

Market Summary

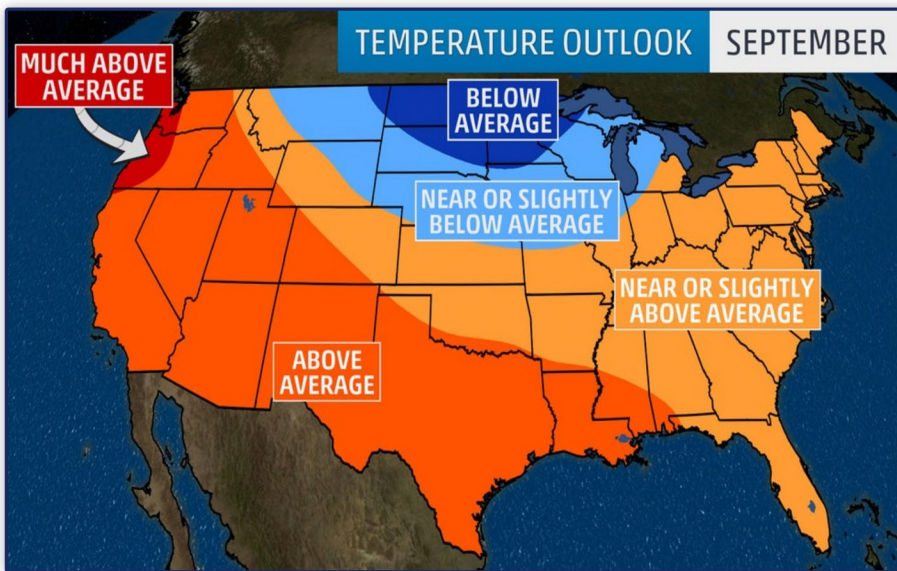
Biggest Factor: Production

Keeping with recent trends, natural gas production records continue to be the biggest market driver.

Procurement Takeaway

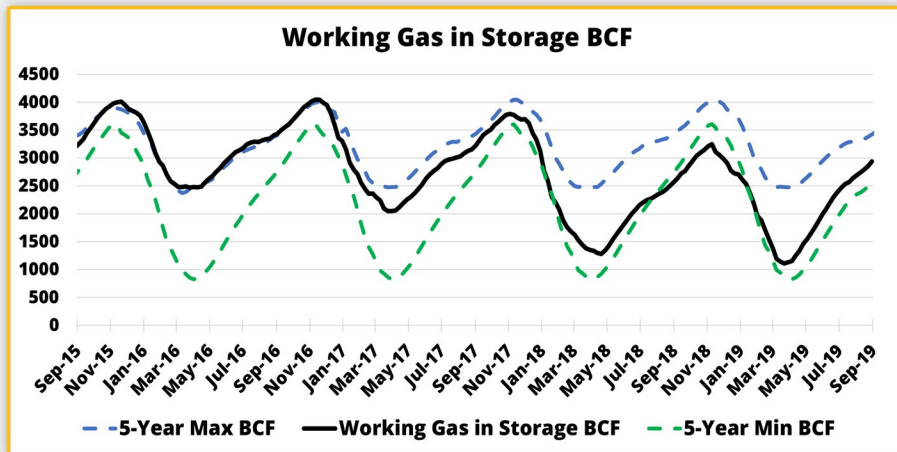
Southern California natural gas customers should considering hedging at least 40% of November and 55% of December 2019. In other parts of the country, consider hedging 30% - 50% through the end of the year, as prices are appearing favorable.

Weather



- September is forecast to be colder than average in the upper midwest and northern plains. Meanwhile, portions of the west and south could see a warmer than average start to fall. The east coast will see temperatures near or slightly above average in September.
- Weaker summer led to early-August prices that collapsed to three-year lows.
- Mid-August prices tried to rally with the biggest weekly gain in over a month, but weather forecasts for cooler temperatures stabilized prices with a slight slide.
- **TAKEAWAY:** As summer pushes into the shoulder season of typically low gas demand, prices could see slump before winter.

Storage

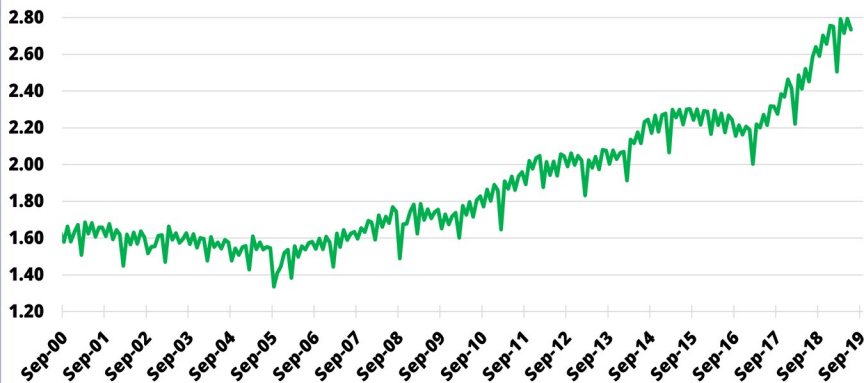


- Record production is allowing storage levels to increase. The beginning of the injection season saw levels 30% lower than the five-year average. However, by mid-August, inventories were only 4% lower than the five-year average. Forecasts for the end of October show levels slightly above the five-year average.
- Working gas in storage was 2,941 Bcf as of Friday, August 30, 2019. Stocks were 383 Bcf higher than last year at this time and 82 Bcf below the five-year average.
- **TAKEAWAY:** A strong injection season is narrowing the deficit against the five-year average.

Production



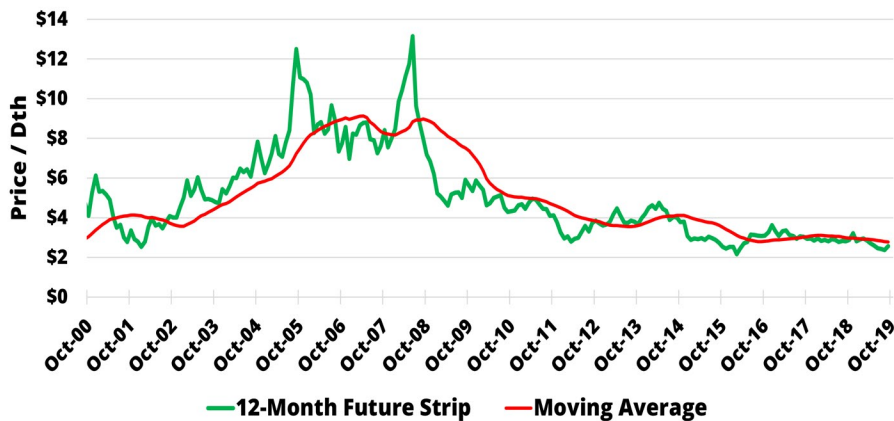
U.S. Dry Natural Gas Production MCF



- The U.S. set a combined natural gas and oil production record in 2018.
- Despite the Henry Hub's multi-year low spot prices and a combined rig count down 14% from year-ago levels, natural gas production continued to hit record high levels in August.
- Gas production is forecasted to rise 10% in 2019 to 91 Bcf/day after hitting a 12% increase in 2018, or 83.4 Bcf/day.
- West Virginia hit record production gains for oil and gas in 2018 - the 10th straight year of output increases. This represents a 17% increase in gas and 60% increase in oil over 2017.
- **TAKEAWAY:** Record-setting production trends continue to make American headlines.

Pricing

Historical 12-Month Future Strip & Moving Average



Bidweek

Month	12-Month Strip	NYMEX
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
Aug. '19	\$2.317	\$2.141
Sept. '19	\$2.481	\$2.251

Wholesale Prices per Mmbtu

Noteworthy

- Berkeley, CA, is the first city in the U.S. to ban natural gas in new building construction. Menlo Park, CA followed soon after. San Francisco, San Jose, Santa Rosa, and Petaluma are considering similar policies.
- Using natural gas for electricity generation, new pipelines, and LNG export facilities are set to continue their increase in demand – yet record-high production is still tempering all these aforementioned factors, including overall demand increases for the fuel.
- The current Administration is set to roll back requirements on oil and gas companies to install technology to monitor methane emissions from pipelines, wells, and facilities. Many oil and gas companies still support the monitoring of methane.
- Flaring in North Dakota has reached unprecedented levels, with 24% of all gas produced being flared.