

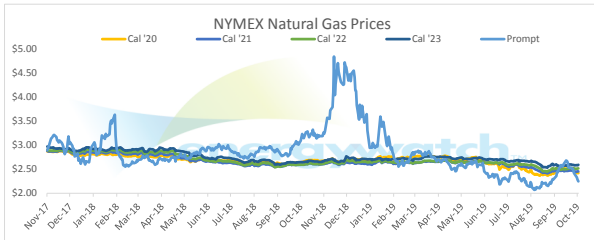
Week Ending: 10/3/2019

Weekly Update:

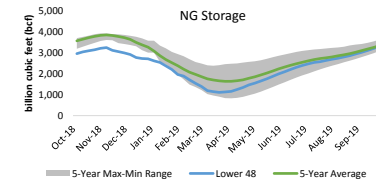
Front month natural gas contract closed yesterday at \$2.329/MMBtu. Stockpiles increased by 112 bcf, which was 6 bcf more than the 106 bcf injection expected by market analysts. The market has not seen a triple digit storage injection in September since 2016. With 4 weeks left in the injection season, storage stands at 3,317 bcf. For the same week last year, storage levels were at 2,852 bcf and the five-year average is 3,335 bcf. "The average rate of net injections into storage is 28% higher than the five-year average so far in the refill season (April through October). If the rate of injections into storage matched the five-year average of 10.5 Bcf/d for the remainder of the refill season, total inventories would be 3,674 Bcf on October 31, which is 18 Bcf lower than the five-year average of 3,692 Bcf for that time of year" (EIA).

Prices at the Transco Zone 6 trading point, which services NYC, decreased from \$1.62/MMBtu last Wednesday to \$1.50/MMBtu this past Wednesday. "Prices reached a low of \$1.08/MMBtu on Friday, the lowest price since October 2016" (EIA). Zone J LMP prices for NYC closed yesterday at \$22.095/MWh, which is lower than the electricity price for the same day the last couple of years.

Natural gas pricing plays a key role in electricity power pricing due to the increasing reliance on natural gas fired generators as nuclear, coal, and oil generation is retired and mothballed. As the marginal unit of generation, gas prices are directly correlated to power pricing (more so in some regions such as NYC vs. others such as parts of PJM). We keep an eye on natural gas market fundamentals in order to provide insights into forward power pricing for our clients. Gas production has grown and surpassed any speculation that production would not be able to keep up with demand due to LNG and Mexican exports.

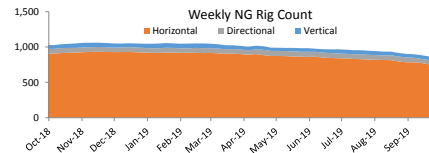


Natural Gas Storage Week Ending 9/27/2019	
Current Week Stocks (bcf)	3,317
Previous Week Stocks (bcf)	3,205
Implied Net Change (bcf)	112
Expected Net Change (bcf)	106
Variance (bcf)	6
Year-Ago Stocks (bcf)	2,852
Variance vs Prev. Year (%)	16.3%
5-Year Average (bcf)	3,335
Variance vs 5-YR Avg (%)	-0.5%

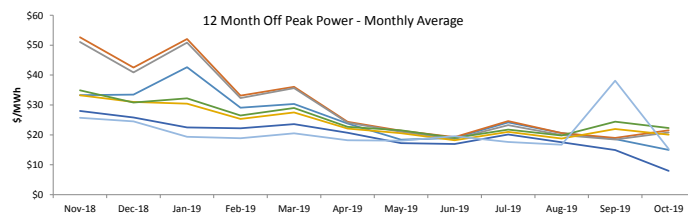
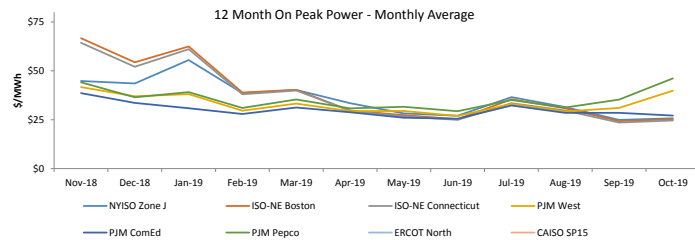


	\$/MMBtu	W-o-W Δ	Y-o-Y Δ
Prompt Month	\$2.329	-0.8%	-27.7%
12-Month	\$2.408	-0.5%	-17.8%
24-Month	\$2.428	-0.3%	-13.7%
Cal 19	\$2.608	-0.2%	-9.0%
Cal 20	\$2.428	-0.2%	-9.0%
Cal 21	\$2.450	-0.1%	-5.8%
Cal 22	\$2.509	-0.1%	-3.5%

Week Ending: 9/27/2019	W-o-W Δ
Oil Rigs	713 -0.8%
Gas Rigs	146 -1.4%
Vertical	51 0.0%
Horizontal	752 -0.5%
Directional	57 -6.6%



	Avg. Temp	Past 10 Weeks	Departure From Normal	CDD	HDD
Boston	60		8	1	6
Chicago	60		5	0	5
Columbus	77		21	13	0
Dallas	85		13	20	0
Denver	50		-5	0	15
Detroit	66		12	1	0
Hartford	63			4	6
Houston	83		8	19	0
Indianapolis	75		21	10	0
Las Vegas	68		-8	3	0
Los Angeles	64		-4	0	1
Miami	83		1	18	0
Minneapolis	49		-4	0	16
New York City	70		16	7	2
Philadelphia	76		20	11	0
Phoenix	80		-4	16	0
Salt Lake City	53		-8	0	13
San Diego	65		-4	0	0
San Francisco	63		-1	0	2
Seattle	54		-3	0	11
St. Louis	76		20	11	0
Washington D.C.	80		22	15	0



2014 - 2019 YTD Locational Marginal Pricing (LMPs)

