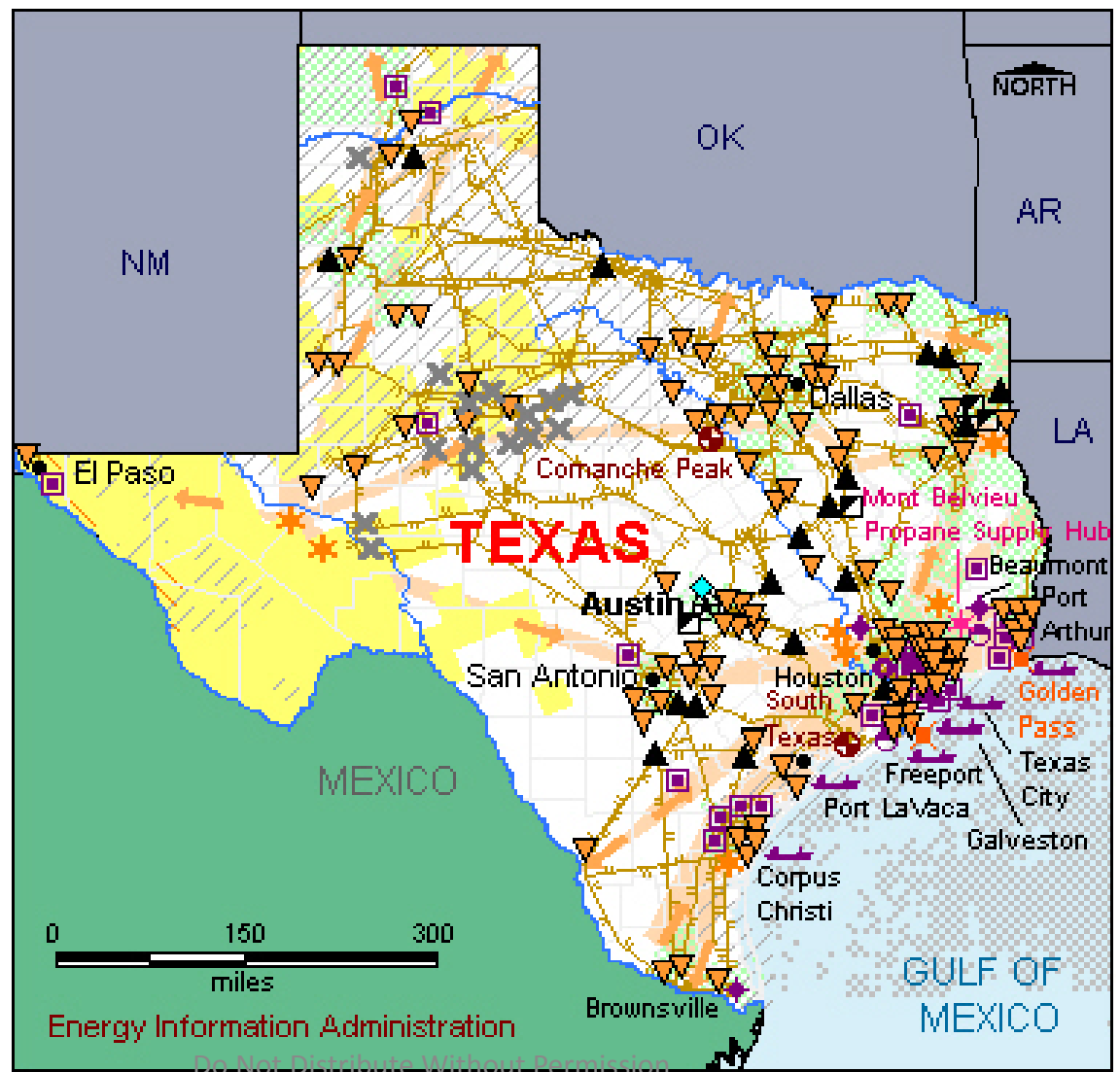
August 24, 2010

Public Utility Commission of Texas



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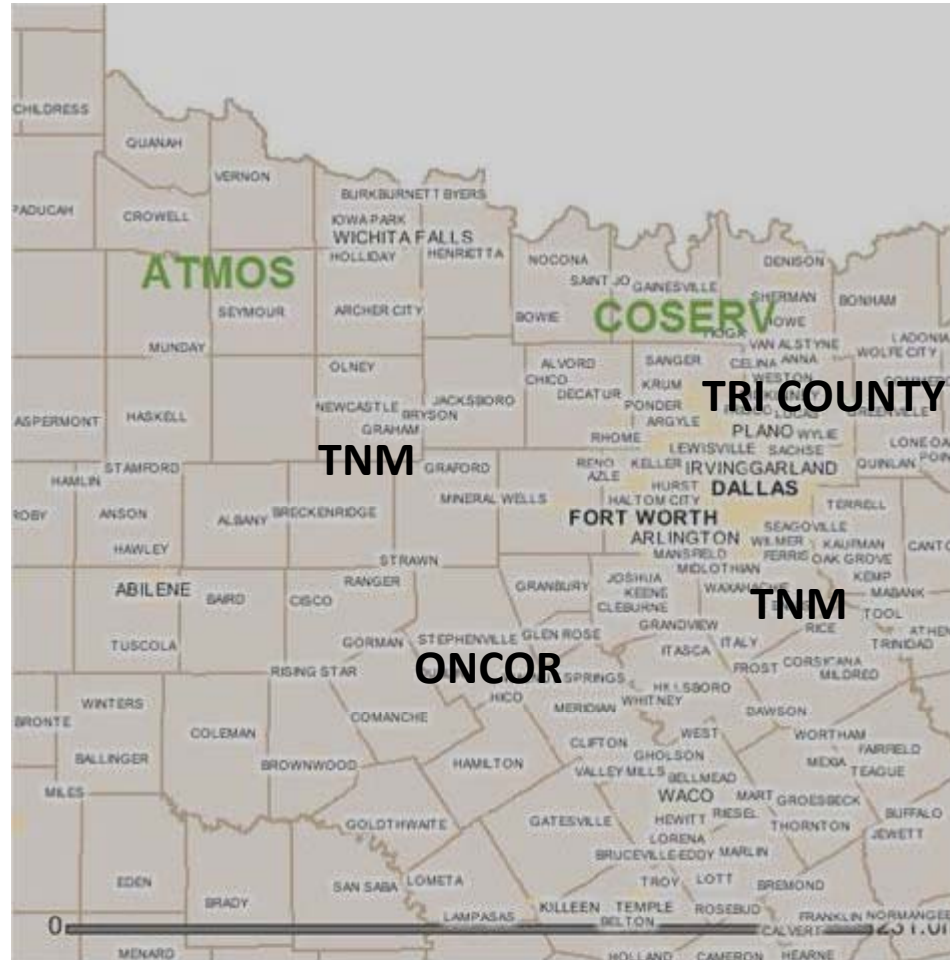
State Energy Profile





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Utility Service Territory



Arctic Cold Front moving across North Texas





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Channel AWSM weather report

February 10



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Emergency Operations Procedure

- **What are we worried about at this point?**
- **How are you communicating? Are you prepared to communicate in the event of an outage?**
- **What is your operations plan in this severe weather scenario? Are any plans activated?**
- **Are you familiar with other sectors emergency procedures?**
- **What communications are occurring between State agencies? Which ones?**
- **What internal communications are occurring?**
- **Are you contacting anyone for assistance?**



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Disruption on the Server

- Malfunctioning PC's
- High traffic on firewall and email server
- No virus detected on antivirus software
- Memo from IT Department

MEMORANDUM

TO: All Employees
FROM: IT Department
DATE: February 10, 2011
RE: Email Disruptions

We have received reports that some of you have noticed that your PCs have been rebooting unexpectedly, and that others have noticed recurrent lock-ups of your system.

We have noticed unusual amounts of traffic going through the email servers, as well as through the firewall on the company's web server. We cannot account for the increase in traffic volume, however, we suspect that a virus may have propagated throughout our organization via email, although no virus had been detected by the corporate antivirus software. Our email system stopped working this morning, and is still being investigated.

Please make arrangements to communicate via alternative methods until we have notified you that this issue has been resolved.



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Communicating Offline

- **General Discussion: How else will this affect your processes and preparations that you have just told us about?**
- What alternative means of communication will you utilize?
- Do these industry partners report outages via email or through a database?
- In the event that these reports are submitted via email, how will these reports be submitted to you?
- In the event that database is not accessible, how will you track these reports?
- Do you notify your workers to report to work (for storm restoration) via email? If so, how will you communicate their reporting times to them?
- Do you utilize an employee database to contact your employees? If so, and this database is not accessible, how will you contact your employees and mutual aid workers? Is this information kept in hard copy form anywhere?



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BREAK



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Channel AWSM weather report

February 11, morning



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Interdependencies

- Electricity outages are causing natural gas processing plants to lose power. Only 25% of facilities have backup generation.
- North Texas gas transmission pipelines lose another 15% deliverability
- Electricity curtailment for some power plants and industrial customers to meet residential and commercial customer demand
- Reports of area homes without power and heating. Gas supply is still in tact from gas company
- Two assisted living facilities in area affected by outages
- How do you confront this issue? Are you prepared for this? How do you respond? How are different sectors communicating formally and informally?



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Outage Map



Do Not Distribute Without Permission



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Persistent IT Issues

MEMORANDUM

TO: All Employees
FROM: IT Department
DATE: February 11, 2011
RE: Network Disruptions

All internal and external networks, including VOIP Telephones have ceased to function. Please do not attempt to use any internal or external networks until further notice. We do not have an estimated restoration time at this point, but IT is addressing the issue.



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BREAKOUT

- Group 1: Commissioners Hearing Room
- Group 2: Hearing Room A



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Tracking Outages

- TNMP, Oncor, and Tri County Electric reporting outages in their service territories
- Reports by zipcode are unavailable due to downed IT system





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Responding During an IT Breakdown

- How many customers are affected? How does the PUC track these outages given the downed database and network issues? How does PUC staff adapt to a technology breakdown?
- How are gas and electricity sectors communicating on the interdependency issues? How do the breakdown in each sector affect the other? What is the role for each?
- How can data be managed effectively for power outage requests? In the gas sector? In the electricity sector?



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LUNCH



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Roof Collapse





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Prioritizing in a Crisis

- Power outage at warming shelter
- Hospital lost power and backup generation has failed
 - 250 patients in hospital
- **How do you prioritize this event?**
- **How does SOC staff handle multiple emergency priorities?**
- **What is the planned response and who are you reaching out to determine the cause?**



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Extensive Transformer Damage

- News helicopter crash into nearby substation
- Power outage to last several days
- **What needs to be done?**
- **How long will these repairs take?**
- **Are spare transformers available in the area?**





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Break



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Recovery

- Customers without gas service:
 - 3,000 residential
 - 230 commercial
 - 17 industrial
- Main transmission line from Waha Hub to Dallas is at 400 psig, significantly below normal 700 psig
- Wichita Falls out of propane
- Trees, electricity poles litter highways and propane trucks are unable to make deliveries
- Customers without electricity
 - 30,000 residential
 - 500 commercial
 - 25 industrial



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Restoration: What are the Priorities?

- **What public information is going out and where does the information originate and flow?**
- **What is the priority of restoring service to customers without gas?**
- **What can TERC and TXOGA do to help out? What involvement does the RRC have with the PUC at this point?**
- **At what point is the crisis over and when does the communication cease?**



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Thank you!

- **Thank you to U.S. Department of Energy for funding this exercise.**
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