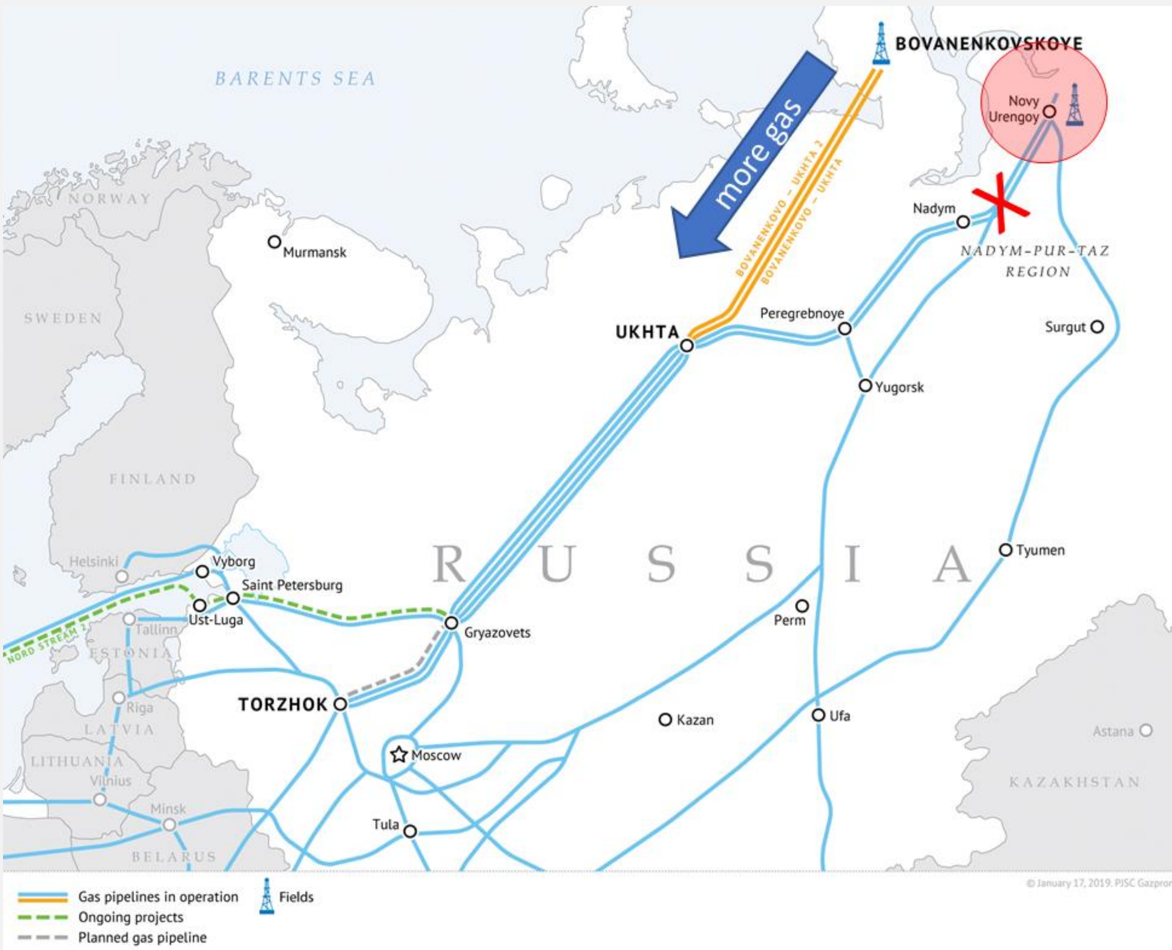
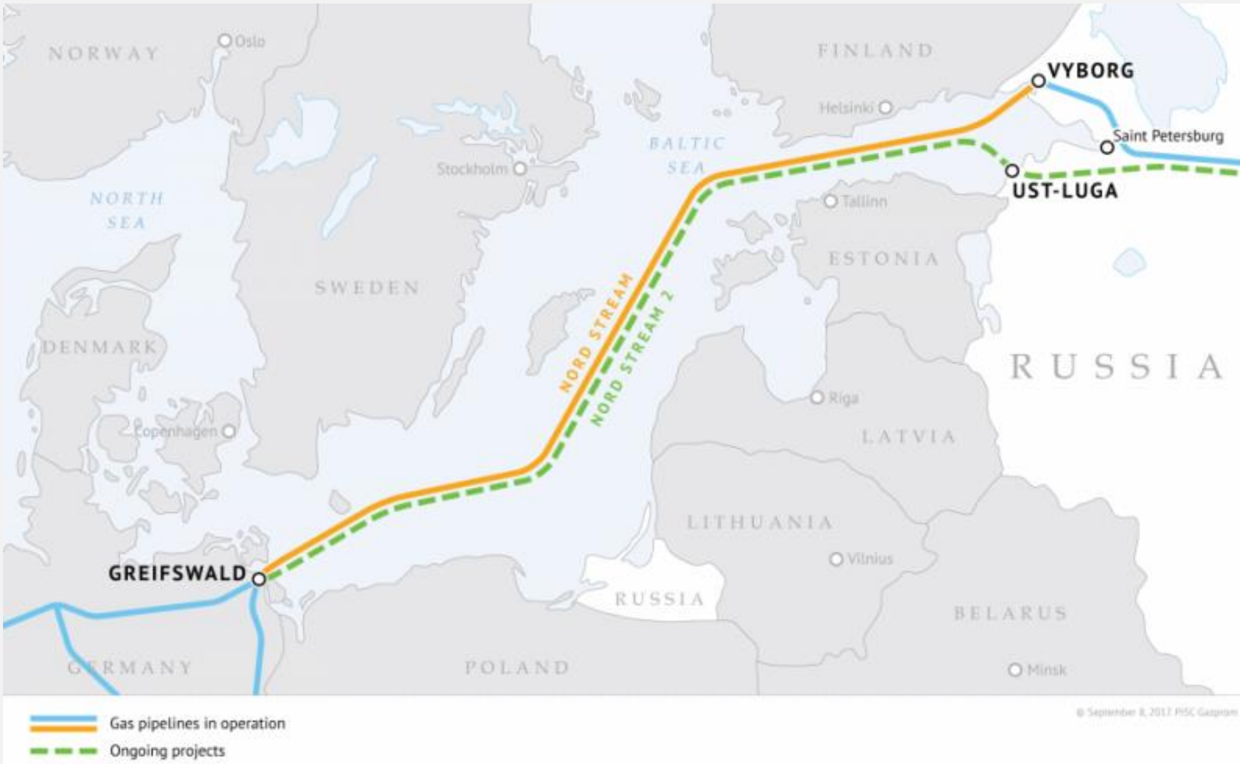
Global gas and LNG markets saw considerable price volatility this week as falling flows on the Yamal pipeline initially sparked fears of greater-than-expect supply tightness in Europe. Flow declined earlier due to a fire that occurred on August 5th at the Gazprom Novy Urengoy condensate processing facility in the Yamal-Nenets Autonomous District. As of this week, the rumor is that flows are back up to normal levels from alternative sources.




The price spike due to the treatment plant incident quickly turned around by a dramatic sell-off following an announcement on Thursday from Gazprom regarding Nordstream 2 (NS2). They said that NS2 pipeline may carry 5.6 billion cubic meters (bcm) this year or 10% of the design capacity [55bcm]. This announcement sent both TTF and NBP prices lower, even though Gazprom did not give a start-up date though.

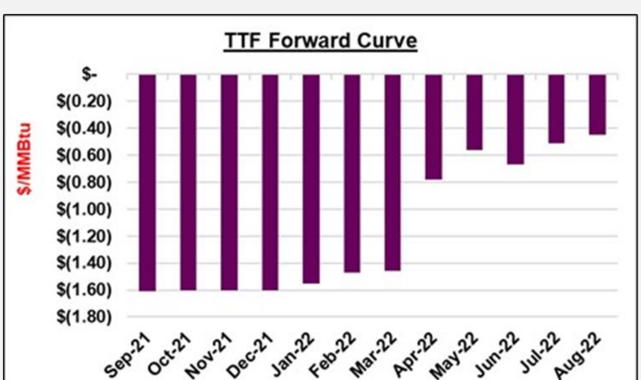
We should note that NS1 (which has an identical route and size to NS2) has been flowing for over a decade. According to Gazprom, it carried over 57.5bcm in 2018 and 2019 and over 58bcm in 2020. Between January-July 2021 it carried 33.7bcm, more than in the same period in 2020 and 2019.

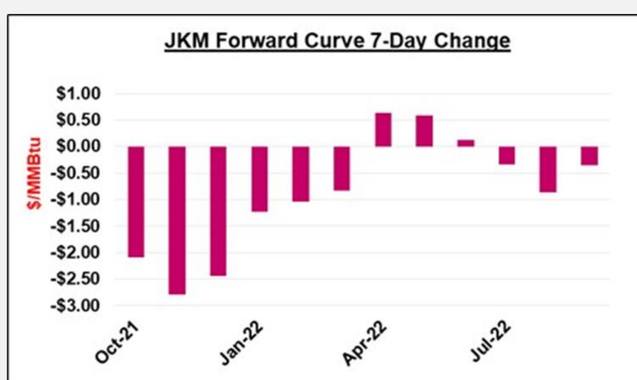
NS2’s design capacity is enough to carry around 12% of all the gas consumed in the EU and the UK in 2020, according to ICIS.




Gazprom owns both the pipeline and the gas that will flow in it- hence giving Gazprom too much control. The EU mandates a separation between the pipeline owner and gas supplier and therefore it remains uncertain how the pipeline will comply with these rules.

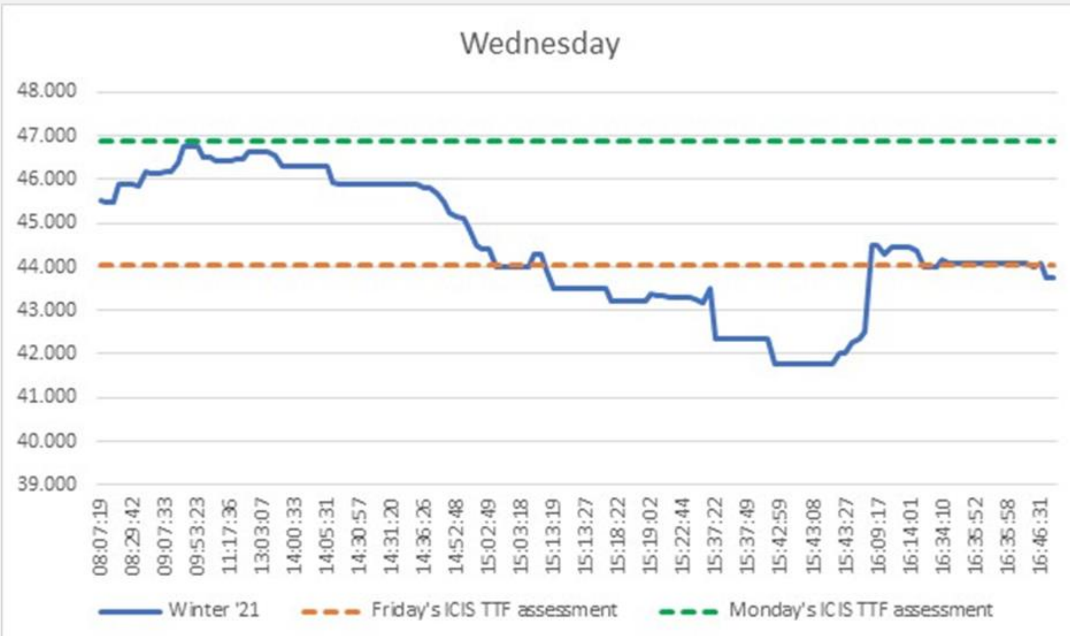
Here are some charts from Platts that show the week-on-week change in the forward TTF and JKM forward curve with all this market news.



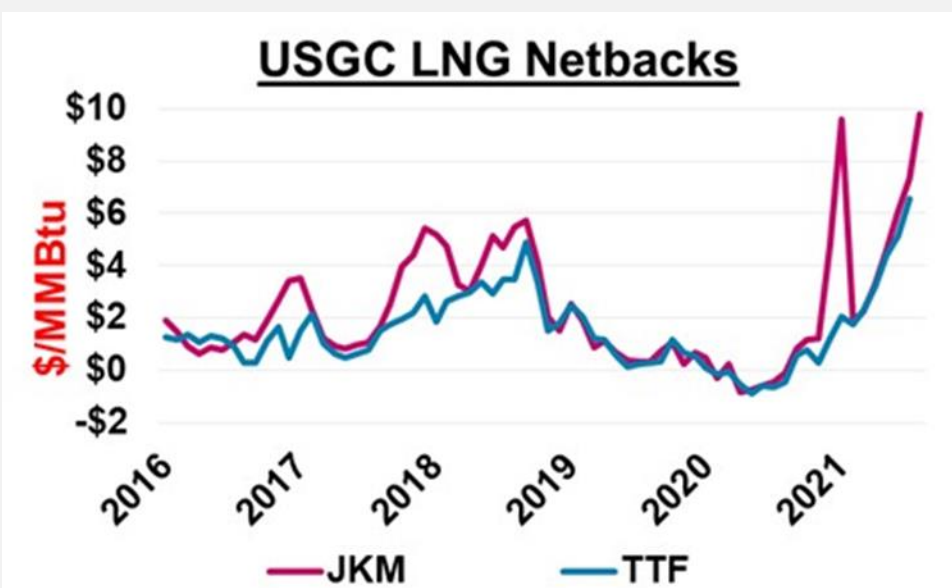

Source: Platts

We should also mention the extremely volatile trading session on August 18th. For a brief period, a data glitch on GASCADE showed NS2 flowing into Germany. This sent TTF prices diving intraday before slightly correcting itself after the bug was fixed.



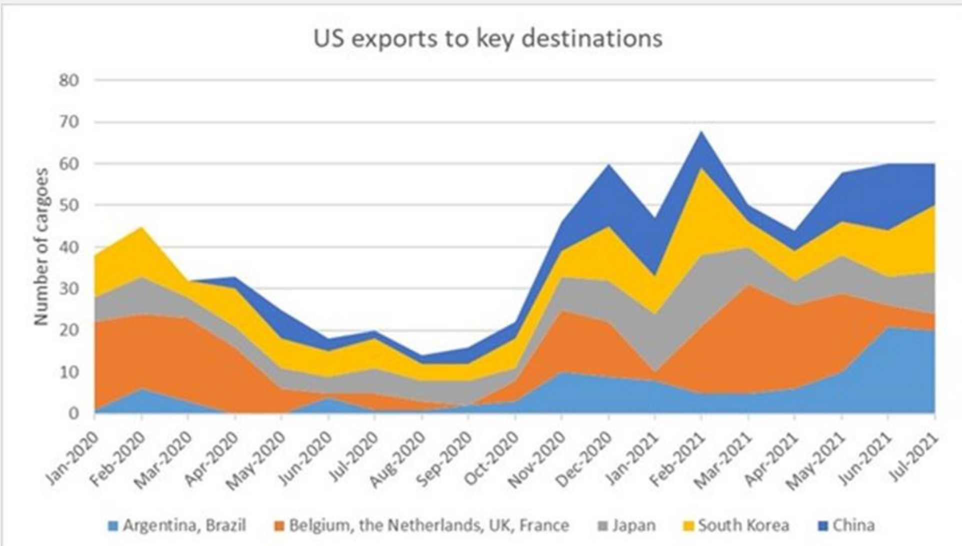

Source: ICIS

The JKM netback is maintaining a strong premium to the TTF through the balance of the year, which suggests that few cargoes will be delivered to Europe. This was the case in June and July.




Source: Platts

Aside from Asia, Brazil has boosted its LNG imports this year with depleted hydro stocks due to a historic drought. Brazil was the second-largest importer of US LNG in July, behind South Korea, for the second month in a row with 900,000 tonnes, 17% of the total. This translated into the country's largest percentage share of US LNG since October 2017 at almost 21%.



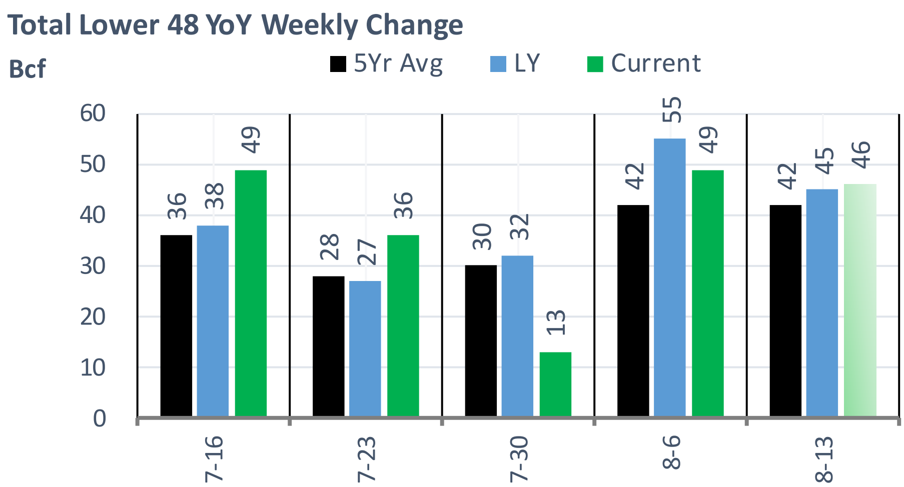

Source: ICIS

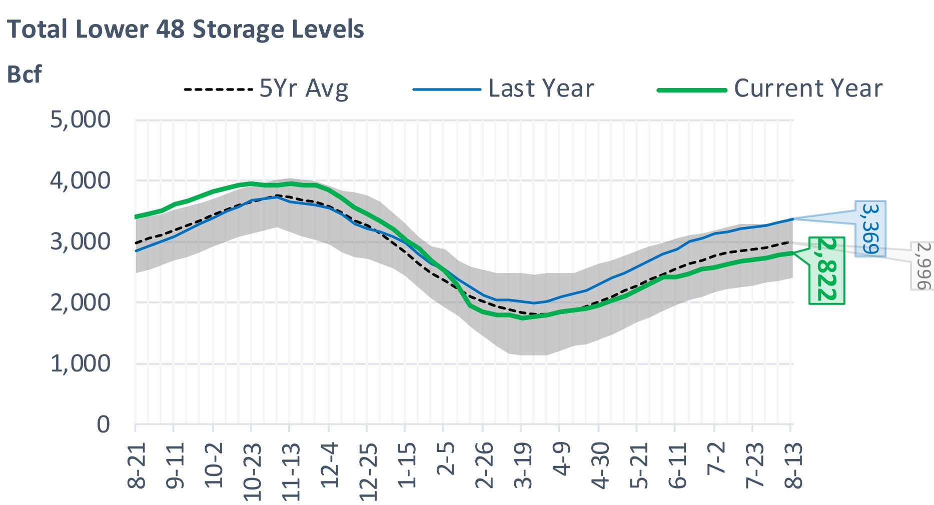
The increased competition for flexible LNG cargoes has left Europe in a bad position as it enters the winter season. Current storage levels are 62% utilized, which is 27% behind last year and 17% behind the 5Yr average.

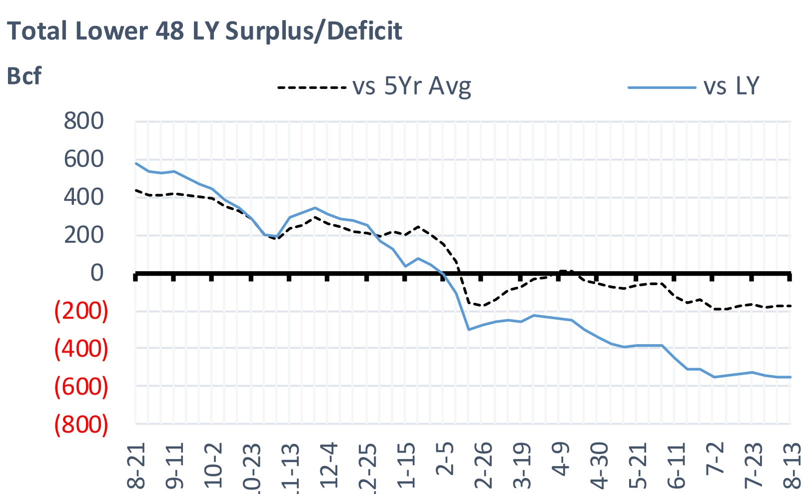
European Natural Gas Storage Levels

| Country | Level (TWh) 2021-08-18 | Capacity (TWh) 2021-08-18 | % Utilization 2021-08-18 | YoY | vs. 5Yr Avg |
|---|---|---|---|---|---|
| Europe | 694.1 | 1112.7 | 62% | -27% | -17% |
| Germany | 127.0 | 229.4 | 55% | -36% | -27% |
| Italy | 156.6 | 197.7 | 79% | -12% | -7% |
| Netherlands Gas Storage (T | 61.7 | 143.8 | 43% | -39% | -39% |
| France | 90.6 | 128.5 | 71% | -21% | -8% |
| Austria | 40.0 | 95.5 | 42% | -46% | -35% |
| Hungary | 51.7 | 69.9 | 74% | -16% | 7% |
| Slovakia | 24.9 | 42.5 | 59% | -32% | -17% |
| Czech Republic Gas Storage | 23.0 | 36.0 | 64% | -29% | -23% |
| Poland | 31.2 | 35.8 | 87% | -5% | 1% |
| Spain | 24.5 | 34.2 | 72% | -18% | -4% |
| Romania | 18.7 | 33.0 | 57% | -27% | -8% |
| Latvia | 20.2 | 21.5 | 94% | 94% | 94% |
| United Kingdom Gas Storage | 6.4 | 9.6 | 67% | -26% | -16% |
| Denmark | 6.0 | 9.1 | 67% | -27% | -16% |
| Belgium | 6.4 | 9.0 | 71% | -26% | -1% |
| Bulgaria | 3.2 | 6.3 | 51% | -29% | -24% |
| Croatia | 3.9 | 5.2 | 75% | -9% | -5% |
| Portugal | 2.4 | 3.6 | 68% | -32% | -2% |
| Ireland | 1.6 | 1.8 | 87% | 87% | 87% |
| Sweden | 0.0 | 0.0 | 66% | -18% | 24% |
| | | | | | |
| Non-EU | | | | | |
| Ukraine | 133.3 | 318.2 | 42% | -37% | -11% |

## EIA Storage Report



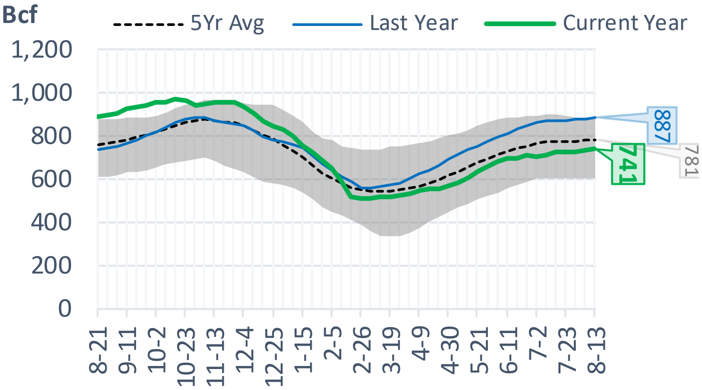



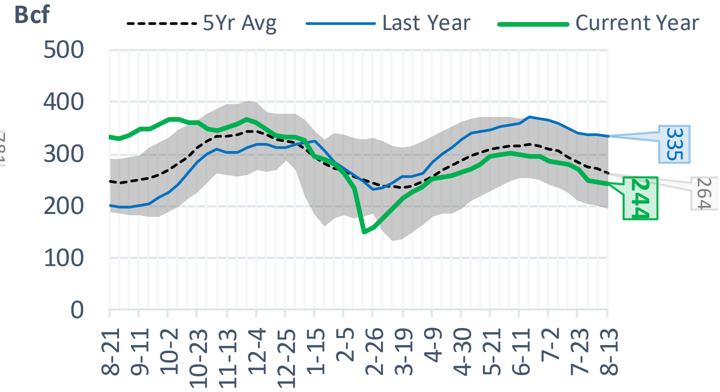
## Natural Gas Storage Stats - Last 5 Weeks

| Week Ending | Current 13-Aug | Week - 1 6-Aug | Week - 2 30-Jul | Week - 3 23-Jul | Week - 4 16-Jul | Week - 5 9-Jul |
|---|---|---|---|---|---|---|
| **Total Lower 48 Storage Level** | **2822** | 2776 | 2727 | 2714 | 2678 | 2629 |
| **Weekly Change** | **+46** | +49 | +13 | +36 | +49 | +55 |
| **vs LY** | **-547** | -548 | -542 | -523 | -532 | -543 |
| **vs 5Yr Avg** | **-174** | -178 | -185 | -168 | -176 | -189 |
| **S. Central Salt Storage Level** | **244** | 247 | 250 | 269 | 279 | 283 |
| **Weekly Change** | **-3** | -3 | -19 | -10 | -4 | -3 |
| **vs LY** | **-91** | -90 | -86 | -71 | -71 | -77 |
| **vs 5Yr Avg** | **-20** | -24 | -26 | -14 | -16 | -22 |
| **S. Central NonSalt Storage Level** | **741** | 732 | 726 | 729 | 723 | 712 |
| **Weekly Change** | **+9** | +6 | -3 | +6 | +11 | +7 |
| **vs LY** | **-146** | -150 | -151 | -143 | -149 | -156 |
| **vs 5Yr Avg** | **-40** | -47 | -51 | -47 | -53 | -61 |
| **Midwest Storage Level** | **765** | 741 | 719 | 702 | 683 | 662 |
| **Weekly Change** | **+24** | +22 | +17 | +19 | +21 | +24 |
| **vs LY** | **-112** | -111 | -109 | -111 | -113 | -115 |
| **vs 5Yr Avg** | **-16** | -16 | -15 | -13 | -14 | -16 |
| **East Storage Level** | **645** | 629 | 604 | 583 | 562 | 543 |
| **Weekly Change** | **+16** | +25 | +21 | +21 | +19 | +22 |
| **vs LY** | **-103** | -106 | -112 | -121 | -128 | -127 |
| **vs 5Yr Avg** | **-49** | -45 | -51 | -53 | -56 | -55 |
| **Mountain Storage Level** | **188** | 185 | 184 | 184 | 183 | 180 |
| **Weekly Change** | **+3** | +1 | 0 | +1 | +3 | +3 |
| **vs LY** | **-21** | -20 | -17 | -11 | -6 | -5 |
| **vs 5Yr Avg** | **-2** | -2 | 0 | +3 | +5 | +5 |
| **Pacific Storage Level** | **240** | 241 | 244 | 246 | 247 | 250 |
| **Weekly Change** | **-1** | -3 | -2 | -1 | -3 | +4 |
| **vs LY** | **-73** | -73 | -67 | -67 | -64 | -62 |
| **vs 5Yr Avg** | **-46** | -45 | -43 | -43 | -43 | -40 |

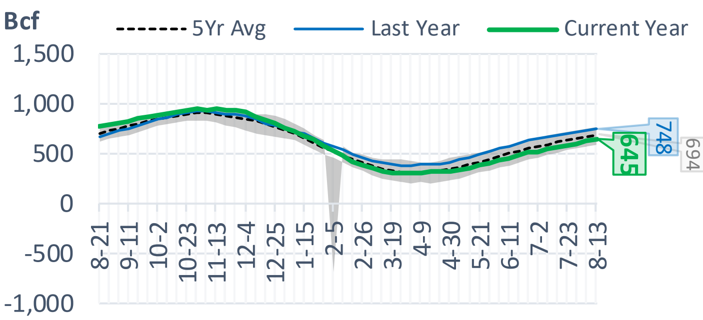
## NonSalt Storage Levels



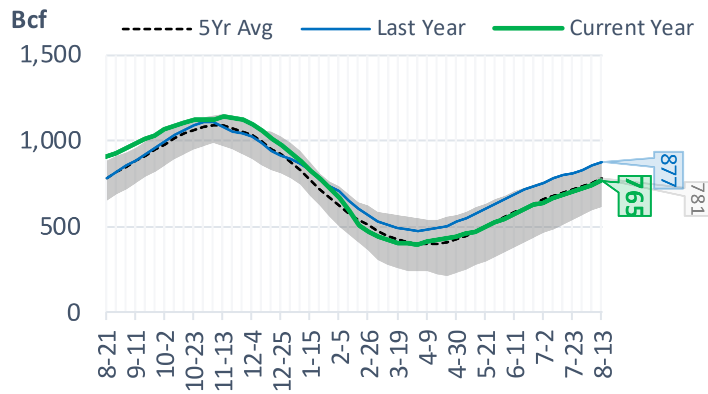

## Salt Storage Levels



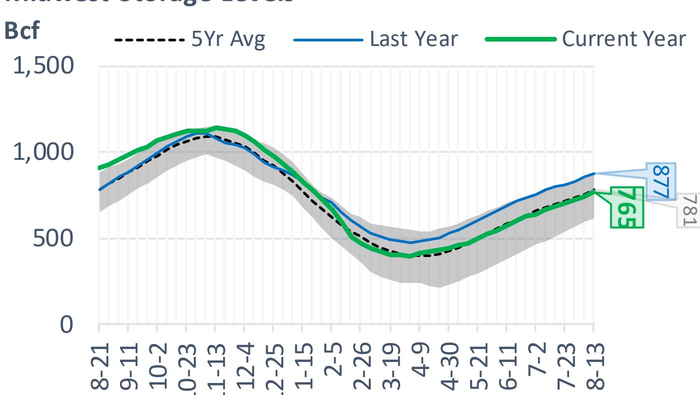

## East Storage Levels



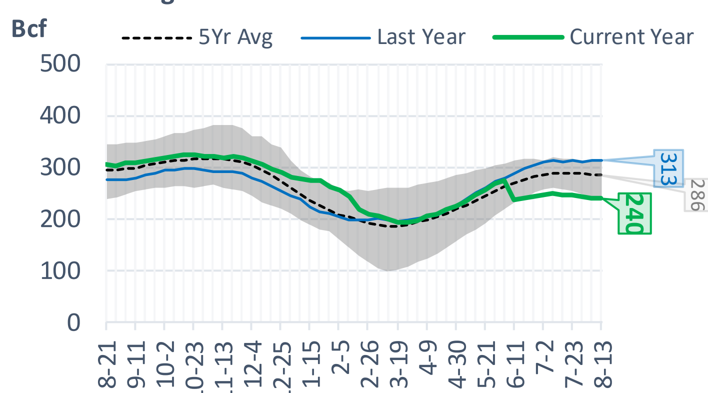

## Midwest Storage Levels




## Midwest Storage Levels




## Pacific Storage Levels



## EIA Storage Week Balances

| | 16-Jul | 23-Jul | 30-Jul | 6-Aug | 13-Aug | 20-Aug | WoW | vs. 4W |
|---|---|---|---|---|---|---|---|---|
| **Lower 48 Dry Production** | **92.5** | **92.6** | **92.6** | **92.0** | **92.5** | **92.4** | **▼ -0.1** | **▼ 0.0** |
| **Canadian Imports** | **5.2** | **4.9** | **5.5** | **5.1** | **5.2** | **5.0** | **▼ -0.2** | **▼ -0.1** |
| L48 Power | 38.7 | 39.7 | 42.1 | 38.4 | 41.1 | 39.6 | ▼ -1.6 | ▼ -0.8 |
| L48 Residential & Commercial | 8.4 | 8.4 | 8.3 | 7.8 | 7.7 | 7.6 | ▼ -0.1 | ▼ -0.5 |
| L48 Industrial | 19.6 | 19.7 | 20.8 | 20.3 | 19.9 | 20.2 | ▲ 0.2 | ▼ 0.0 |
| L48 Lease and Plant Fuel | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | ▼ 0.0 | ▼ 0.0 |
| L48 Pipeline Distribution | 2.2 | 2.3 | 2.4 | 2.2 | 2.4 | 2.3 | ▼ -0.1 | ▼ 0.0 |
| **L48 Regional Gas Consumption** | **74.1** | **75.2** | **78.7** | **73.8** | **76.2** | **74.7** | **▼ -1.5** | **▼ -1.3** |
| **Net LNG Exports** | **10.8** | **10.5** | **10.8** | **10.6** | **9.9** | **10.9** | **▲ 0.9** | **▲ 0.4** |
| **Total Mexican Exports** | **7.1** | **7.1** | **7.0** | **6.9** | **6.8** | **6.9** | **▲ 0.0** | **▼ -0.1** |
| **Implied Daily Storage Activity** | **5.6** | **4.6** | **1.7** | **5.7** | **4.6** | **5.0** | **0.4** | |
| **EIA Reported Daily Storage Activity** | **7.0** | **5.1** | **1.9** | **7.0** | **6.6** | | | |
| **Daily Model Error** | **-1.4** | **-0.5** | **-0.2** | **-1.3** | **-2.0** | | | |

## Monthly Balances

| | 2Yr Ago Aug-18 | LY Aug-18 | Apr-21 | May-21 | Jun-21 | Jul-21 | MTD Aug-21 | MoM | vs. LY |
|---|---|---|---|---|---|---|---|---|---|
| **Lower 48 Dry Production** | **85.0** | **85.0** | **92.3** | **92.7** | **93.0** | **92.3** | **92.2** | **▼ -0.1** | **▲ 7.2** |
| **Canadian Imports** | **5.0** | **5.0** | **4.6** | **4.5** | **4.8** | **5.2** | **5.1** | **▼ -0.1** | **▲ 0.0** |
| L48 Power | 38.1 | 38.1 | 24.9 | 26.6 | 35.3 | 39.4 | 39.7 | ▲ 0.3 | ▲ 1.6 |
| L48 Residential & Commercial | 7.8 | 7.8 | 19.5 | 13.2 | 8.8 | 8.3 | 7.7 | ▼ -0.6 | ▼ -0.1 |
| L48 Industrial | 21.6 | 21.6 | 21.2 | 20.3 | 20.8 | 19.9 | 20.1 | ▲ 0.1 | ▼ -1.5 |
| L48 Lease and Plant Fuel | 4.7 | 4.7 | 5.1 | 5.1 | 5.1 | 5.1 | 5.1 | ▼ 0.0 | ▲ 0.4 |
| L48 Pipeline Distribution | 2.2 | 2.2 | 2.3 | 2.1 | 2.2 | 2.3 | 2.3 | ▲ 0.0 | ▲ 0.1 |
| **L48 Regional Gas Consumption** | **74.4** | **74.4** | **73.0** | **67.2** | **72.3** | **75.0** | **74.9** | **▼ -0.2** | **▲ 0.5** |
| **Net LNG Exports** | **3.3** | **3.3** | **11.5** | **10.8** | **10.2** | **10.8** | **10.4** | **▼ -0.4** | **▲ 7.1** |
| **Total Mexican Exports** | **4.9** | **4.9** | **6.7** | **6.8** | **7.4** | **7.0** | **6.9** | **▼ -0.1** | **▲ 2.0** |
| **Implied Daily Storage Activity** | **7.4** | **7.4** | **5.7** | **12.4** | **8.0** | **4.6** | **5.1** | | |
| **EIA Reported Daily Storage Activity** | | | | | | | | | |
| **Daily Model Error** | | | | | | | | | |

Source: Bloomberg, analytix.ai

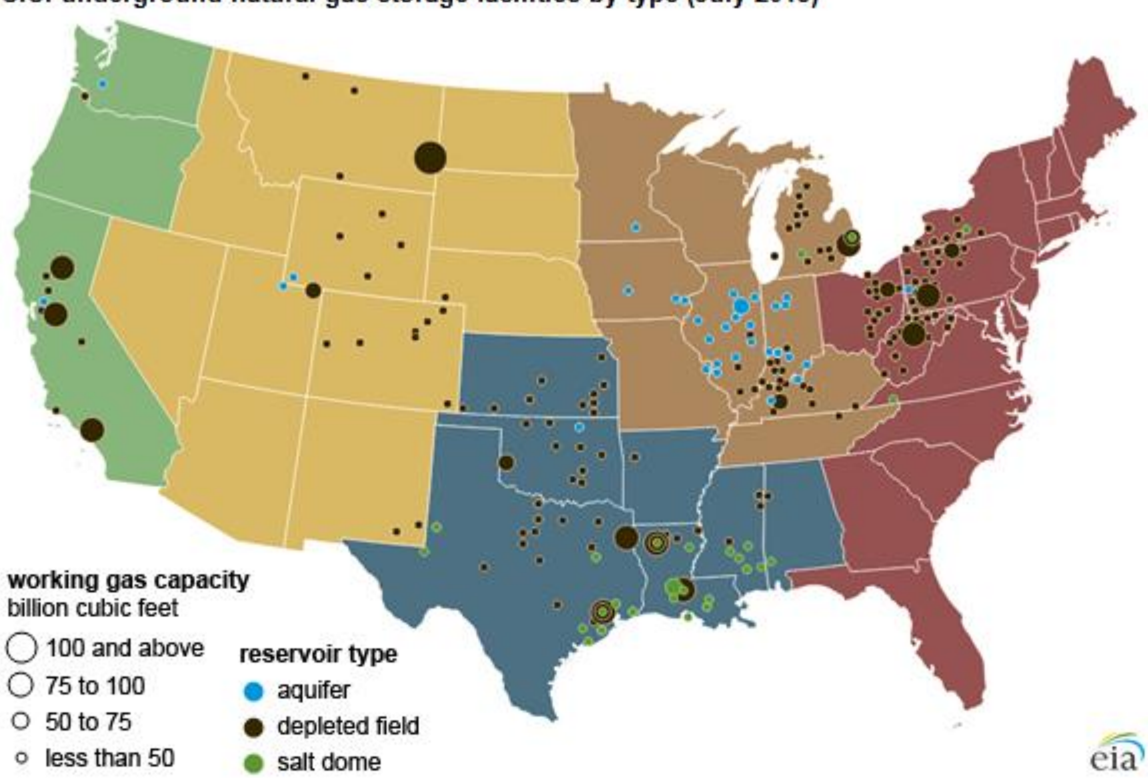
## Regional S/D Models Storage Projection

Week Ending 20-Aug

| | Daily Raw Storage | Daily Adjustment Factor | Daily Average Storage Activity (Adjusted) * | Weekly Adjusted Storage Activity |
|---|---|---|---|---|
| L48 | 4.6 | 1.7 | 6.3 | 44 |
| | | | | |
| East | 2.0 | 1.2 | 3.1 | 22 |
| Midwest | 3.8 | -0.2 | 3.6 | 25 |
| Mountain | 4.0 | -4.0 | 0.0 | 0 |
| South Central | -5.4 | 4.9 | -0.5 | -4 |
| Pacific | 0.4 | -0.2 | 0.2 | 1 |

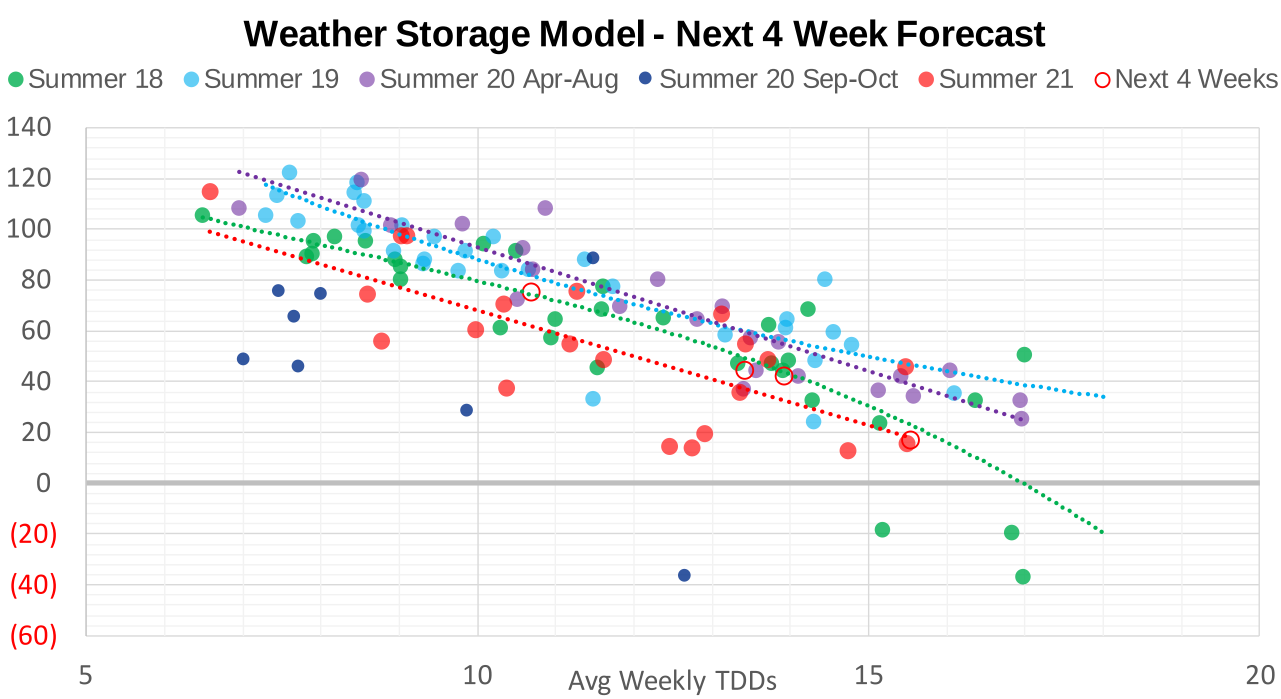
*Adjustment Factor is calcuated based on historical regional deltas

U.S. underground natural gas storage facilities by type (July 2015)



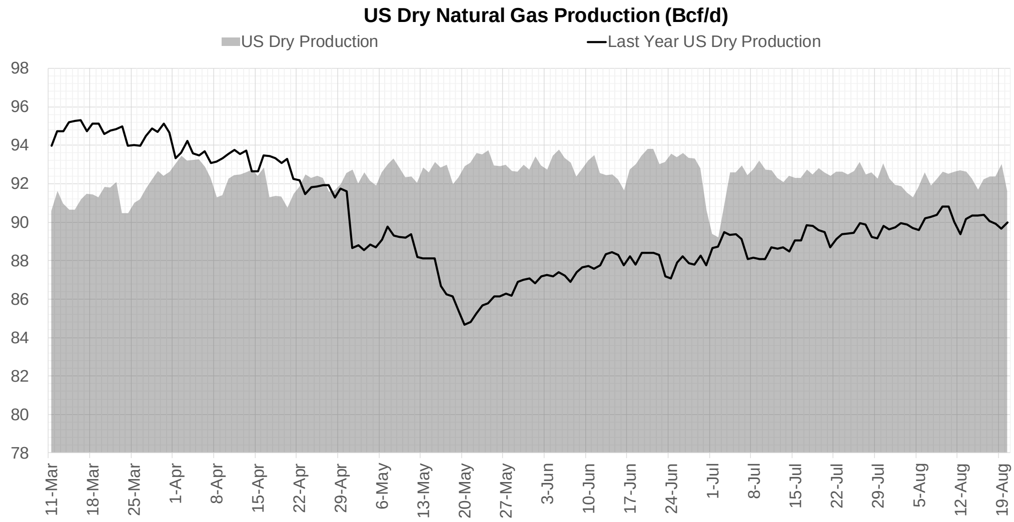
## Weather Model Storage Projection

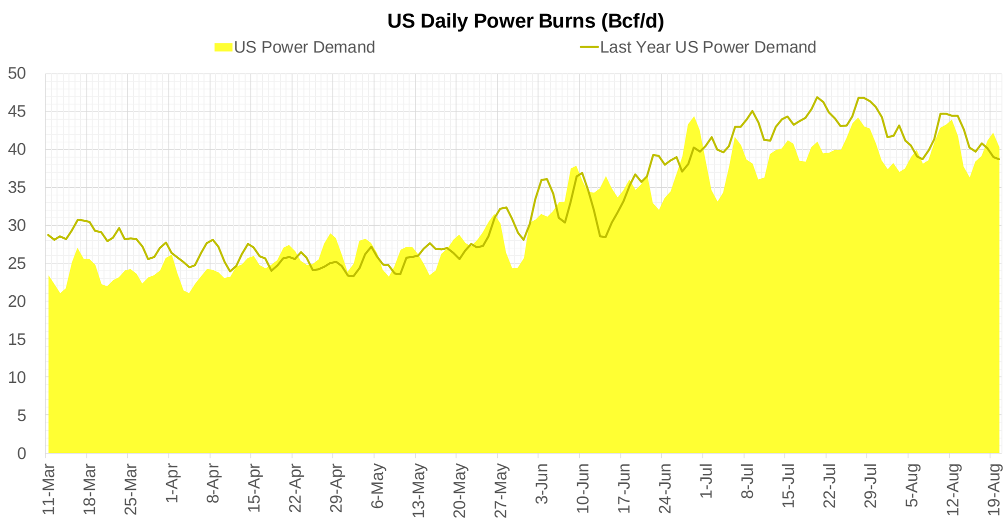
| Next report and beyond | | |
|---|---|---|
| Week Ending | Temp | Week Storage Projection |
| 27-Aug | 15.6 | 17 |
| 03-Sep | 13.9 | 42 |
| 10-Sep | 10.7 | 75 |

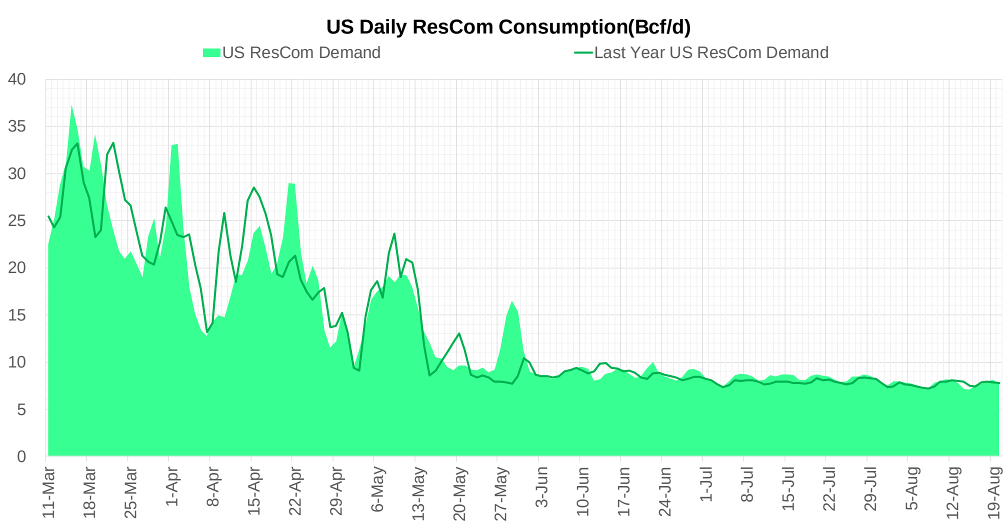



Note: this is not our official end of season forecast. This chart signifies where storage levels end with 10-year normal weather and current market tightness relative to last year

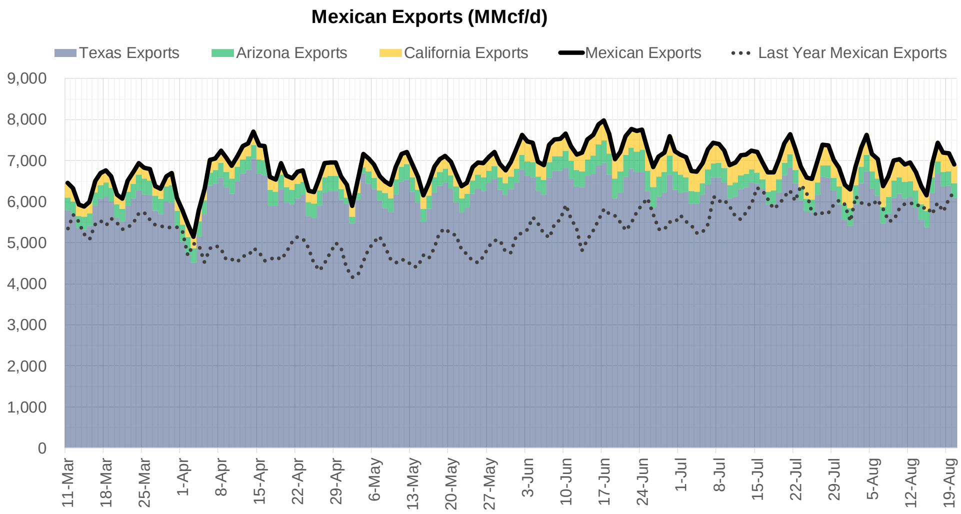
## Supply – Demand Trends

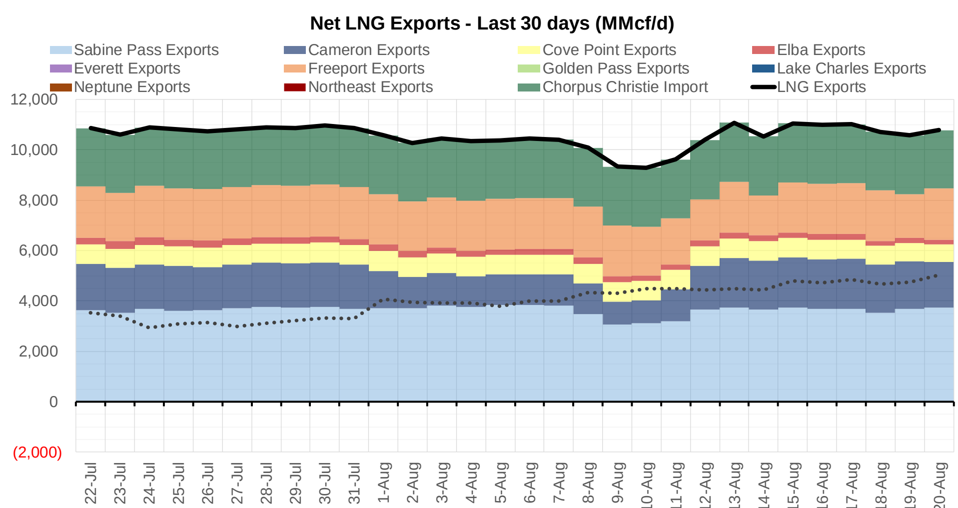



Source: Bloomberg




Source: Bloomberg

# Nat Gas Options Volume and Open Interest

## CME, ICE and Nasdaq Combined

| CONTRACT MONTH | CONTRACT YEAR | PUT/CALL | STRIKE | CUMULATIVE VOL |
|---|---|---|---|---|
| 10 | 2021 | C | 4.50 | 16448 |
| 10 | 2021 | C | 5.00 | 14619 |
| 9 | 2021 | C | 3.90 | 11622 |
| 9 | 2021 | C | 4.00 | 10672 |
| 9 | 2021 | P | 3.70 | 9825 |
| 10 | 2021 | P | 3.50 | 7602 |
| 10 | 2021 | C | 4.00 | 7268 |
| 10 | 2021 | P | 3.70 | 6702 |
| 9 | 2021 | C | 4.20 | 5038 |
| 9 | 2021 | P | 3.50 | 4057 |
| 9 | 2021 | P | 3.75 | 3623 |
| 9 | 2021 | C | 3.80 | 3254 |
| 10 | 2021 | C | 4.25 | 3218 |
| 4 | 2022 | P | 3.00 | 3200 |
| 9 | 2021 | C | 4.15 | 3115 |
| 10 | 2021 | P | 3.25 | 3017 |
| 4 | 2022 | P | 2.50 | 2850 |
| 9 | 2021 | P | 3.60 | 2742 |
| 9 | 2021 | P | 3.80 | 2658 |
| 9 | 2021 | C | 4.25 | 2600 |
| 11 | 2021 | P | 3.50 | 2358 |
| 9 | 2021 | P | 3.65 | 2271 |
| 11 | 2021 | C | 4.50 | 2215 |
| 9 | 2021 | C | 4.10 | 2155 |
| 10 | 2021 | C | 6.00 | 2103 |
| 9 | 2021 | C | 3.95 | 1818 |
| 11 | 2021 | C | 4.00 | 1772 |
| 12 | 2021 | P | 3.50 | 1758 |
| 11 | 2021 | C | 5.25 | 1583 |
| 9 | 2021 | P | 3.40 | 1530 |
| 3 | 2022 | P | 2.75 | 1500 |
| 3 | 2022 | P | 3.25 | 1500 |
| 2 | 2022 | C | 4.50 | 1469 |
| 12 | 2021 | P | 4.00 | 1360 |
| 10 | 2021 | C | 5.25 | 1335 |
| 11 | 2021 | C | 6.00 | 1334 |
| 9 | 2021 | C | 4.30 | 1331 |
| 2 | 2022 | P | 3.25 | 1300 |
| 3 | 2022 | C | 4.00 | 1245 |
| 1 | 2022 | C | 3.50 | 1225 |
| 1 | 2022 | C | 4.00 | 1225 |
| 3 | 2022 | C | 3.50 | 1225 |
| 12 | 2021 | C | 7.00 | 1224 |
| 2 | 2022 | C | 4.00 | 1169 |
| 2 | 2022 | P | 4.00 | 1166 |
| 1 | 2023 | C | 3.50 | 1150 |
| 2 | 2023 | C | 3.50 | 1150 |
| 3 | 2023 | C | 3.50 | 1150 |
| 9 | 2021 | C | 4.05 | 1147 |

| CONTRACT MONTH | CONTRACT YEAR | PUT/CALL | STRIKE | CUMULATIVE OI |
|---|---|---|---|---|
| 10 | 2021 | C | 5.00 | 50656 |
| 12 | 2021 | P | 2.75 | 41830 |
| 10 | 2021 | C | 4.50 | 40865 |
| 10 | 2021 | C | 4.00 | 39712 |
| 10 | 2021 | P | 3.50 | 38722 |
| 12 | 2021 | P | 2.50 | 38528 |
| 10 | 2021 | C | 3.50 | 33004 |
| 9 | 2021 | C | 4.00 | 31887 |
| 10 | 2021 | P | 3.00 | 31712 |
| 10 | 2021 | P | 2.50 | 29844 |
| 9 | 2021 | C | 4.25 | 29719 |
| 10 | 2021 | P | 2.00 | 28650 |
| 10 | 2021 | C | 3.25 | 28195 |
| 10 | 2021 | P | 2.75 | 27144 |
| 10 | 2021 | C | 4.25 | 26821 |
| 9 | 2021 | C | 5.00 | 26586 |
| 10 | 2021 | C | 6.00 | 25479 |
| 12 | 2021 | P | 3.00 | 24697 |
| 9 | 2021 | P | 2.50 | 23385 |
| 11 | 2021 | P | 3.00 | 23071 |
| 11 | 2021 | C | 4.00 | 22723 |
| 9 | 2021 | C | 3.50 | 22611 |
| 9 | 2021 | P | 3.00 | 22432 |
| 9 | 2021 | P | 3.50 | 22129 |
| 12 | 2021 | C | 4.00 | 22092 |
| 9 | 2021 | P | 2.00 | 20427 |
| 9 | 2021 | C | 4.75 | 20402 |
| 9 | 2021 | P | 3.25 | 20089 |
| 10 | 2021 | P | 2.25 | 19900 |
| 4 | 2022 | C | 3.00 | 19810 |
| 9 | 2021 | C | 3.25 | 18994 |
| 10 | 2021 | C | 3.00 | 18502 |
| 9 | 2021 | C | 4.50 | 17972 |
| 11 | 2021 | C | 5.00 | 17831 |
| 10 | 2021 | P | 3.25 | 16846 |
| 10 | 2021 | C | 3.75 | 16812 |
| 1 | 2022 | C | 5.00 | 16285 |
| 9 | 2021 | P | 4.00 | 16268 |
| 9 | 2021 | P | 2.75 | 15816 |
| 3 | 2022 | C | 5.00 | 15473 |
| 2 | 2022 | C | 5.00 | 15419 |
| 3 | 2022 | P | 2.50 | 15394 |
| 11 | 2021 | P | 3.50 | 15098 |
| 9 | 2021 | P | 3.75 | 14835 |
| 11 | 2021 | C | 3.75 | 14577 |
| 3 | 2022 | C | 3.00 | 14448 |
| 11 | 2021 | P | 2.50 | 14399 |
| 3 | 2022 | C | 4.00 | 14313 |
| 3 | 2022 | C | 8.00 | 14178 |
| 1 | 2022 | C | 4 | 14107 |

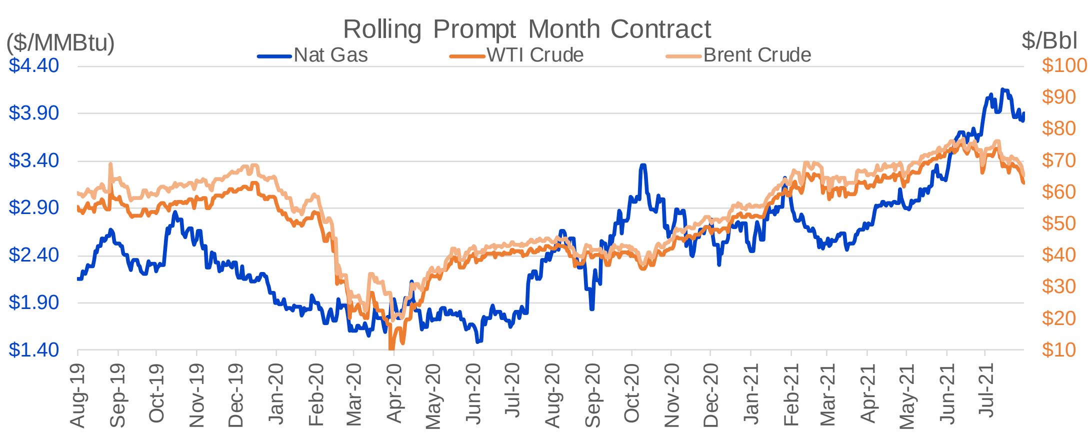
Source: CME, Nasdaq, ICE

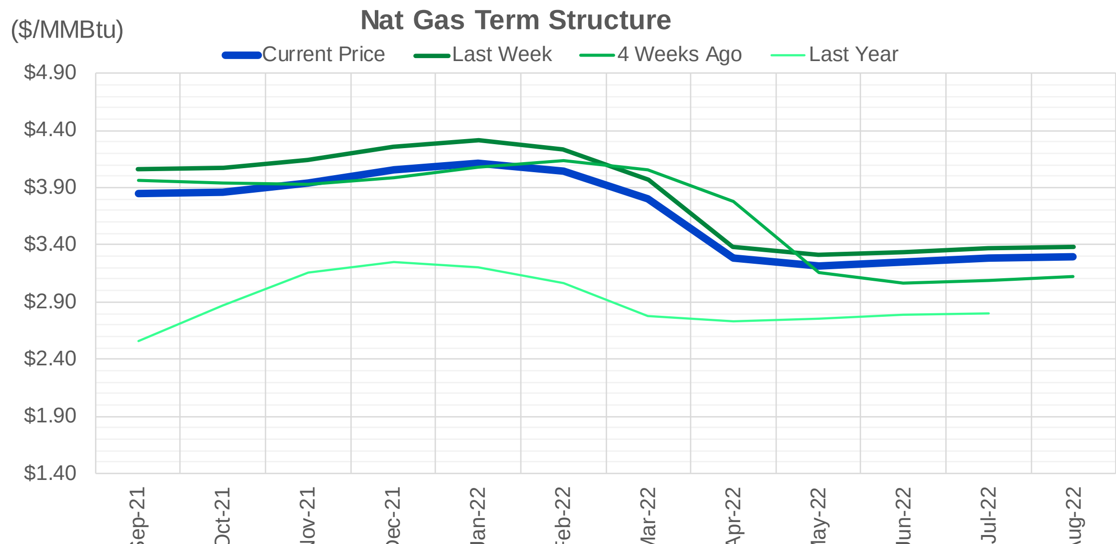
## Nat Gas Futures Open Interest

### CME, ICE and Nasdaq Combined

| CME Henry Hub Futures (10,000 MMBtu) | | | | ICE Henry Hub Futures Contract Equivalent (10,000 MM | | | |
|---|---|---|---|---|---|---|---|
| | Current | Prior | Daily Change | | Current | Prior | Daily Change |
| SEP 21 | 70913 | 83921 | -13008 | SEP 21 | 84957 | 81887 | 3070 |
| OCT 21 | 228219 | 223441 | 4778 | OCT 21 | 107367 | 107602 | -235 |
| NOV 21 | 194629 | 194059 | 570 | NOV 21 | 70040 | 69167 | 872 |
| DEC 21 | 84433 | 84447 | -14 | DEC 21 | 75711 | 75658 | 53 |
| JAN 22 | 140182 | 137876 | 2306 | JAN 22 | 79210 | 78899 | 310 |
| FEB 22 | 55204 | 55220 | -16 | FEB 22 | 68410 | 69347 | -937 |
| MAR 22 | 104066 | 104606 | -540 | MAR 22 | 73015 | 73887 | -872 |
| APR 22 | 111455 | 111533 | -78 | APR 22 | 68363 | 69873 | -1511 |
| MAY 22 | 100925 | 100453 | 472 | MAY 22 | 66978 | 68284 | -1306 |
| JUN 22 | 31464 | 31226 | 238 | JUN 22 | 52004 | 53158 | -1154 |
| JUL 22 | 26885 | 26695 | 190 | JUL 22 | 53457 | 54179 | -722 |
| AUG 22 | 25242 | 25457 | -215 | AUG 22 | 53197 | 54407 | -1210 |
| SEP 22 | 26851 | 26754 | 97 | SEP 22 | 53164 | 54114 | -950 |
| OCT 22 | 68885 | 67073 | 1812 | OCT 22 | 60688 | 61703 | -1016 |
| NOV 22 | 28022 | 27853 | 169 | NOV 22 | 46898 | 48058 | -1160 |
| DEC 22 | 24935 | 24618 | 317 | DEC 22 | 50344 | 51511 | -1168 |
| JAN 23 | 18398 | 18436 | -38 | JAN 23 | 33430 | 33329 | 102 |
| FEB 23 | 6436 | 6496 | -60 | FEB 23 | 28196 | 28099 | 97 |
| MAR 23 | 9027 | 9011 | 16 | MAR 23 | 30016 | 29924 | 92 |
| APR 23 | 11015 | 10785 | 230 | APR 23 | 24921 | 24722 | 198 |
| MAY 23 | 6366 | 6459 | -93 | MAY 23 | 25962 | 25760 | 203 |
| JUN 23 | 5128 | 5101 | 27 | JUN 23 | 24171 | 23975 | 196 |
| JUL 23 | 3904 | 3904 | 0 | JUL 23 | 24189 | 23991 | 198 |
| AUG 23 | 3162 | 3157 | 5 | AUG 23 | 24061 | 23863 | 198 |
| SEP 23 | 4096 | 3887 | 209 | SEP 23 | 23505 | 23309 | 196 |
| OCT 23 | 4710 | 4913 | -203 | OCT 23 | 25286 | 25084 | 202 |
| NOV 23 | 1722 | 1722 | 0 | NOV 23 | 25564 | 25382 | 182 |
| DEC 23 | 1766 | 1741 | 25 | DEC 23 | 23874 | 23694 | 180 |
| JAN 24 | 989 | 985 | 4 | JAN 24 | 13239 | 13236 | 4 |
| FEB 24 | 879 | 872 | 7 | FEB 24 | 11242 | 11322 | -80 |

Source: CME, ICE






| | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Current Price** | **$3.852** | **$3.866** | **$3.939** | **$4.057** | **$4.120** | **$4.045** | **$3.800** | **$3.287** | **$3.220** | **$3.250** | **$3.284** | **$3.292** |
| Last Week | $4.059 | $4.071 | $4.143 | $4.256 | $4.319 | $4.237 | $3.967 | $3.385 | $3.309 | $3.338 | $3.371 | $3.378 |
| vs. Last Week | -$0.207 | -$0.205 | -$0.204 | -$0.199 | -$0.199 | -$0.192 | -$0.167 | -$0.098 | -$0.089 | -$0.088 | -$0.087 | -$0.086 |
| 4 Weeks Ago | $3.959 | $3.938 | $3.935 | $3.990 | $4.084 | $4.141 | $4.053 | $3.781 | $3.157 | $3.064 | $3.092 | $3.126 |
| vs. 4 Weeks Ago | -$0.107 | -$0.072 | $0.004 | $0.067 | $0.036 | -$0.096 | -$0.253 | -$0.494 | $0.063 | $0.186 | $0.192 | $0.166 |
| Last Year | $2.426 | $2.563 | $2.868 | $3.152 | $3.255 | $3.203 | $3.065 | $2.777 | $2.733 | $2.759 | $2.791 | $2.799 |
| vs. Last Year | $1.426 | $1.303 | $1.071 | $0.905 | $0.865 | $0.842 | $0.735 | $0.510 | $0.487 | $0.491 | $0.493 | $0.493 |

| | Units | Current Price | vs. Last Week | vs. 4 Weeks Ago | vs. Last Year |
|---|---|---|---|---|---|
| NatGas Jul21/Oct21 | $/MMBtu | 0.227 | -0.104 | -0.132 | 0.207 |
| NatGas Oct21/Nov21 | $/MMBtu | 0.065 | -0.008 | 0.008 | 0.015 |
| NatGas Oct21/Jan22 | $/MMBtu | 0.237 | -0.023 | 0.032 | -0.037 |
| NatGas Apr22/Oct22 | $/MMBtu | 0.017 | 0.010 | 0.036 | -0.022 |
| WTI Crude | $/Bbl | 63.69 | -5.400 | -8.220 | 21.110 |
| Brent Crude | $/Bbl | 66.45 | -4.860 | -7.340 | 21.550 |
| Fuel Oil, NY Harbour 1% | $/Bbl | 97.18 | 0.000 | 0.000 | 0.000 |
| Heating Oil | cents/Gallon | 196.90 | -13.490 | -16.360 | 72.230 |
| Propane, Mt. Bel | cents/Gallon | 1.11 | -0.010 | 0.021 | 0.607 |
| Ethane, Mt. Bel | cents/Gallon | 0.34 | -0.002 | 0.023 | 0.092 |
| Coal, PRB | $/MTon | 12.30 | 0.000 | 0.000 | 0.000 |
| Coal, PRB | $/MMBtu | 0.70 | | | |

Source: CME, Bloomberg

## Baker Hughes Rig Counts

**Rotary Rig Count**

**8/20/2021**

Baker Hughes

| U.S. Breakout Information | This Week | +/- | Last Week | +/- | Year Ago |
|---|---|---|---|---|---|
| Oil | 405 | 8 | 397 | 222 | 183 |
| Gas | 97 | -5 | 102 | 28 | 69 |
| Miscellaneous | 1 | 0 | 1 | -1 | 2 |
| Directional | 30 | 3 | 27 | 10 | 20 |
| Horizontal | 454 | -2 | 456 | 233 | 221 |
| Vertical | 19 | 2 | 17 | 6 | 13 |
| **Canada Breakout** | **This Week** | **+/-** | **Last Week** | **+/-** | **Year Ago** |
| Oil | 95 | -5 | 100 | 75 | 20 |
| Gas | 60 | -3 | 63 | 24 | 36 |
| Miscellaneous | 1 | 0 | 1 | 1 | 0 |
| **Major Basin Variances** | **This Week** | **+/-** | **Last Week** | **+/-** | **Year Ago** |
| Ardmore Woodford | 3 | 0 | 3 | 3 | 0 |
| Arkoma Woodford | 1 | 0 | 1 | 0 | 1 |
| Cana Woodford | 17 | -1 | 18 | 11 | 6 |
| DJ-Niobrara | 12 | 0 | 12 | 8 | 4 |
| Eagle Ford | 35 | -1 | 36 | 26 | 9 |
| Granite Wash | 4 | 0 | 4 | 3 | 1 |
| Haynesville | 45 | -1 | 46 | 13 | 32 |
| Marcellus | 28 | -1 | 29 | 2 | 26 |
| Permian | 247 | 2 | 245 | 120 | 127 |
| Utica | 12 | 1 | 11 | 7 | 5 |
| Williston | 23 | 0 | 23 | 13 | 10 |