NATURAL GAS MARKET UPDATE

OCTOBER 2022



MARKET SUMMARY

BIGGEST FACTORS: STORAGE & PRODUCTION

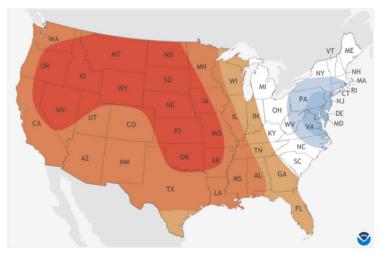
Strong storage injections reflect waning shoulder season demand, robust production levels, and added domestic supply benefit from the protracted Freeport LNG outage in June.

PROCUREMENT TAKEAWAY

Late October has presented a narrow window for hedging opportunities through winter uncertainty. Customers that have been on the fence should capitalize on the depressed prices quickly.

WEATHER (BEARISH)

TAKEAWAY - Drought conditions are present across ~59% of the country, but parts of the Western U.S and southern Great Plains will continue to be the hardest hit this fall/winter.

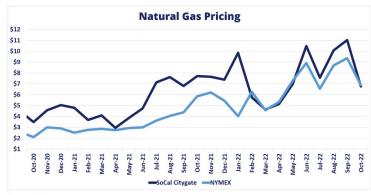


Plummeting October futures prices reflect a market in the process of reassessing winter risks amid a combination of surging production, warm weather, and rising gas inventories.

This year La Niña returns for the third consecutive winter, driving warm temperatures for the Southwest, Gulf Coast, and eastern seaboard.

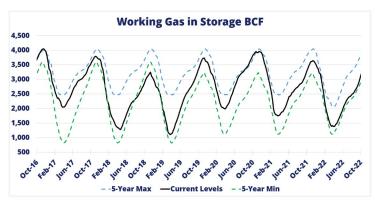
PRICING

TAKEAWAY - U.S. natural gas futures fell almost 60% in October compared to their September peaks.



STORAGE (BEARISH/NEUTRAL)

TAKEAWAY - Natural gas futures fell to their lowest since March after numerous larger-than-expected storage builds in October.



Working gas in storage was 3,342 Bcf as of October 14. Stocks were

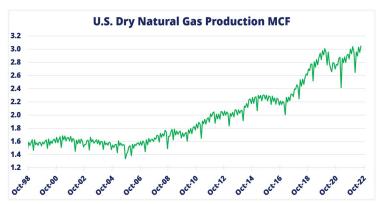
STORAGE (CONTINUED)

below the five-year average but within the five-year historical range.

October 14 marked the fifth consecutive triple-digit storage injection and continued an autumn trend of narrowing deficits to historic averages.

PRODUCTION (BEARISH)

TAKEAWAY - After months of extreme European demand and regulatory limits on flaring, U.S. natural gas production reached an all-time high.



In late October, natural gas prices in West Texas plunged toward zero as booming production overwhelmed pipeline networks.

After a surge of LNG demand in Europe, vessels are now loitering off the coast waiting for slots at crowded terminals to unload their cargoes.

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IN THE NEWS

Natural gas production in the U.S. has generally increased over the past decade because of the widespread adoption of horizontal drilling and hydraulic fracturing techniques that allow operators to increase the efficiency of natural gas production from shale formations. In 2021, natural gas from shale formations accounted for 79% of all U.S. natural gas production. The increase in dry natural gas production was accompanied by an almost 4% increase in natural gas plant liquids (NGPL) production in 2021, which has grown every year since 2005, averaging just under 8 billion cubic feet per day in 2021. The expansion of infrastructure needed to process growing volumes of marketed natural gas has resulted in more recovered NGPLs, leading to both greater domestic consumption and increased export volumes of ethane and propane.

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In their latest Winter Fuels Outlook, the EIA forecasts that U.S. households that primarily use natural gas for space heating will spend an average of \$931 on heating this winter (October–March), which is 28% (or \$206) more than last year.

Duke Energy has filed to offer customers in Florida a refund on their electric bill to reflect tax credits the company will receive retroactively under the Inflation Reduction Act (IRA).

Five Duke Energy solar sites in Florida will qualify for tax credits under a provision of the IRA that allows refunds on certain renewable energy projects placed into service after December 31, 2021.

Duke Energy expects to receive an initial tax credit of \$56 million that will reduce residential customers' rates by about 1%. The company plans to pass any additional tax credits received under the IRA on to customers.

Injections into U.S. working natural gas storage in the Lower 48 states are increasing at the end of the 2022 injection season (April–October), ahead of winter. The largest injection in the 2022 season so far was 129 billion cubic feet (Bcf) for the week ending September 30, which is the fourth net injection greater than 100 Bcf in 2022 and the second-highest net injection on record, 3 Bcf below the record injection of 132 Bcf in 2015.

The war in Ukraine is raging, Russian natural gas exports to Europe are dwindling, and the winter heating season is approaching. That would seem like a recipe for higher prices, yet the cost of the fuel, which is vital for heating homes and for powering electricity plants and industry, has been plummeting in Europe.

The benchmark European price of natural gas has fallen to a level that is more than 70% below its record high in August. One of the main reasons for the plunge is that Europe has all the natural gas it needs. Over the summer, Europe went on a global buying spree as Russia, its longtime main supplier, reduced its flow of natural gas.

Across the continent, governments and businesses have aggressively replenished how much gas they are holding in storage. At the urging of European Union officials and at a high cost, energy companies and governments have filled underground caverns and other facilities to more than 90% of capacity, compared with less than 80% year ago.