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# A Texas Energy Reliability Exercise

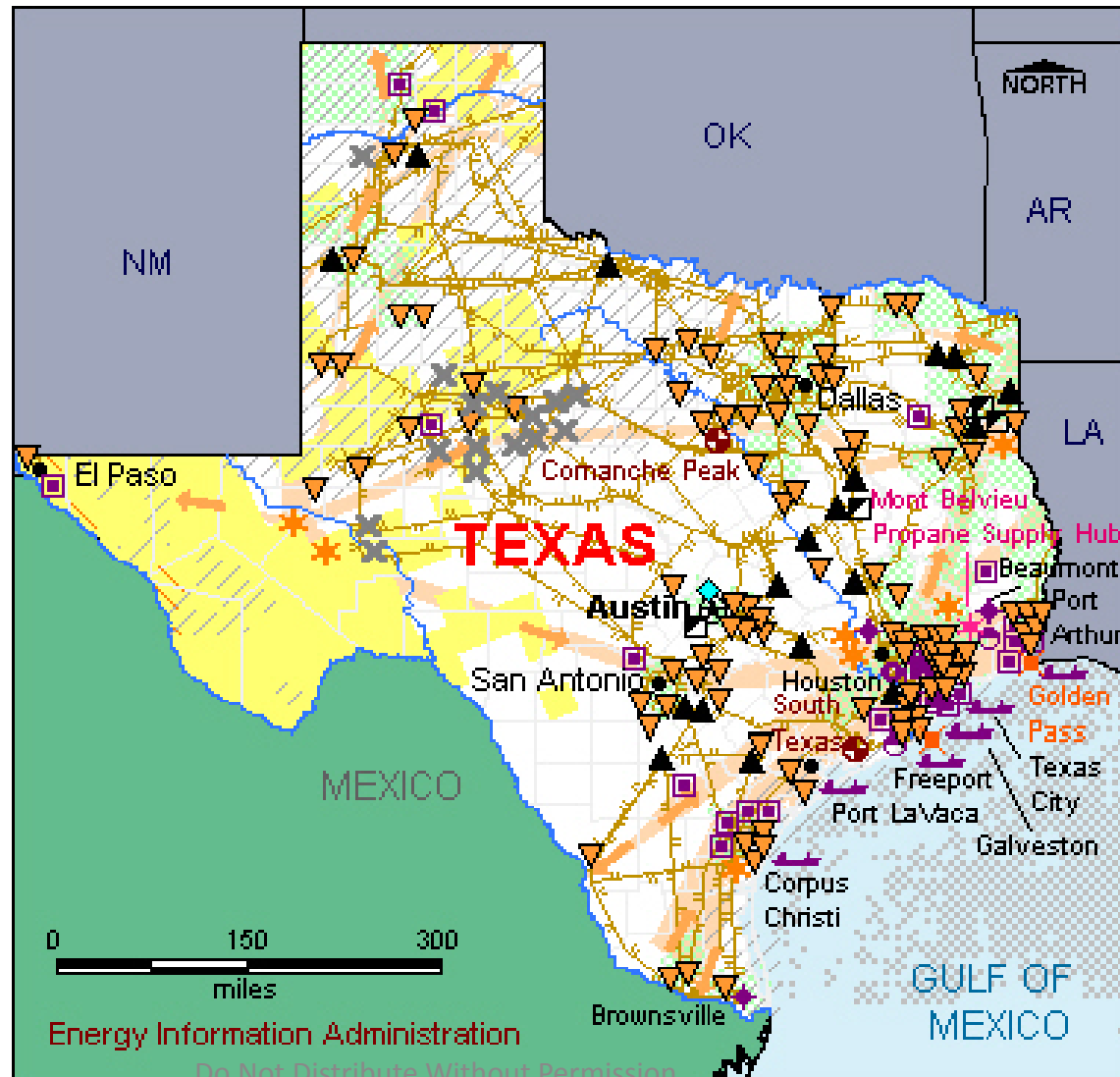
August 24, 2010

Public Utility Commission of Texas



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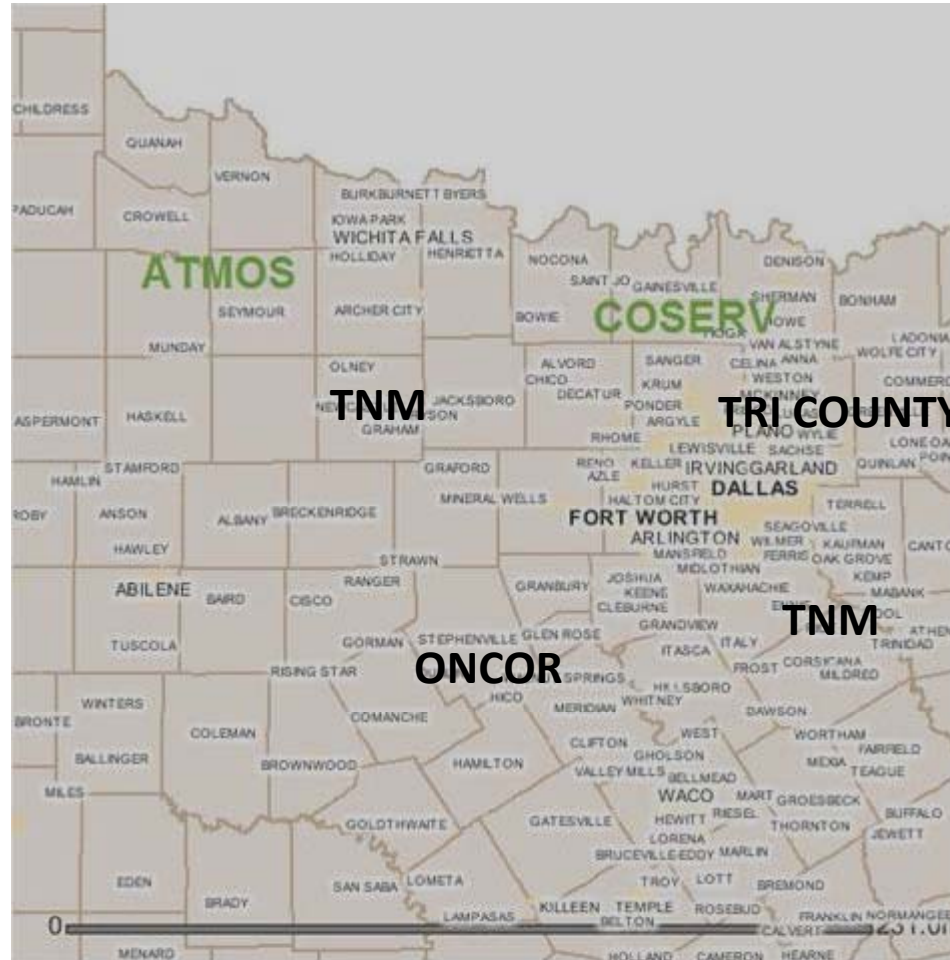
# State Energy Profile





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# Utility Service Territory



# Arctic Cold Front moving across North Texas





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Embed video here.

## 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
- What 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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# Gas Explosion



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# Response to Explosion

- What operations procedure would be used to extinguish the fire and repair the connection? Is this covered in the company emergency plan? Who takes charge? What others would be called in to help repair the leak?
- Is the Mayor, County Judge, City Manager or City Attorney notified? What are their roles, if any? When are the DDC and/or SOC notified? If so, what are their roles? Who notifies whom? Is there ongoing communication? About what?
- Who handles the press? Who handles the injured? Who handles warm sheltering? Who makes sure all of this happens in a professional and timely manner?



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**LUNCH**



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# Freezing Gas Supply

- Gas transmission lines only receiving 60% of reported volumes
- Gas infrastructure freezing up
  - Wells
  - Gathering systems
  - Field compressors
- Processing plants losing power cannot operate
- Spot price has increased to \$12.00/MMBtu
- Supply curtailment being discussed
- Major 36” line running from WAHA Hub to DFW has lost significant pressure



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# Coordination in a Crisis

- **What is the impact on electricity?**
- **What are the lines of communication? At what point in the crisis does TERC come into play? How about the SOC? What is the frequency of contact?**
- **How does TERC manage to monitor all of the transmission lines during a winter storm? How does TERC decide what information to share with the RRC-SOC representative and when to share it?**
- **Is curtailment of gas service an option? Who goes first and who decides? What is the scale of priority?**
- **How does voluntary allocation take place? Does TERC ask a company to give up gas to a company in distress? Does TERC keep up with gas in storage? Do the companies deal with each other and make supply decisions directly?**
- **Does TDEM get involved in voluntary allocation? If voluntary allocation doesn't work, what happens? Is the price of gas an issue in voluntary allocation?**



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# Diminishing Propane Supply

- Liquids terminals running low, especially in Wichita Falls area. Some terminals have lost power.
- Propane trucks in Lawton, OK have propane but not licensed to operate in TX.
- Public facilities, including an assisted living facility and children's home in Electra, are out of propane



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# Addressing Propane Supply

- **What could be done about the drivers' hours limitations? Who would handle it? What would it involve?**
- **Could the Oklahoma trucks bring in propane? If so, how would it be handled and who would handle it?**
- **What could be done about the power outage at the terminals in Wichita Falls?**
- **What could the SOC do about the supply of propane in Electra? Who would handle it and what would they do?**



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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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