The Effects of Winter Storm Uri on Natural Gas Utilities
The American Gas Association (AGA) represents companies delivering natural gas safely, reliably, and in an environmentally responsible way to help improve the quality of life for their customers every day. AGA’s mission is to provide clear value to its membership and serve as the indispensable, leading voice and facilitator on its behalf in promoting the safe, reliable, and efficient delivery of natural gas to homes and businesses across the nation.

Committed to utilizing America’s abundant, domestic, affordable and clean natural gas to help meet the nation’s energy and environmental needs.
An arctic air mass led to colder-than-normal conditions in all but six states.

HDD Source: NOAA and Paul Pierson

Source: Tropical Tidbits
In November, ERCOT’s worst-case scenario for extreme winter weather: 67,208 MWh.

Peak net generation, Feb 14: 68,834 MWh

Peak forecast demand: 76,783 MWh

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Power demand forecast
Inputs from SPP and CEN (Mexico)

Solar
Natural gas
Wind
Coal
Nuclear

ROLLING BLACKOUTS

FEBRUARY
US natural gas demand set a two-day record on February 14 and 15.
Texas set a new demand record for natural gas consumption during the cold event.

Temperature Deviation from Normal, Feb 14, 2021

RTMA Temperature Anomaly [°F] Sun 21:00Z14FEB2021

Texas Natural Gas Demand (Bcf)

- All-time demand record 23.7 Bcf/d with Mexico exports 27.7 Bcf/d

S&P Global Platts
Natural gas served to all Texas customers increased dramatically during the coldest days.

Texas Natural Gas Demand, Feb 3 - 22, 2021 (Bcf)

Data: S&P Global Platts
Natural gas production declined sharply as temperatures dropped, and then rebounded quickly.
The largest declines in Texas (ERCOT) generation were due to gas-fired units. But, as you can see, natural gas continued to do the heavy lifting even as the grid was stressed under unprecedented demand.
Wind generation in Texas (ERCOT) was well below levels at prevailing wind speeds only days and weeks before the cold event, suggesting severe temperatures were affecting equipment operation.
Natural gas storage stepped up in a big way to meet demand across the country.

Source: U.S. Energy Information Administration, Weekly Natural Gas Storage Report
The Canadian gas market played a key role.
US natural gas prices surged due to supply constraints and record demand.
Despite the sharp increases in daily cash prices, futures contracts faced moderate pressure.
Natural gas prices remain the lowest in decades.

Data: Energy Information Administration
Early Lessons from the 2021 Cold Event

• Natural gas utility operations were largely uninterrupted during the cold event.

• Energy diversity of supply and end-uses is vital.

• Energy systems with heavy dependence on electricity for space heating will be challenged by exceptionally cold temperatures.

• Energy system resilience will be achieved through a diverse set of integrated assets.
Gas Utility Responses to Winter Storm Uri

- Ensuring safe and reliable operations across the life of the storm
- Making sure the financial impact to customers is as minimal as possible
  - Accessing capital to cover the extraordinary costs of gas experienced during the storm
  - Filings for the establishment of regulatory assets
State Regulatory Commission Responses to Winter Storm Uri

Commission ordered investigations into the impacts of Winter Storm Uri on customers and utilities

9 state regulatory commissions responded to the event with an ordered investigation

4 state regulatory commissions ordered some form of deferred cost treatment for costs relating to Winter Storm Uri
Natural gas is delivered to customers through a 2.6-million-mile underground pipeline system. This includes approximately 2.3 million miles of local utility distribution pipelines and 300,000 miles of transmission pipelines that stretch across the country.

What were lessons learned from the interactions between state regulators and gas utilities?

- How can gas utilities better serve customers during these extraordinary events?
- The importance of gas supply and capital planning
- Effective strategies to minimalize extraordinary impacts on utility customers
The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 76 million residential, commercial and industrial natural gas customers in the U.S., of which 95 percent — more than 72 million customers — receive their gas from AGA members. Today, natural gas meets more than 30 percent of the United States' energy needs.

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