



**ENERGY AND ENVIRONMENTAL MARKETS
ADVISORY COMMITTEE
JUNE 3, 2021 MEETING**

**February 2021 Winter Storm: Impact on
Futures Markets**

Division of Market Oversight & Division of Clearing and Risk

Disclaimer

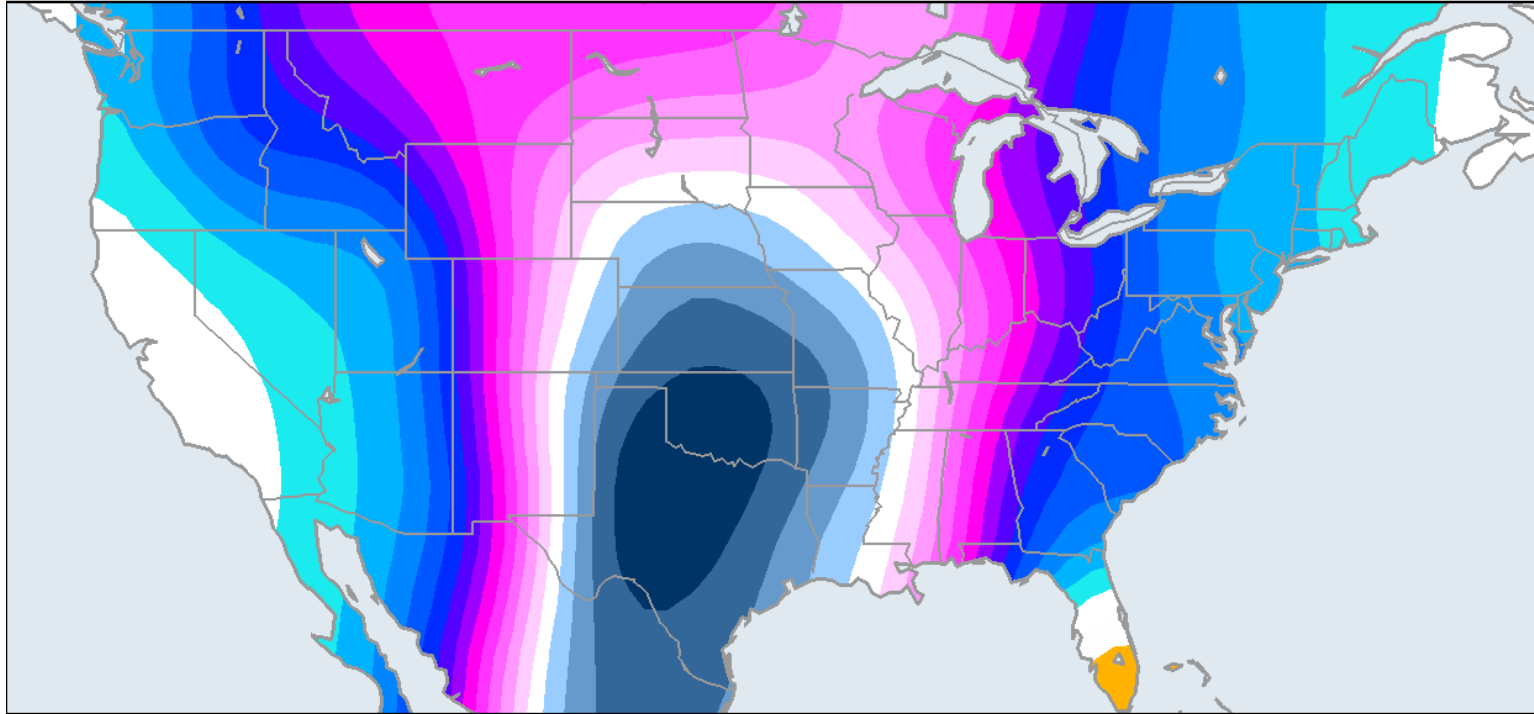
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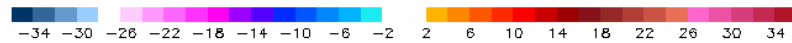
Overview

Winter storm affected large part of the U.S.; Record cold temperatures in the Southwest

7 Day Temp Anomaly vs 5 Year Avg



Week Ending 02/19/2021



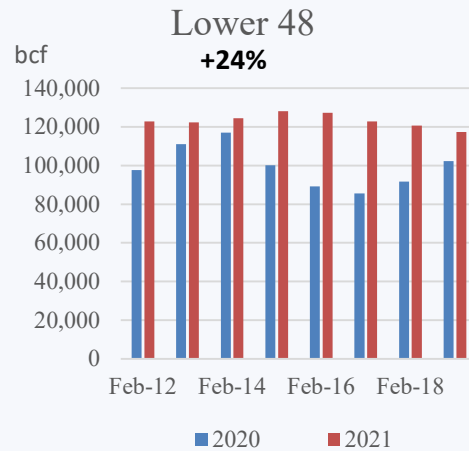
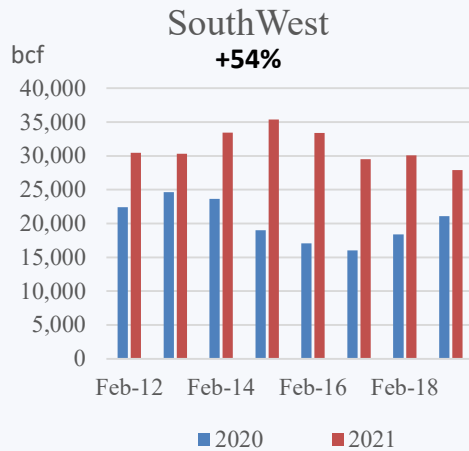
Source: DTN

Natural Gas

Natural Gas Demand and Supply

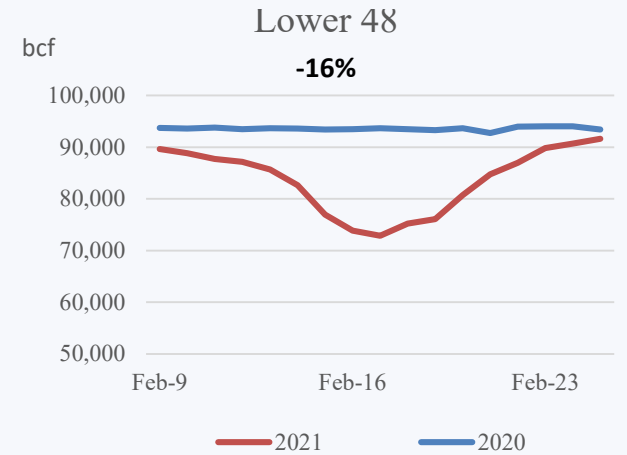
Sharp increase in demand; largest monthly decline in production due to well freeze-offs

Natural Gas Demand



Source: Refinitiv Eikon

Natural Gas Production



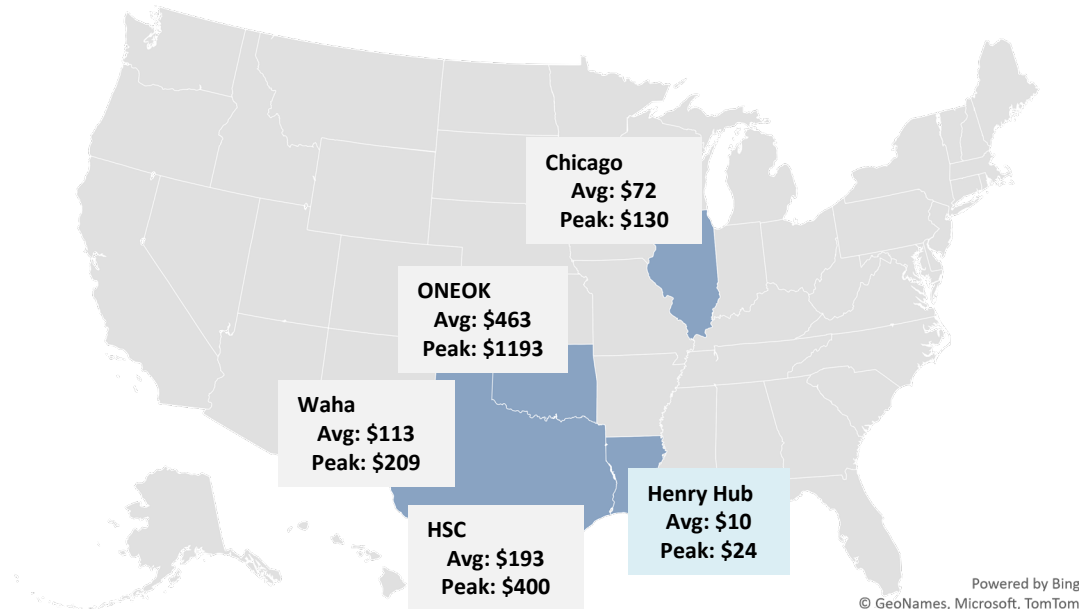
Source: Refinitiv Eikon

Demand-supply imbalance met from storage withdrawals of more than 300 bcf: second highest withdrawal ever (highest in January 2018)

Natural Gas Prices

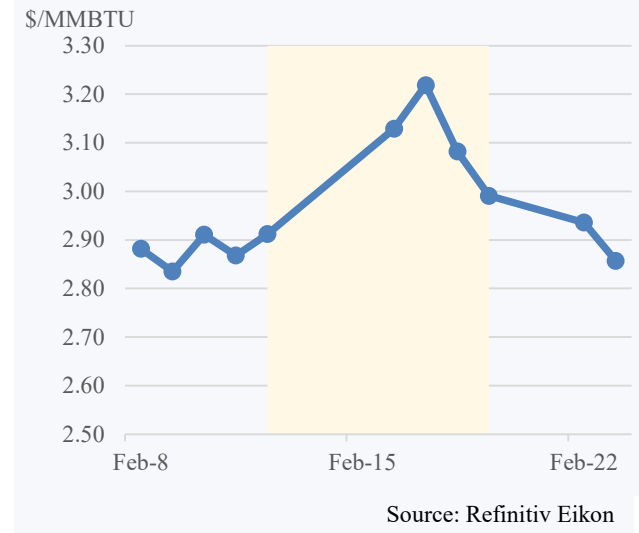
Sharp increase in spot gas prices; prices in excess of \$1,000/MMBTU reported

Daily Gas Prices: Feb 12 - Feb 19



Source: Platts

March NG Futures



Futures prices relatively less volatile: active month was March with the delivery period two weeks out

Electricity

Electricity Markets: Texas

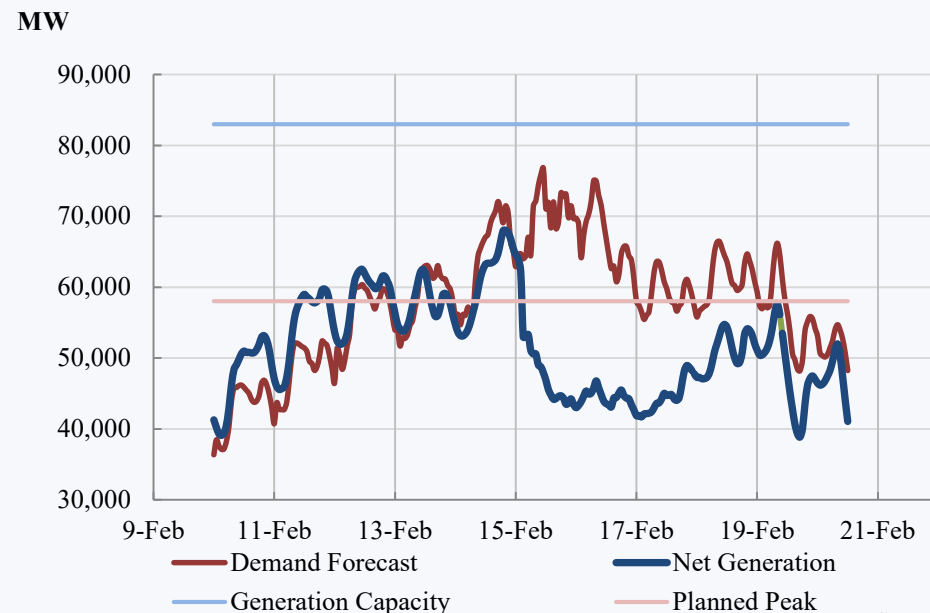
Background

- Texas electricity grid is relatively isolated from the rest of the U.S.; operated by Electricity Reliability Council of Texas (ERCOT), and regulated by Public Utility Commission of Texas (PUCT)
- “Energy-only” market; approximately half of generation from natural gas

Impact of storm

- Equipment failure due to inadequate weatherization
- Widespread outages; ERCOT implemented load shedding to prevent system collapse
- Net generation just above 50% of installed capacity during peak of the storm

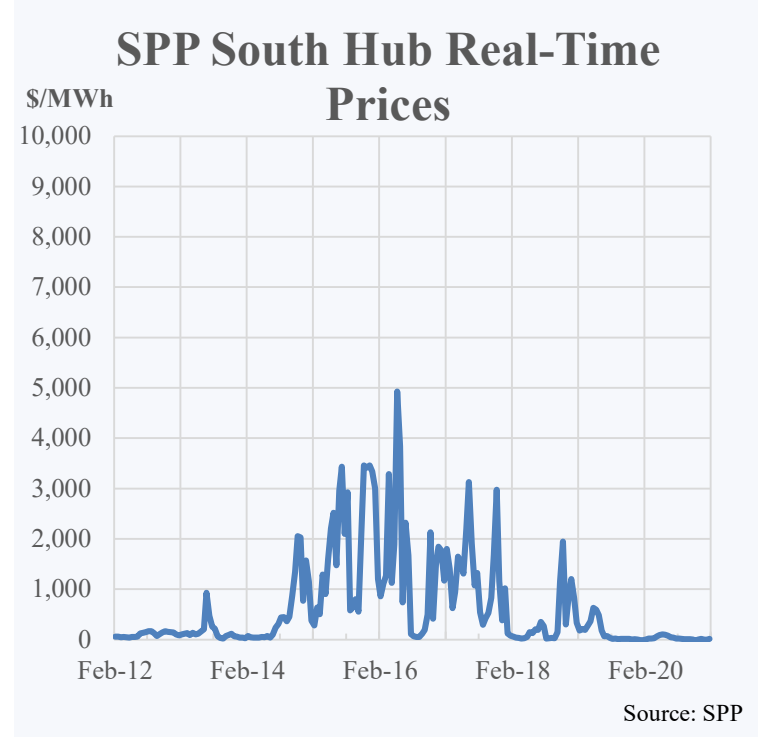
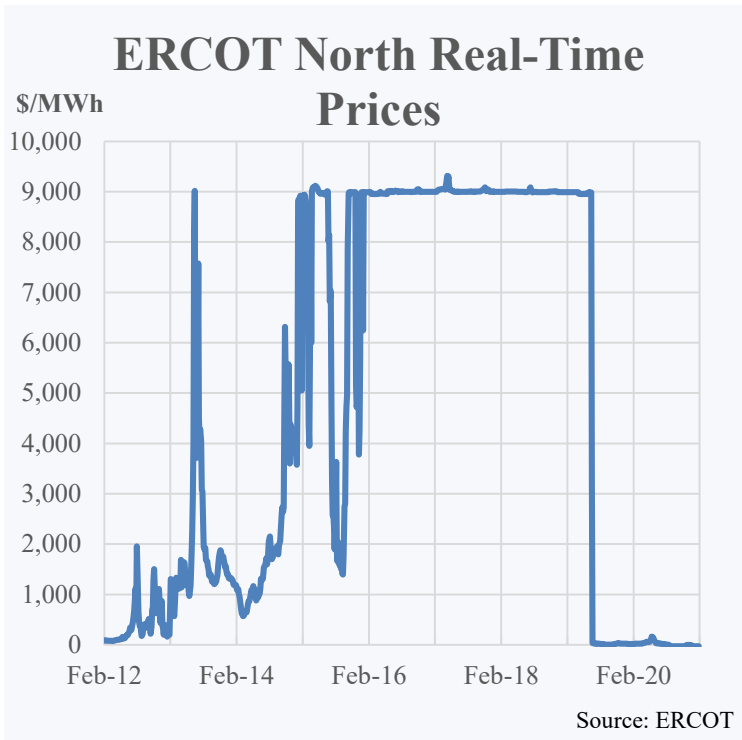
ERCOT Generation vs Installed Capacity



Source: EIA

Electricity Prices

High demand, generation shortfall, and high price of natural gas led to high prices for electricity

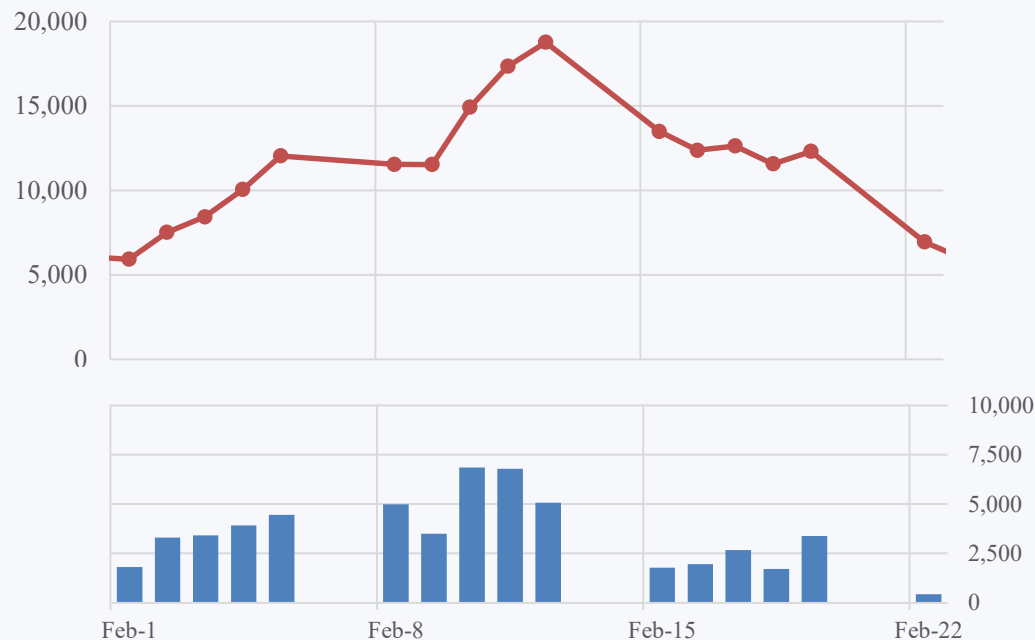


High energy prices in ERCOT meant to compensate generators for variable and fixed costs; some retail contracts indexed to wholesale prices

ERCOT Futures

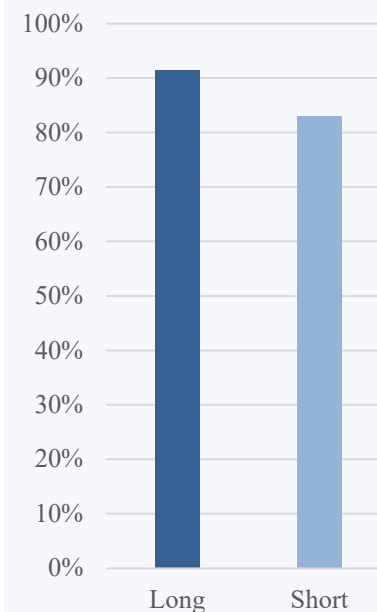
Futures cash settle to ERCOT prices; Significant increase in ERCOT daily futures volumes and open interest leading up to storm

ERCOT Daily Futures OI and Trade Volume



Source: CFTC

Commercial Share of OI



Source: CFTC

Commercial traders dominate contract open interest

ERCOT Price Adjustments

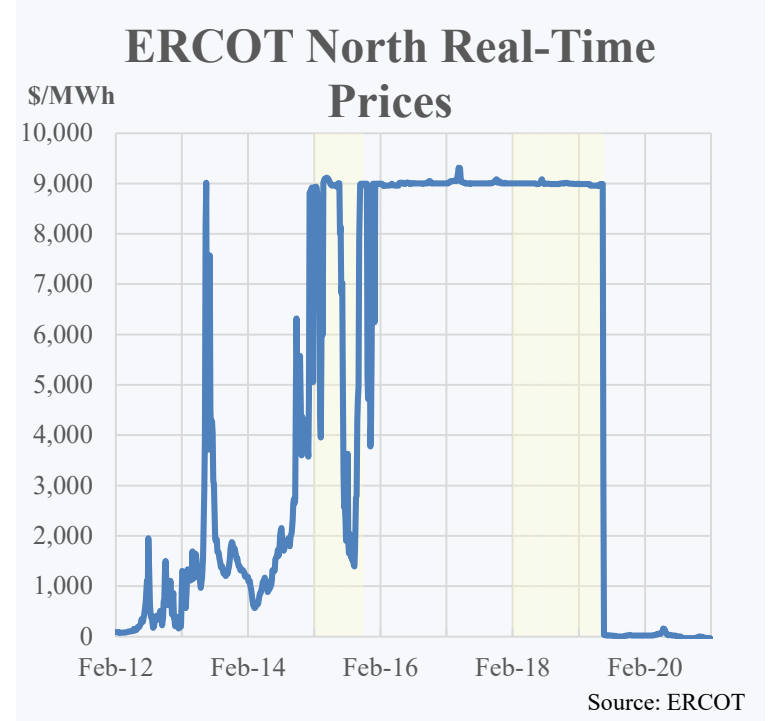
PUCT Directives to ERCOT

- **Feb 15, 5:30 pm**: Set prices to cap of \$9,000 during periods of load shedding; Price adjustments **retroactive** to morning of 2/15.
- **Feb 16, 1:00 pm**: Rescinded retroactive price changes: prices between 1:00 am and 5:30 pm on 2/15 restored to original levels of around \$6,000.

Texas Legislature (through early March)

- Pressure by Texas legislature to retroactively reduce prices to help consumers.
- ERCOT Independent Market Monitor report on March 4: \$9,000 price cap applied incorrectly from Feb 18 – Feb 19, 9:00 am, since system was not load-shedding; total impact estimated at \$16 billion within the ERCOT system.

Re-pricing efforts eventually abandoned



Futures Markets: Potential Impacts

Potential Impact on Futures Markets

- ERCOT re-pricing efforts raised possibility of re-settling futures contracts.
- Daily and monthly contracts with notional value of several billion dollars could have been affected.
- By the time re-pricing efforts were abandoned, futures contracts had settled.
- Changes in the settlement price would have resulted in DCOs collecting variation margin from its members based on the new settlement price.
- Staff estimated the size of these pays and determined that several clearing members would have had very large pays, but not greater than pays they make regularly.

CFTC Actions

- Monitored developments at PUCT and Texas Legislature
- Held regular discussions with DCOs, FCMs, and DCMs
 - Monitored customer and firm positions, margins and cashflows
 - Identified clearing members and customers with exposure to re-pricing futures
 - Verified all pays were made on time
 - Ensured clearing members had adequate liquidity and capital
 - Ensured clearing members were collecting from customers