NATURAL GAS MARKET UPDATE
NOVEMBER 2022

ecom-energy
Objective Consulting, Personal Service, Energy Excellence

MARKET SUMMARY

BIGGEST FACTORS: WEATHER & PRODUCTION

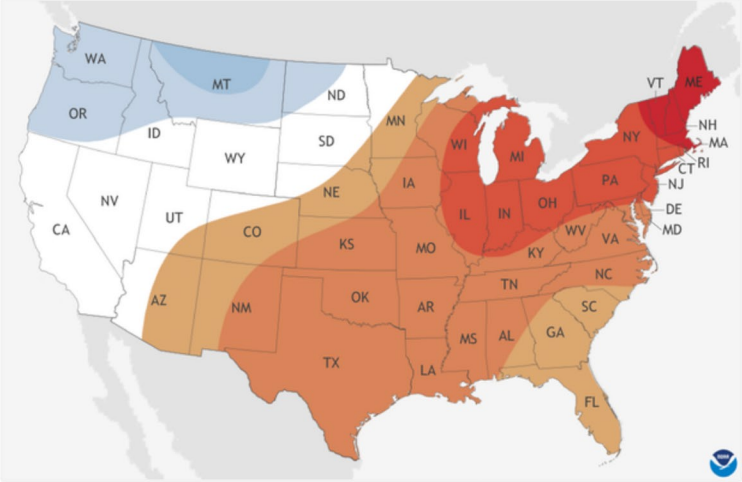
Fall brought a substantial drop in natural gas prices, which is being eroded by volatile November forecasts and seasonal uncertainty. Record natural gas production is helping anchor prices.

PROCUREMENT TAKEAWAY

The fall pricing dip revealed the need for a proactive energy management strategy. Ecom-Energy monitors the market daily and can help your facilities capitalize and hedging opportunities.

WEATHER (BULLISH/NEUTRAL)

TAKEAWAY - As winter creeps in, natural gas prices rose more than 10% to begin November upon expectations of rising demand.



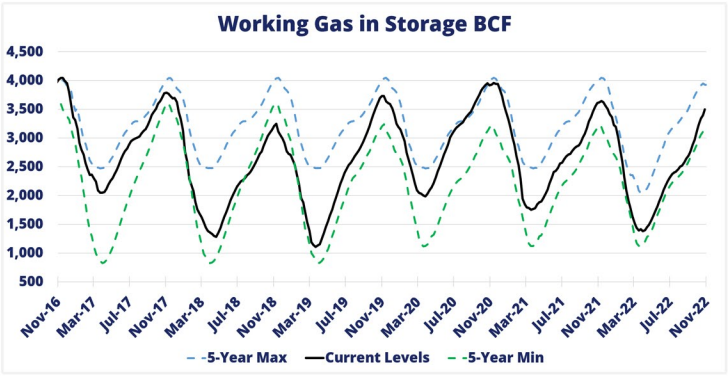
Source: National Oceanic & Atmospheric Administration (NOAA)

Winter forecasts are heavily influenced by the presence of La Niña, which forecasters say is likely to stick around through the winter months.

In early November, subtropical storm Nicole had a bearish pricing effect amid possible demand destruction and reduced exports.

STORAGE (BEARISH/NEUTRAL)

TAKEAWAY - SoCalGas' caverns remain full, with little need to draw from storage. Increased Aliso Canyon capacity from the CPUC has helped.



Source: EIA

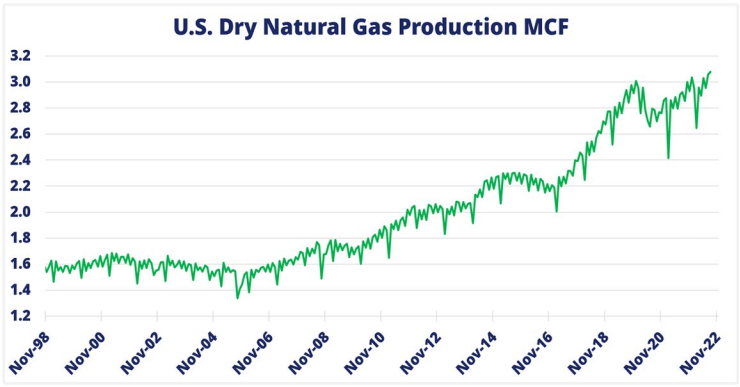
Working natural gas stocks were 4% lower than the five-year average and 3% lower than last year at this time for the week ending October 28.

STORAGE (CONTINUED)

IEA has noted that while immense LNG imports have prepared Europe for this winter, next winter may prove even more foreboding.

PRODUCTION (BEARISH)

TAKEAWAY - U.S. natural gas production and demand will rise to record highs in 2022 according to the EIA's latest Short-Term Energy Outlook.



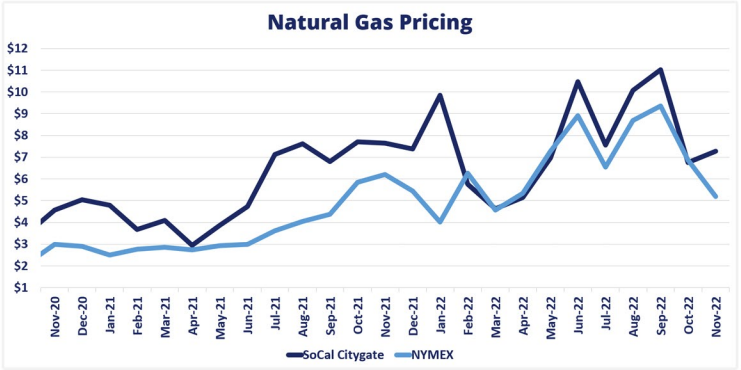
Source: EIA

As the economy grows and consumers burn more oil and gas, EIA projects carbon dioxide emissions from fossil fuels will rise to 4.975 billion tonnes in 2022 from 4.904 billion tonnes in 2021.

Natural gas consumption in China could see a 1% decline this year - the first drop in China's oil demand in 20 years.

PRICING

TAKEAWAY - After a rare reprieve, natural gas futures rallied in early November on cold weather forecasts and stronger heating demand.



Source: EIA

IN THE NEWS

The California Independent System Operator (CAISO) got through a record-setting heat wave in September without resorting to rolling outages - a "remarkable outcome" - in part because of 3.5 GW of storage that was added since mid-2020, the grid operator said in a recent report.

Also, consumers cut their electric use by about 1,510 MW in response to calls for conservation and other efforts on September 6 when the CAISO grid hit a record peak load of 52,061 MW.

"As we continue to integrate new resources onto the grid and make other necessary adjustments, our experience and lessons learned during the September 2022 heatwave will help us navigate the next climate-driven challenge," CAISO said.

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In 2021, 60% of the country's coal was produced in the western U.S., but only 28% of workers in the coal mining industry worked there. This difference is related to the technologies used in the East and West; surface mines in the West can use massive mining equipment to extract large amounts of coal with relatively fewer workers.

In the U.S., coal is primarily used for electricity generation. The Clean Air Act of 1970, and subsequent amendments in 1977 and 1990, restricted sulfur emissions from coal-fired power plants. One way for plants to meet the emissions regulations was to burn low-sulfur coal, most of which is found in the West. The resulting growth in demand for low-sulfur coal expanded western coal production.

In 2021, on average, every coal worker in the West produced 16 tons of coal per hour. In the East, the average worker produced 4 tons of coal per hour. Mining productivity, or the amount of coal produced per employee hour, is greater in the West because most western coal mines are large, open-pit operations that tap thick coal seams that are close to the surface. This setup allows western mines to use super-sized draglines, shovels, and trucks, which allows them to extract more coal with fewer workers.

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Eight new natural gas-fired combined-cycle gas turbine (CCGT) power plants have come online or will come online in the U.S. this year. These new plants will add 7,775 megawatts (MW) of electric generating capacity to the electric grid. These eight projects reverse four years of decline in CCGT plant start-ups. EIA expects CCGT electric generating capacity to reach almost 290 gigawatts (GW) by year-end, or 24% of total U.S. generating capacity.

CCGT plants are one of four major sources of natural gas-fired power generation and the single largest source of both electric generating capacity and electricity generation. CCGT plants use both a natural gas and a steam turbine. Output from the U.S. CCGT fleet will likely rise from 32% of total electricity generation last year. Shares of coal-fired generation (22%) ranked second, and nuclear sources (19%) ranked third in terms of electric generating capacity and electricity generation in 2021.