

Market Summary

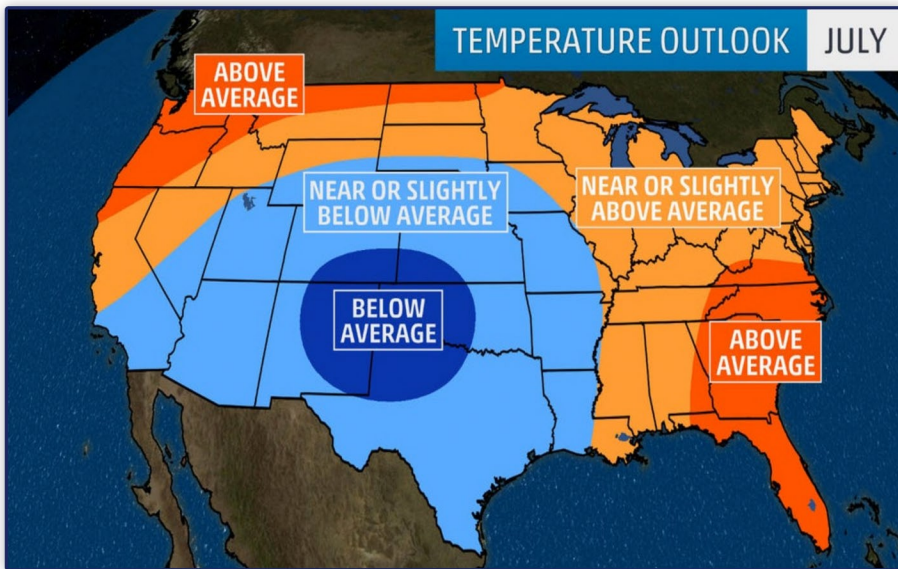
Biggest Factors: Weather

Despite storage levels within the five-year historical range and sustained production records, summer's cool temperatures have been the biggest curveball (albeit favorable) in Q3.

Procurement Takeaway

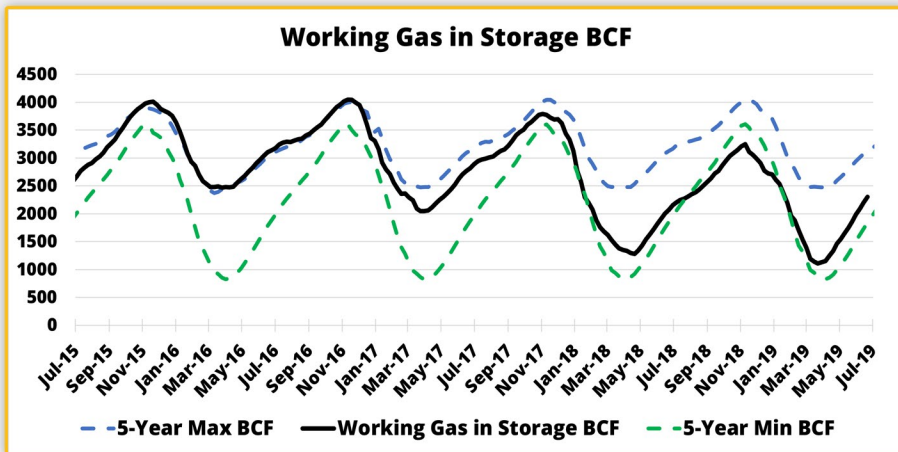
In California, consider hedging through summer and winter seasons. Otherwise, look for price stabilization and opportunities for mixed Index/fixed strategies.

Weather



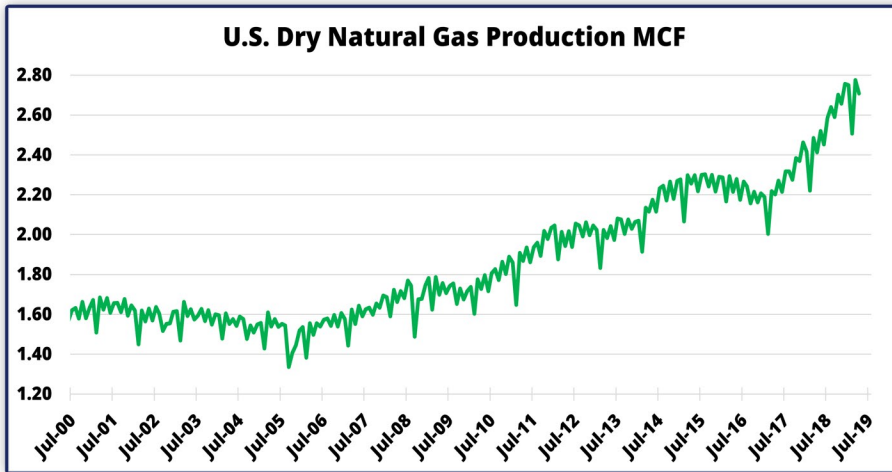
- Relatively cool temperatures at the start of summer have sent natural gas prices tumbling to their lowest level in three years.
- Low natural gas prices are further undermining the already fragile economics of the remaining coal-fired power stations and will likely hasten more closures.
- Falling prices have also led to a slowdown in the drilling of new gas wells.
- **TAKEAWAY:** Natural gas prices are incentivizing power producers to run gas-fired generators for more hours at the expense of remaining coal plants.

Storage



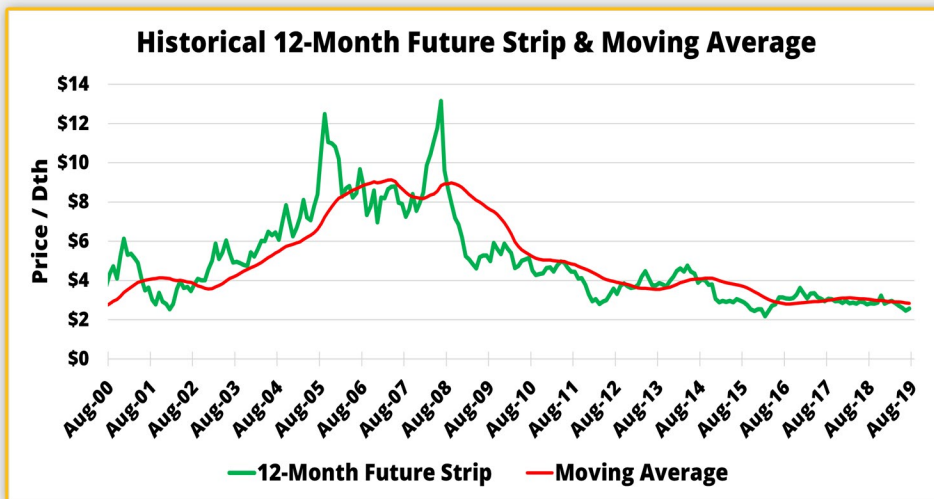
- Early-June saw large storage injections, with prices hitting three-year lows.
- Early- to mid-June saw above expected injections, which kept prices low.
- The late-June injection exceeded expectations and put prompt month prices at a new low.
- Working gas in storage was 2,471 Bcf as of Friday, July 5. Stocks were 275 Bcf higher than last year at this time and 142 Bcf below the five-year average of 2,613 Bcf.
- **TAKEAWAY:** At 2,471 Bcf, total working gas is within the five-year historical range.

Production



- Pennsylvania had record production in 2018.
- EIA forecasts that United States dry natural gas production will average 91.3 Bcf per day (Bcf/d) in 2019, up 8 Bcf/d from the previous record in 2018. EIA expects annual average United States natural gas production will rise by 1.4 Bcf/d in 2020.
- **TAKEAWAY:** In 2018, the United States exceeded every other country for the largest ever annual production increases of gas and oil.

Pricing



Bidweek

Month	12-Month Strip	NYMEX
Nov. '18	\$2.953	\$3.190
Dec. '18	\$3.240	\$4.714
Jan. '19	\$2.806	\$3.642
Feb. '19	\$2.818	\$2.950
Mar. '19	\$3.008	\$2.860
Apr. '19	\$2.847	\$2.713
May 19	\$2.671	\$2.566
June 19	\$2.548	\$2.633
July 19	\$2.516	\$2.291

Wholesale Prices per Mmbtu

Noteworthy

- Global demand for natural gas grew 4.6% in 2018 as the international natural gas trade continues to develop.
- A California study shows low-income customers could be largely affected by rising natural gas costs as the state works to dramatically decline gas use in favor of the broad electrification of buildings.
- There are four key benchmarks being used to track global natural gas prices: Henry Hub (US), TTF (Dutch), NBP (UK), and Platts JKM (Asia). The Henry Hub (US) is the dominant benchmark and helping the US set global prices.
- As renewable electricity prices continue to drop in California, GE is shutting down its natural gas fired turbine generator, Inland Empire Power Plant, as it is not designed to supplant the intermittent loads of renewable sources and is no longer economically viable.