MOTILAL OSWAL
WEALTH MANAGEMENT

Energy
— Quarterly —

Sep, 9th 2024

Overview:

- Natural gas prices fluctuated significantly due to seasonal demand, geopolitical tensions, and supply challenges.
- Working natural gas stocks totaled 3,334 Bcf, 12% higher than the 5-year average, with production stable despite cutbacks from major producers like EQT and Coterra Energy
- U.S. natural gas inventories were +7% year-over-year and +12.1% above the 5-year seasonal average as of August 23.
- European gas storage reached 91% full (as of August 21), above the 5-year average of 83%
- September 1 marks the transition from summer storage to winter withdrawals.

Natural Gas – On Tenterhooks

Natural gas prices experienced notable fluctuations in Q3 2024, driven by a mix of seasonal demand, geopolitical tensions, and ongoing supply-side challenges. Last quarter, the focus was on the interplay between rising temperatures and the gradual recovery of European gas storage, all of which left a significant impact on futures prices. Prices sank to a 4-month low due to robust supplies and forecasts for moderate temperatures, reducing gas demand. While prices did receive some support as the market shifted from summer storage to winter withdrawals, bearish sentiment lingered.

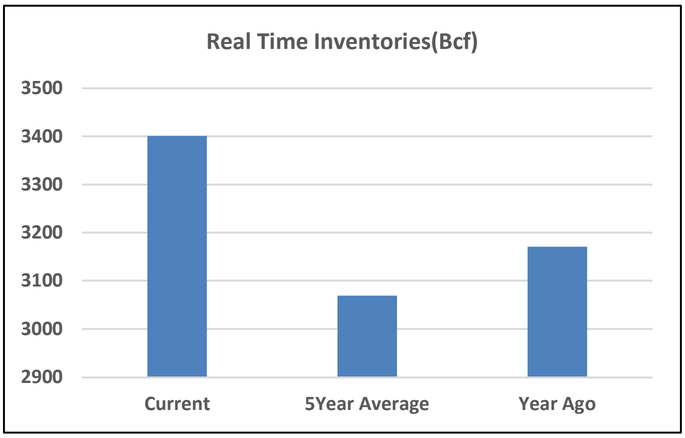
Supply:

On supply front, U.S. natural gas supplies as of August 23 were +12.1% above their 5-year average. Active rigs have declined since posting a 5-year high of 166 rigs in September 2022, up from the pandemic-era low of 68 rigs in July 2020 (data since 1987). Working natural gas stocks totaled 3,334 Bcf, which is 361 Bcf (12%) more than the five-year average and 228 Bcf (7%) more than last year at this time. The average rate of injections into storage is 20% lower than the five-year average so far in the refill season (April through October). If the rate of injections into storage matches the five-year average of 10.7 Bcf/d for the remainder of the refill season, the total inventory would be 4,073 Bcf on October 31, which is 361 Bcf higher than the five-year average of 3,712 Bcf for that time of year.

In Mexico, the Altamira LNG plant received authorization from the U.S. Department of Energy (DoE) to export LNG. Production remains strong despite cutbacks from major producers like EQT and Coterra Energy, with output stable at around 101 Bcf/day. This robust supply, coupled with rising storage levels, has weighed heavily on market sentiment. Despite the production cutbacks, the strong output and storage surplus have dampened the market's ability to sustain any significant price rally, maintaining downward pressure on futures.

Inventory:

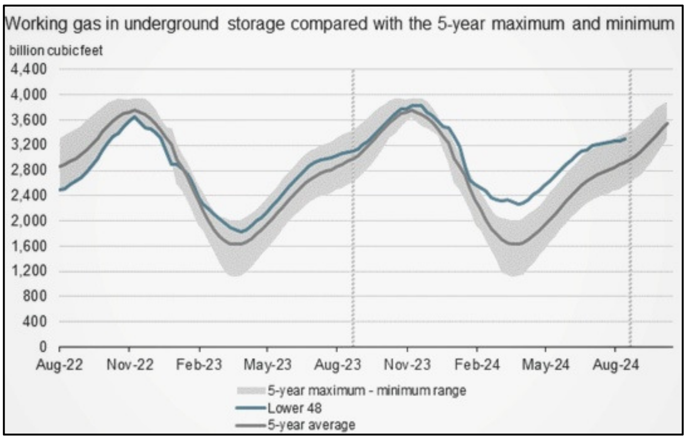
Natural gas inventories were up +7.0% year-over-year and +12.1% above their 5-year seasonal average, signaling ample gas supplies as of August 23. In Europe, gas storage was 91% full as of August 21, above the 5-year seasonal average of 83%. Projected real-time gas inventories topped 3,400 Bcf. This is 22 days earlier than last year (September 26) and 26 days earlier than the 5-year average. While late-summer heat might offer brief support, a significant price recovery is unlikely before winter.



Seasonal Transition and Market Impact

September 1 marks an important shift in the natural gas market, signaling the end of the summer storage season and the start of the winter withdrawal period. This date is crucial for several reasons:

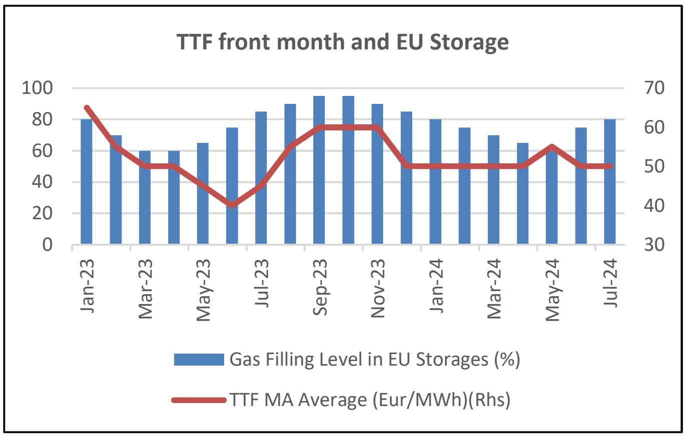
- Storage Cycle: From September onward, the market focus moves from storing gas to preparing for winter withdrawals, which typically peak around November 1. Storage levels at this time are key indicators for winter pricing.
- Demand and Pricing: As cooler weather approaches, heating demand rises, increasing natural gas consumption. The October contract, now the front-month, often reflects this change, leading to more market activity.



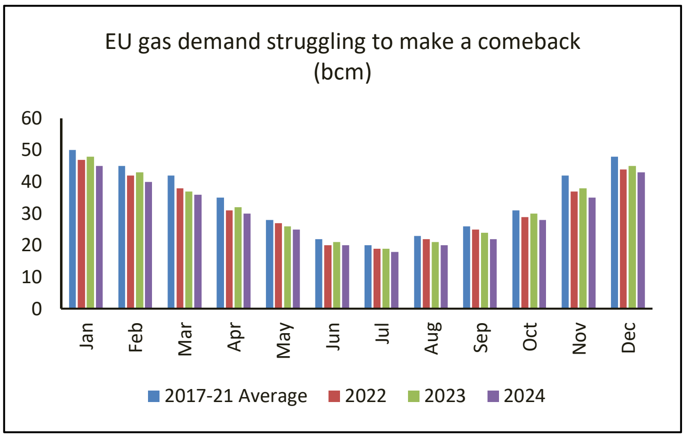
Working gas in storage was 3,299 Bcf, 221 Bcf higher than last year and 369 Bcf above the five-year average of 2,930 Bcf. The average rate of injections into storage is 20% lower than the five-year average so far in the refill season (April through October). If the rate of injections into storage matches the five-year average of 10.3 Bcf/d for the remainder of the refill season, the total inventory would be 4,081 Bcf on October 31, 369 Bcf higher than the five-year average of 3,712 Bcf.

European Gas Storage Recovery:

Europe has been the focus of attention throughout 2024, especially following last year's energy crisis stemming from reduced Russian gas imports. During Q3, European gas storage levels were replenished more quickly than anticipated, easing fears of a winter supply crunch. By late September, storage levels in key EU countries had surpassed 90% capacity, thanks to increased LNG imports and energy-saving measures introduced in the first half of the year. Europe natural gas prices fell as much as 4%, to the lowest in about a month. Storage sites across the region are almost full, and industrial demand remains subdued amid a slow recovery from the energy crisis two years ago. Gas prices got support from European gas market last year, but now situation looks quite conformable, thus removing additional push.

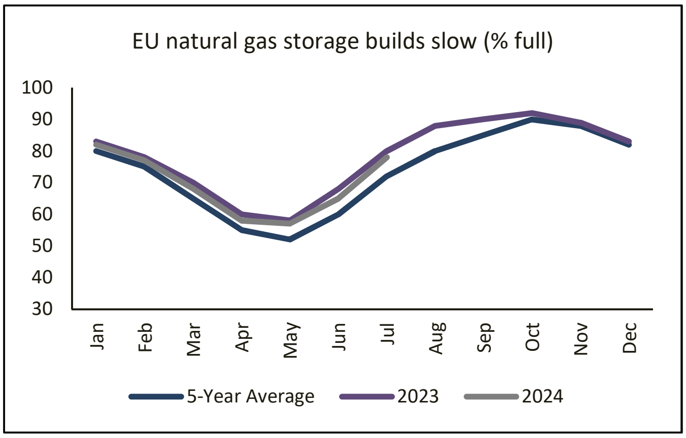


Consumption of natural gas in Europe consistently decreased since mid-2022, driven by a combination of mild winter weather and government policies aimed at reducing natural gas consumption. In 2023, natural gas consumption in the European Union's 27 member countries (EU-27) declined 18% from the previous five-year (2017–21) average according to Eurostat data. During the first five months of 2024 (January–May), consumption remained 19% below the 2017–21 average for the same months.



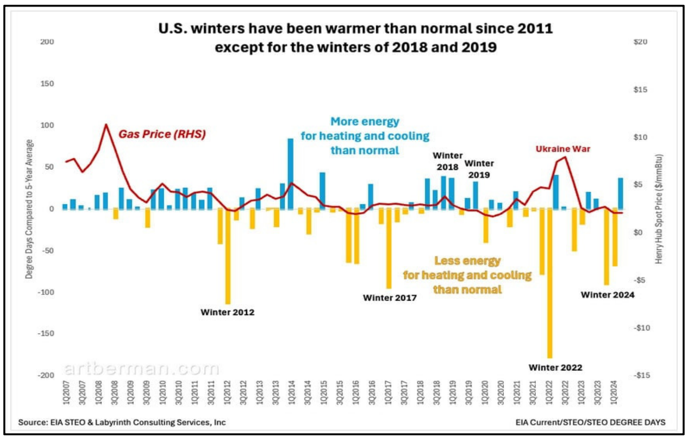
Fundamentals for European natural gas market remain relatively bearish EU gas storage remains comfortable at 75% full, which is well ahead of the five-year average of 65%. European gas demand remains under pressure, with gas demand in the first five months of year down 2.4% YoY.

Prices are sliding lower with markets focusing on recent headlines that Volkswagen is set to close factories domestically. Europe is seeing its manufacturing engine stutter, and might mean a serious spillover effect into several other countries in the Eurozone and might wipe out domestic growth and demand on the back of it. European Gas storage facilities are over 92% filled up. However, any disruption would still be enough to see gas prices jump higher. However, the energy crisis is far from over, with potential supply disruptions and colder-than-expected winter weather posing significant risks. Prices in Europe remained volatile as traders monitored developments in Ukraine and the broader geopolitical landscape.



Weather fluctuations:

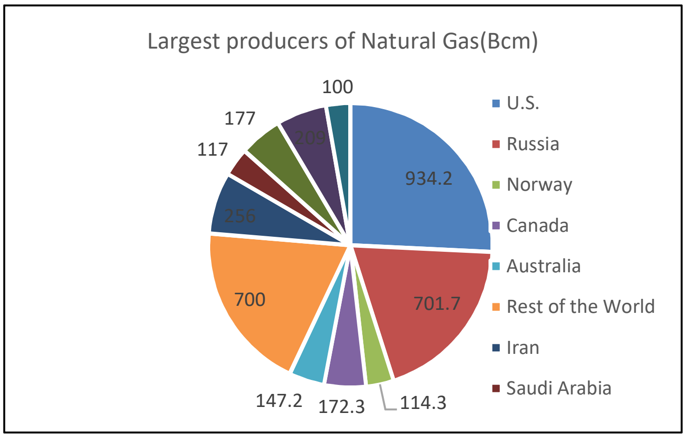
Weather remained mixed for whole summer season, failing to push prices higher. Global heating has changed the winter-to-summer consumption ratio and total consumption has increased 40% since 2008. Total consumption has increased by 40% since 2008, but producers have struggled to manage output effectively.



The core issue for gas producers has been the reduced consumption during recent winters. Degree days—a measure of energy used for heating and cooling—over the period from 2007 to the present. Since 2011, U.S. winters have generally been warmer than average, with the exceptions of 2018 and 2019. About 25% more U.S. natural gas is consumed in winter than in summer. Global heating has changed the winter-to-summer consumption ratio Total consumption has increased 40% since 2008.

Storage Season:

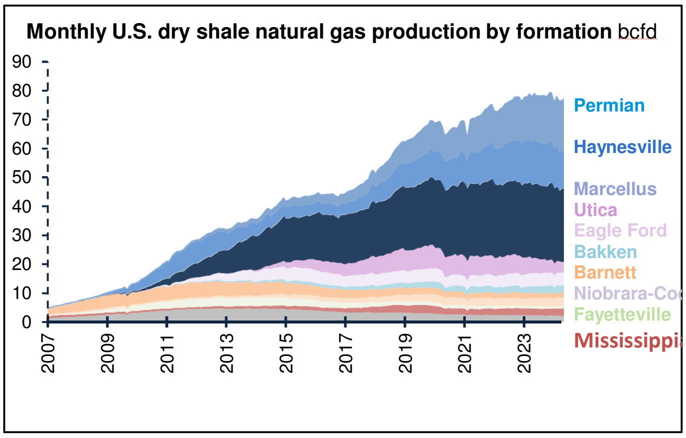
September 1 marked a significant shift in the natural gas market, transitioning from the summer storage season to the winter withdrawal period. This change alters the market focus, as participants now prioritize preparing for the anticipated rise in demand during colder months. Storage levels become a critical factor in determining winter prices, with the October contract, now the front-month, reflecting the expected increase in market activity as heating demand rises. However, the actual impact on demand can vary significantly based on regional weather patterns, adding uncertainty to market forecasts.



Despite starting the year with record-high natural gas storage, the pace of injections has slowed down, rapidly returning aligning storage levels closer to the 5-year average. This adjustment is crucial for market stability, especially as we prepare for the upcoming winter months.

U.S. Gas production: “cure for low prices is low prices”

The decline in gas prices since the middle of 2022 has been even more severe and has brought all growth in production to a halt. Dry gas production averaged 102.6 Bcfd in March 2024 compared with 102.9 bc f/d in March 2023. Dry gas production appears to have peaked at the end of 2023 and has since been trending gently but steadily lower. In consequence, the number of rigs drilling for gas had fallen to an average of just 115 in March 2024 from a cyclical high of 162 in September 2022. The number of active rigs has since fallen even further to an average of just 101 in May 2024 as major producers have scaled back drilling programs in response to ultra-low prices. Unless there is an unexpected rebound in prices, production is likely to remain broadly flat throughout the rest of 2024 and 2025, helping rebalance the market.



Demand:

Global natural gas demand saw minimal growth in 2023 and expected increase by about 2% in 2024 and 2025. This modest growth is expected to be driven by China and the Middle East in 2024. In 2025, flat demand in advanced economies will temper an expected rise in consumption in emerging countries. EIA expects US natural gas consumption for electric generation to rise 4.7% y/y in August and reach a record high of 46.45 Bcfd. Despite strong growth in renewables, Natural gas will be main fuel for electric generation in July and August, with share of about 46%. Strong air-conditioning demand is likely to push US electric generation from natural gas to a record high this summer. The growing demand from data centers, electric vehicles, and LNG exports is reshaping the future landscape of natural gas, potentially driving a nearly 50% increase in demand.

As these sectors expand, need for reliable and efficient energy sources becomes even more critical. It's no surprise that utilities and public natural gas companies are performing well in this evolving environment.

U.S.Consumption (bcfd)					
	2021	**2022**	**2023**	**2024**	**2025**
Electric power	30.76	33.13	35.43	35.95	34.83
Industrial	22.94	23.39	23.39	23.25	22.94
Residential and commercial	21.93	23.21	21.35	21.58	22.41
Total	**83.96**	**88.46**	**89.10**	**89.75**	**89.22**

Export Demand:

Increased demand for liquefied natural gas (LNG) also supported prices, as Asia and Europe continued competing for shipments. The U.S., as a leading exporter, has benefited from this demand, with higher-than-average LNG export volumes reported in August and September. According to the U.S. EIA, natural gas inventories in the U.S. ended the quarter below the five-year average, despite a modest increase in production. The United States shipped a record 56.9 MMT of LNG during the first eight months of 2024. Prices got supported after news of U.S. Department of Energy awarding a five-year LNG export license to New Fortress Energy to sell gas to countries that do not have a free trade agreement with the US. Since January, this is the first time that the Energy Department has granted an LNG export license and is supportive of prices since an increase in LNG exports could reduce US gas supplies and shrink elevated inventories.

Outlook:

Looking ahead at Q4 2024, natural gas prices are expected to stay lower, with concerns about U.S. storage approaching capacity by October potentially re-emerging. European natural gas inventories are already more than 80% full. However, any geopolitical developments, reduced U.S. exports, and adverse weather conditions could support prices. Prices are expected to remain lower as bearish fundamentals continue to dominate price movement. Key support remains at Rs.170, while major resistance for natural gas is at Rs.215. If prices break the Rs.215 level, the bias could shift to positive, with an additional push from winter weather forecasts. Until Rs.215 is broken, the bias remains negative.

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