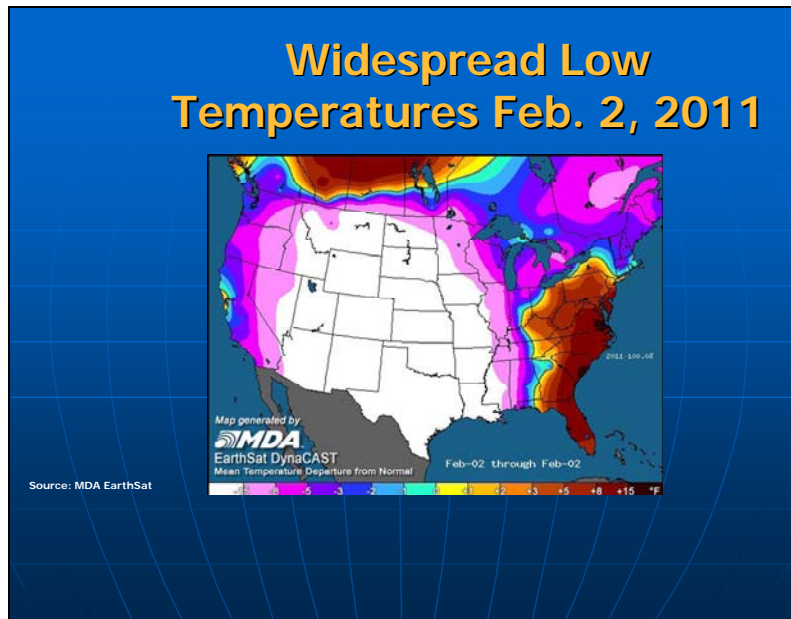


Mr. Chairman, Commissioners, I am pleased to present a summary of the Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011, published on August 16, 2011. I am Loye Hull with the Office of Electric Reliability. With me are Kathryn Kuhlen, James Meade, Heather Polzin and Thomas Pinkston of the Office of Enforcement. This was, however, a true multi-office effort with members of nearly every office on the team, including Office of General Counsel, Office of Energy Projects, Office of Administrative Litigation, Office of Energy Market Regulation, Office of Energy Policy & Innovation, and Office of External Affairs, and I would also like to ask members of those offices, as well as the additional members of OER and OE that participated in the task force to stand and be recognized.

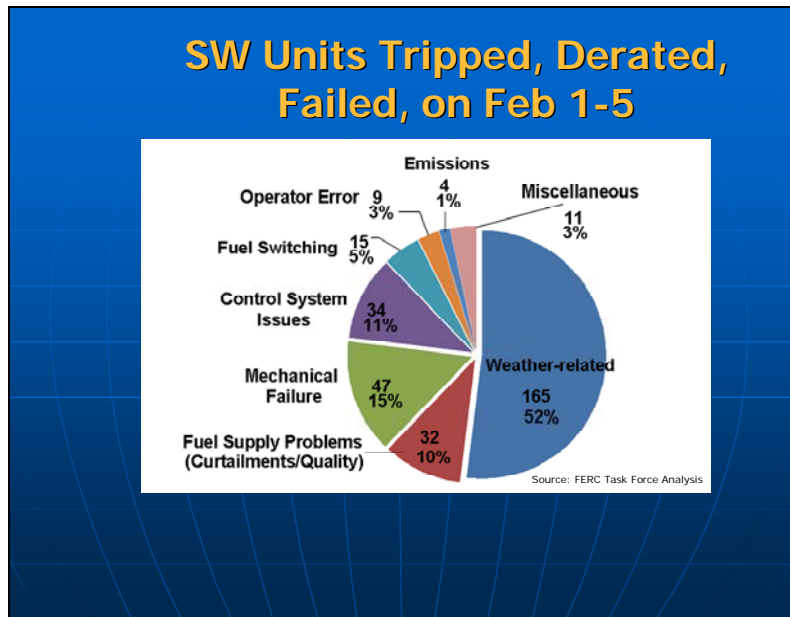
On February 14, 2011, the Commission ordered an Inquiry in Case AD-11-9-000 into the causes of widespread electricity outages and gas curtailments in the Southwest. Approximately 4.4 million electric customers in ERCOT and WECC were affected, while over 50,000 gas customers had their service curtailed in New Mexico, Arizona and Texas. The Commission ordered staff to identify the causes and "appropriate actions for preventing a recurrence." The Commission established a staff task force, and ordered it to report its findings and recommendations "as soon as practicable." Commission Staff and NERC cooperated from the beginning, and in May, the Commission formally announced that FERC and NERC would issue a joint Report. The task force completed the Inquiry and the Commission published the joint report with NERC in six months.

The task force obtained approximately 54 gigabytes of data, issued over 200 data requests, conducted numerous site visits and meetings to gather information from gas and electric entities, conducted numerous outreach meetings with the gas and electric industries, and, in addition to NERC, coordinated with Regional Entities and state legislative and regulatory bodies. We thank NERC for its cooperation and contribution to the work of the task force.

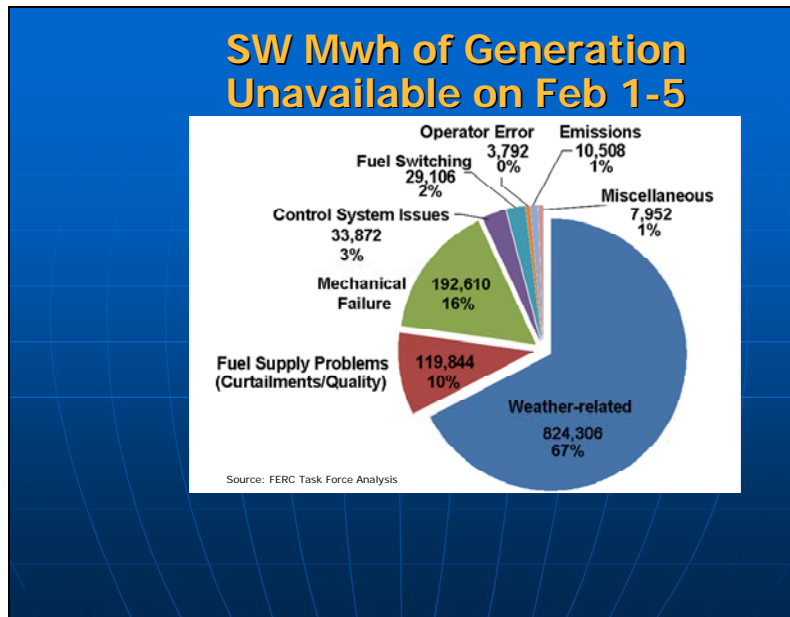
I will be summarizing the task force's findings and recommendations on electricity outages, while Tom Pinkston will be summarizing the gas findings and recommendations.



The task force concluded that temperatures considerably lower than normal, representing the longest sustained cold spell in 25 years, along with steady winds, were the primary causes of the widespread electricity outages. The white areas on this graphic show those areas where the mean temperature was at least 15 degrees colder than normal on February 2, the day when outages peaked. For example, Albuquerque hit almost 40 degrees below normal. Such cold weather was not unprecedented in the Southwest. ERCOT experienced a very similar event in 1989, when it also shed firm load, but the lessons learned from that event were not used to prevent outages during the 2011 event.



From February 1 to 5, over 250 electric generating units in ERCOT, WECC and SPP experienced outages. By number of units, 52% were directly weather-related, while another 15% were indirectly related to the weather, either due to gas supply problems or attempts to switch from gas to alternate fuels.



During the same 5 day period, approximately 1.2 million megawatt hours of electric generation was unavailable. On a megawatt hour basis, 67% of the outages were directly weather related, while an additional 12 percent were indirectly related, again due to gas supply problems and fuel switching.

The single largest problem causing electric outages was frozen sensing lines, followed by frozen equipment, water lines and valves. Wind turbines experienced outages due to blade icing and low temperature limits.

These outages could have been minimized if generators had proactively executed critical winterization procedures such as inspecting and maintaining heat tracing and thermal insulation, and installing wind breaks and enclosures to protect equipment and lines vulnerable to freezing. This event emphasized the lack of any Reliability Standard that directly requires generators to develop, maintain and implement plans to winterize their units. NERC has agreed to submit a Standard Authorization Request to begin the process of developing such a standard. Prompt action could allow a Standard to be in place before winter 2012.

The balancing authorities could have been better prepared for this event by, among other things, requiring accurate information about temperature design limits from generators, not allowing planned outages requested when extreme weather is expected, raising reserve levels when extreme weather is expected, and having procedures that would allow them to order some units to warm up (and be compensated) before extreme weather hits.

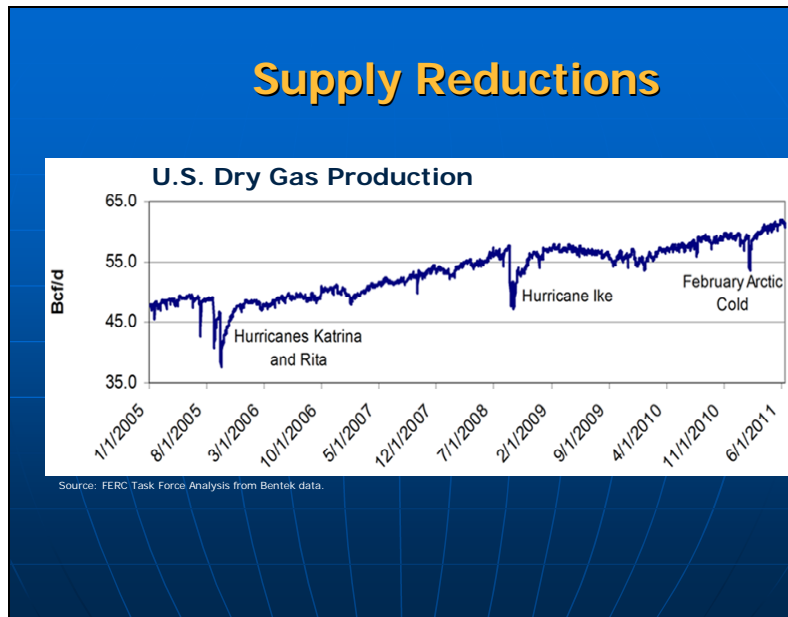
We found that balancing authorities and reserve sharing groups need to review their distribution of reserves to ensure that they are useable and deliverable during contingencies, taking into account such factors as transmission constraints, other

demands on reserve sharing resources, and the possibility that more than one reserve sharing group member might experience simultaneous emergencies.

To protect the gas supply, we also recommended that transmission operators and distribution providers review where critical gas production and transmission facilities are located on the electrical transmission and distribution systems, and determine whether these facilities can be protected in the event of system stress or load shedding.

We also recommended that balancing authorities improve communications during extreme weather events with transmission owner/operators, distribution providers, and other market participants.

Commission Staff is committed to working with NERC and the Regional Entities to ensure that generators, balancing authorities and other registered entities implement applicable recommendations before extreme weather arrives. The conditions experienced in early February could reoccur in the Southwest or even in the South, with similar results, if generators are not prepared for extreme winter weather. Tom Pinkston will now discuss the task force's findings and recommendations in the area of natural gas.



The impact of this cold weather event on natural gas supply to the region was unprecedented. Over 50,000 customers in the Southwest lost gas service - 30,000 in New Mexico, 20,000 in Arizona, and close to 900 in the city of El Paso, Texas. Because it takes much longer to restore gas service than it does electric service, some of these customers were without natural gas for days, or even as long as a week.

The task force's inquiry into the causes of the gas outages began with the local utility companies and the interstate and intrastate pipelines that serve the region, but also extended to gas processing plants and production companies. Although we were unable to contact all of the processors and producers in the area, we reached out to a broad cross section of those sectors, representing approximately 40 percent of the gas production in the area.

The data and information we obtained from the industry confirmed that the primary cause of the gas outages was the extreme, prolonged cold weather, which resulted in widespread freeze-offs at wellheads, gathering systems, and processing plants, reducing the flow of gas in the Texas and New Mexico production basins by approximately 20 percent, a much greater extent than has occurred in the past. The prolonged cold caused production shortfalls in the San Juan and Permian Basins, the main supply areas for the local gas utilities that eventually curtailed service to customers in New Mexico, Arizona, and Texas. Wellhead freeze-offs normally occur several times a winter in the San Juan Basin but are not common in the Permian Basin, which is the supply source that utilities in the Southwest region typically rely upon when cold weather threatens production in the San Juan Basin.

We also learned that in parts of Texas, icy road conditions contributed to the production losses, as crews were unable to access production sites for necessary maintenance, repairs and disposal of produced water.

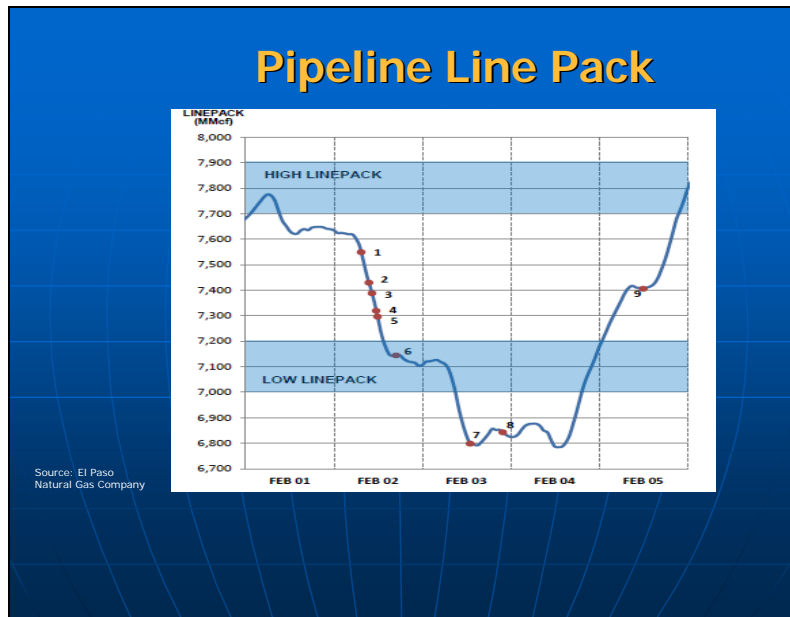
In addition, the rolling blackouts and other electrical outages in Texas and New Mexico contributed to the cold weather problems faced by gas producers, processors, and storage facilities, which depend on electric pumps and compressors to keep gas flowing. However, the pipeline companies, which tend to use larger, gas-fired compressors and which typically have back up generation and compression, were not significantly affected by electric outages.

As you can see from this chart, the effect on production was comparable to that of a major hurricane. From February 1 to 5, production losses in the Southwest totaled almost 15 billion cubic feet of gas.

The extreme cold weather also created an unprecedented demand for gas, which further strained the ability of the utilities and pipelines to maintain sufficient operating pressure.

Although producers in the New Mexico and Texas production areas routinely implement some winterization measures, those measures were generally inadequate in light of the extreme, prolonged cold weather that occurred.

The pipelines and gas utilities prepared for cold weather by increasing their line pack - the amount of gas stored in their pipeline and distribution systems - to maximum levels. As freeze-offs interrupted gas deliveries while demand was increasing, significantly more gas was taken out of pipeline than was put in causing line pack and pipeline operating pressures to decline drastically.



This chart shows the rapid fall of line pack on El Paso Natural Gas, one of the major interstate pipelines that serve New Mexico and Arizona. The numbers refer to key events. For instance No. 1 was a notice of SOC and Nos. 7 and 8 were pressure falling below 600 psi and a low pressure force majeure. In the course of two days, the system pressures declined from a high line pack condition to below the minimum pressures required for normal operation. These low delivery pressures on the El Paso system, resulting from supply failures, were a major factor in the retail outages that occurred in Arizona and southern New Mexico on Feb 3rd.

We also found that some of the local distribution systems were simply unable to deliver the unprecedented volume of gas demanded by residential customers during the cold snap.

However, as a general matter, the pipeline network, both interstate and intrastate, showed good flexibility in adjusting flows to meet demand and compensate for supply shortfalls. We found no evidence that interstate or intrastate pipeline design, system limitations, or equipment failures contributed significantly to the gas outages.

Additional gas storage capacity in Arizona and New Mexico could have prevented many of the outages that occurred by making additional supply available during the periods of peak demand. Additional gas storage capacity in the downstream market areas closer to demand centers might have prevented most of the outages that occurred by making additional supply available in a more timely manner during peak demand periods.

We found that specific measures can and should be taken to improve the reliability of natural gas supply to consumers during extreme cold weather events. Because our recommendations involve sectors of the industry that are not currently subject to the

Commission's jurisdiction, they are directed to state regulators, legislators, and industry participants.

Our recommendations are as follows:

Lawmakers in Texas and New Mexico should work with state regulators and members of the gas industry to determine whether minimum, uniform standards for the winterization of natural gas production and processing facilities could be adopted to improve the reliability of supply during extreme cold weather events.


State utility commissions should work with local gas utilities to determine whether curtailment plans are up to date and can be implemented as efficiently as possible, and whether local distribution systems can be improved to help preserve gas supply when shortages develop.

State regulators, balancing authorities, electricity generators, and local gas and electric utilities should work together to determine whether and under what circumstances residential gas customers should receive priority over electrical generating plants during a gas supply emergency. Gas-fired generators consume large amounts of natural gas, and in some instances, curtailing supply to generators could avoid outages affecting large numbers of residential customers.

While the cold weather that struck the Southwest in early February was unusually severe and long lasting, we believe many of the outages suffered by residents of Texas, New Mexico and Arizona could have been prevented, and it is our hope that state and regional authorities and the energy industry will carefully consider our recommendations and work together to implement them.

This concludes our presentation and we'd be happy to answer any questions.

Slide 7



**Outages and Curtailments
Southwest Cold Weather Event
February 1-5**

Item No: A-4
September 15, 2011