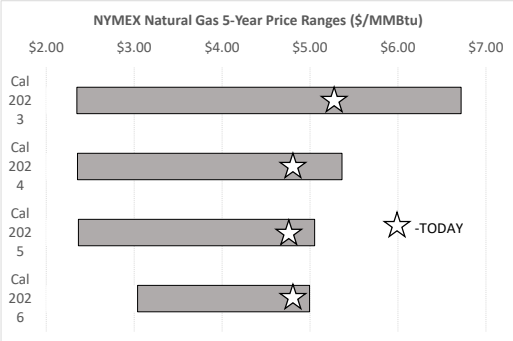




Wednesday, December 14, 2022

Natural Gas Commentary

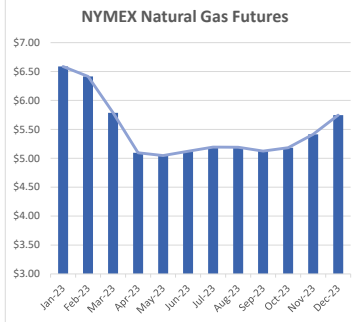
- The 12-month natural gas strip declined more than 25% since September as the potential railroad strike was averted, production remained robust, and the start of typical winter weather has yet to materialize. After reaching \$9.238 on September 14th, prompt-month gas prices settled yesterday at \$6.587 per MMBtu.
- In its Short-Term Energy Outlook, the EIA is forecasting 2023 natural gas prices to average \$5.43 per MMBtu after averaging \$6.64 in 2022, with the stipulation that price volatility will remain extremely high throughout the winter.
- Natural gas production has exceeded pre-pandemic, record-setting levels of more than 100 Bcf per day, representing a 4% increase year-over-year. Total U.S. gas demand is ~1.0 Bcf per day higher as compared to 2021. Even with Freeport LNG coming back online (likely early January) it is expected that the gas storage deficit could once again turn into a surplus vs. the 5-year average.
- Weather remains the primary driver for natural gas prices as peak-winter approaches.



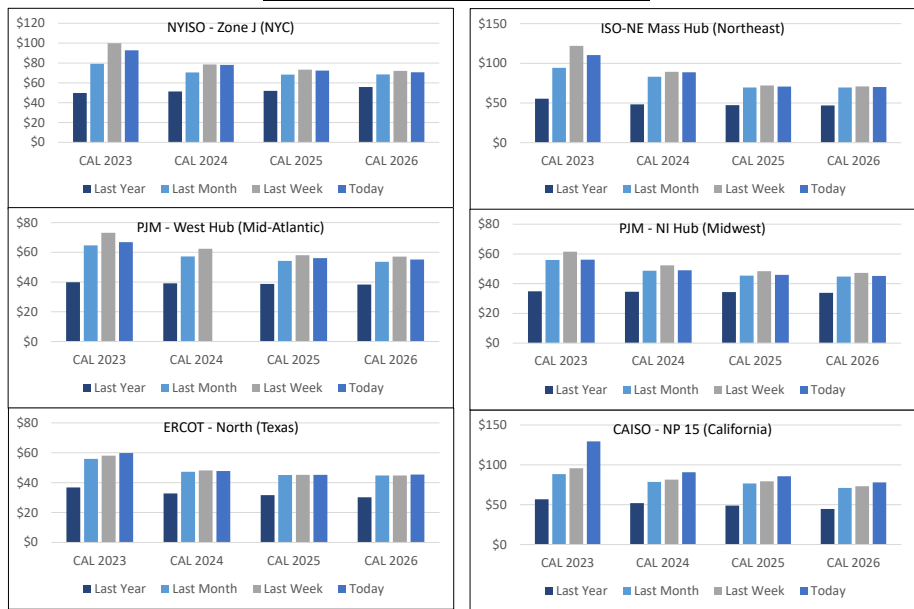
NYMEX Natural Gas Futures

Month	\$/MMBtu	% Δ
Jan-23	\$ 6.587	4.6%
Feb-23	\$ 6.416	6.0%
Mar-23	\$ 5.785	6.9%
Apr-23	\$ 5.096	7.8%
May-23	\$ 5.047	7.2%
Jun-23	\$ 5.121	7.0%
Jul-23	\$ 5.194	6.7%
Aug-23	\$ 5.190	6.4%
Sep-23	\$ 5.124	6.4%
Oct-23	\$ 5.184	6.4%
Nov-23	\$ 5.414	4.6%
Dec-23	\$ 5.745	4.4%

Note - Δ is change in price over past 30 days.



Electricity Market Update (Prices in \$ / MWh)



Bullish Factors Creating Market Support

- Weather-driven heating demand is expected to increase as a mild early-December gives way to more typical seasonal temperatures.
- Freeport LNG terminal is set to resume exports after several delays.
- Elevated prices for LNG in Europe and Asia persist.

Bearish Factors Creating Market Resistance

- Natural gas production remains strong.
- U.S gas inventory has recovered to within <2% of prior-year and 5-year averages.
- Concerns remain over possible economic recession in the U.S., Europe, and Asia.
- Crude oil futures have slid to 1-year lows.

Electricity Market Commentary

- Forward power prices for 2023-2027 have increased 5-10% across most of PJM, NYISO, and ISO-NE over the last month. Real-time prices in all deregulated regions have settled >50% higher in 2022 YTD vs. their 5-year averages.
- A New York City taskforce is working with the Department of Buildings to more clearly outline the role of RECs in compliance with Local Law 97. It is expected that the market will be flooded with RECs starting in 2027 as the Clear Path NY and Champlain Hudson Power Express transmission lines connect clean energy to NYC.
- ISO-NE expects its winter LNG cargos to average \$31 per MMBtu, 25% below the global rate due to its long-term fuel security agreements. LNG provides key support for electric generation to several parts of New England.
- Congestion prices in ERCOT have averaged \$13 per MWh in December as renewables overload the state's grid.
- West coast gas prices are spiking as Pacific Region storage is well below average and pipeline outages are causing scarcity. This combined with an extended cold spell has left power prices soaring with expectations for even higher prices in Q1 of 2023.

Oil Prices

	\$/Bbl	% Δ
WTI Crude	\$ 72.89	-18.1%
Brent Crude	\$ 77.28	-19.5%

	\$/Gal	% Δ
RBOB (Gasoline)	\$ 2.08	-20.4%
No. 2 Heating Oil	\$ 2.82	-36.0%

U.S. Temperature Forecasts

