



Longreach Energy Holdings LLC

FIRM INFORMATION

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1. Market and Macro Industry Commentary

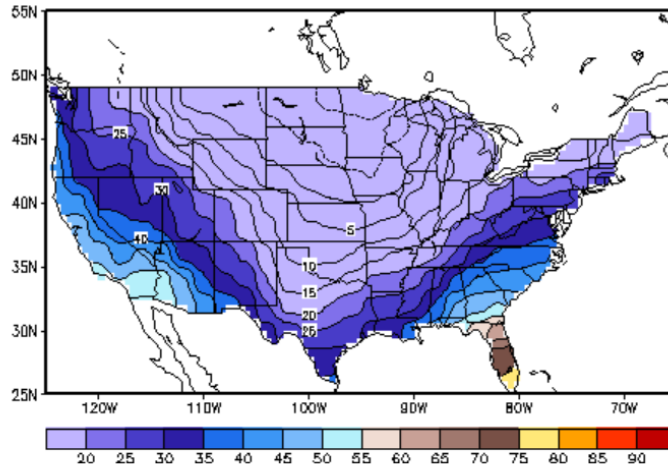
General Market Commentary

A polar vortex hit the US in mid February delivering record cold weather (Figures 1 and 2). This delivered markedly increased heating demand and large energy supply disruptions.

Figure 1: Average Temperature for 7 days ending 18 Feb 2021 (Source: National Oceanic and Atmospheric Administration, NOAA)

Average temperature (°F)

7-day mean ending Feb 18, 2021

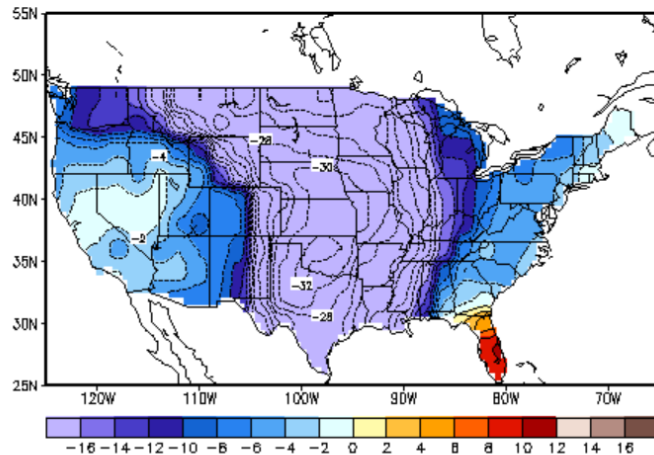


Source: National Oceanic and Atmospheric Administration

Figure 2: Deviation between Average and Normal (Source: NOAA)

Deviation between average and normal (°F)

7-day mean ending Feb 18, 2021

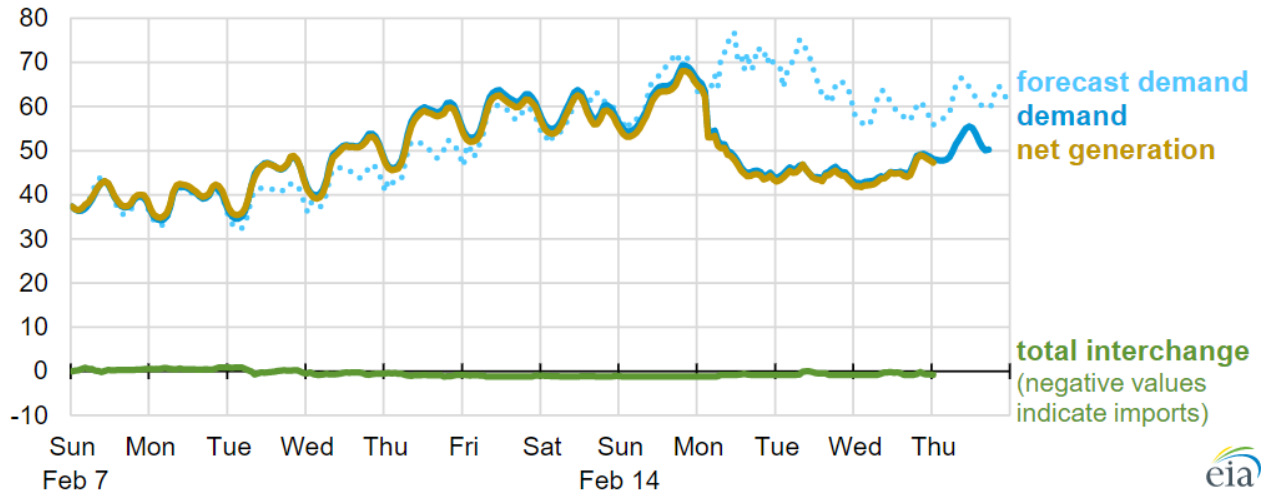


Source: National Oceanic and Atmospheric Administration

Energy supply disruptions were most acute in Texas where, according to the Texas Tribune, the Texas power grid was “seconds and minutes” away from a major failure that would have put most of Texas in the dark for months. Grid operators had to start rolling blackouts across the state, over the period from 14 to 19 February up to 4 million Texas residents had no access to electricity. Figure 3 shows the demand destruction impact of rolling Texas blackouts over the polar vortex period.

Figure 3: Electricity Generation and Demand in Texas (Source: EIA)

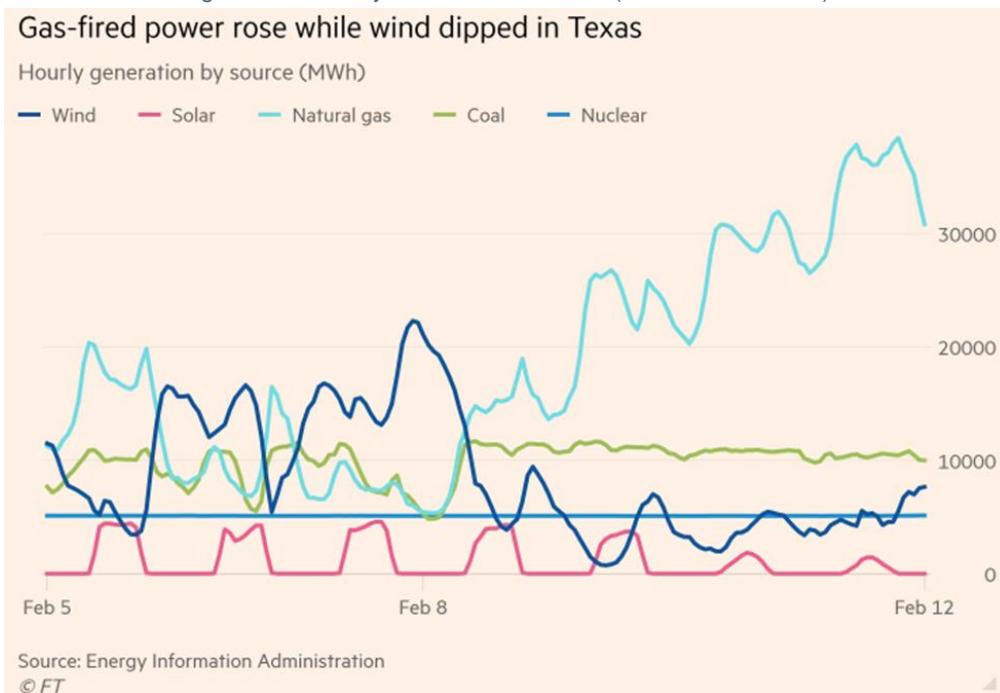
Hourly electricity demand, net generation, and total interchange (Feb 7–Feb 18, 2021) Electric Reliability Council of Texas, Inc (ERCOT) gigawatts



Source: U.S. Energy Information Administration, *Hourly Electric Grid Monitor* (ERCOT demand, net generation, and interchange)

The extreme cold disrupted gas, nuclear and wind powered electricity generation. Disruptions to gas power, the largest power source at this time of year (minimal solar and only small wind contributions in late winter, see Figure 4), had the biggest impact. Gas power generation was hit because companies in Texas had not prepared surface facilities (including pipes) to resist the cold. This meant that liquids in the produced gas stream (principally water) froze in the pipes and prevented gas flow. This does not happen in the northern US where this sort of cold weather is experienced regularly and planned for. The Texas electricity regulator is under great pressure to address this system weakness.

Figure 4: Electricity Generation in Texas (Source: EIA via FT)



The weather impact on both gas and oil markets is discussed in detail below.

The latest Baker Hughes rig count data follows. In the last month US total rigs have increased from 384 to 403, land rigs increasing from 365 to 389. The gains have come from oil rigs, increasing from 295 to 310 and another 4 new gas rigs, up from 88 to 92. Strong gas and oil prices should see rig counts jump up over the coming months. Drilling activity is clearly picking up across our Oklahoma minerals portfolio.

Baker Hughes rig count



Rotary Rig Count

3/5/21

| Location | Week | +/- | Week Ago | +/- | Year Ago |
|----------------------------------|------------------|------------|------------------|-------------|-----------------|
| Land | 389 | 4 | 385 | -379 | 768 |
| Inland Waters | 0 | 0 | 0 | -2 | 2 |
| Offshore | 14 | -3 | 17 | -9 | 23 |
| United States Total | 403 | 1 | 402 | -390 | 793 |
| Gulf Of Mexico | 14 | -3 | 17 | -9 | 23 |
| Canada | 141 | -22 | 163 | -62 | 203 |
| North America | 544 | -21 | 565 | -452 | 996 |
| U.S. Breakout Information | This Week | +/- | Last Week | +/- | Year Ago |
| Oil | 310 | 1 | 309 | -372 | 682 |
| Gas | 92 | 0 | 92 | -17 | 109 |
| Miscellaneous | 1 | 0 | 1 | -1 | 2 |
| Directional | 16 | -2 | 18 | -35 | 51 |
| Horizontal | 362 | 3 | 359 | -346 | 708 |
| Vertical | 25 | 0 | 25 | -9 | 34 |



Gas Market

Extreme cold weather caused US gas prices to spike during February. The Henry Hub prompt contract hit a high of 3.239/mmbtu on 17 February before warmer weather saw prices falling to close the month at \$2.771/mmbtu, flat on the January close of \$2.769/mmbtu.

Gas supply is tight compared to demand and the market looks set for stronger prices through the northern summer and 21/22 winter seasons.

The moves in Nymex Henry Hub were subdued against the physical spot prices.

Unusually strong winter season heating and power demand for natural gas (see the big jump in heating degree days, a measure of cold weather induced demand for space heating, in Figure 5) combined with freezing induced sudden decrease in natural gas production (Figure 6), delivered a large imbalance of demand over supply (Figure 7).

Figure 5: US Heating Degree Days week ending 18 Feb (Source: NOAA)

Temperature – heating & cooling degree days (week ending Feb 18)

| Region | HDD Current | HDD deviation from: | | CDD Current | CDD deviation from: | |
|-----------------|----------------|------------------------|--------------|----------------|------------------------|--------------|
| | | normal | last year | | normal | last year |
| New England | 269 | 10 | 25 | 0 | 0 | 0 |
| Middle Atlantic | 272 | 26 | 42 | 0 | 0 | 0 |
| E N Central | 372 | 106 | 97 | 0 | 0 | 0 |
| W N Central | 465 | 195 | 166 | 0 | 0 | 0 |
| South Atlantic | 186 | 26 | 56 | 16 | 9 | -2 |
| E S Central | 257 | 99 | 119 | 0 | -1 | 0 |
| W S Central | 290 | 183 | 191 | 0 | -4 | -7 |
| Mountain | 272 | 72 | 63 | 0 | -1 | 0 |
| Pacific | 125 | 22 | 25 | 0 | 0 | 0 |
| United States | 279 | 81 | 83 | 3 | 1 | -1 |

Note: HDD = heating degree day; CDD = cooling degree day

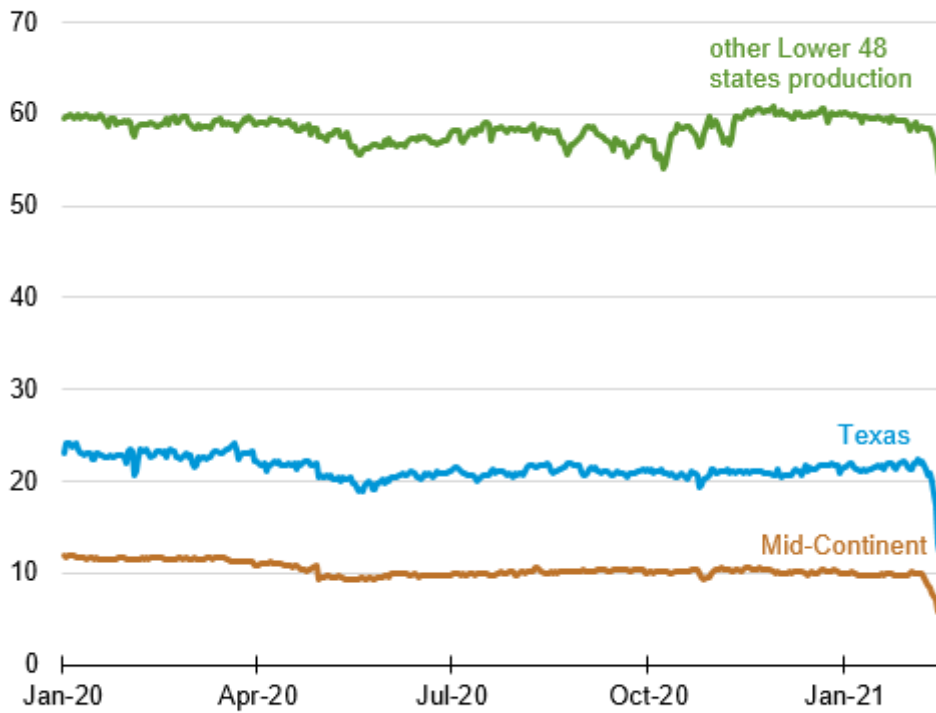
Source: National Oceanic and Atmospheric Administration



Figure 6: US Gas Production (Source: EIA)

Regional natural gas production (January 2020–February 2021)

billion cubic feet per day

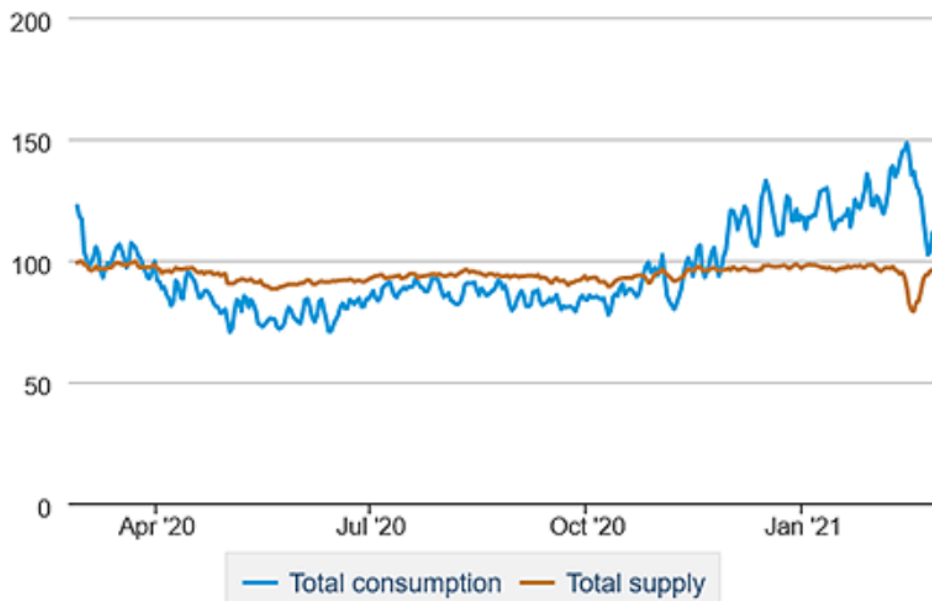


Source: U.S. Energy Information Administration, based on data from IHS Markit.

Figure 7: US Gas Supply/Demand Balance (Source: HIS Markit via EIA)

Total supply/demand balance (last 365 days)

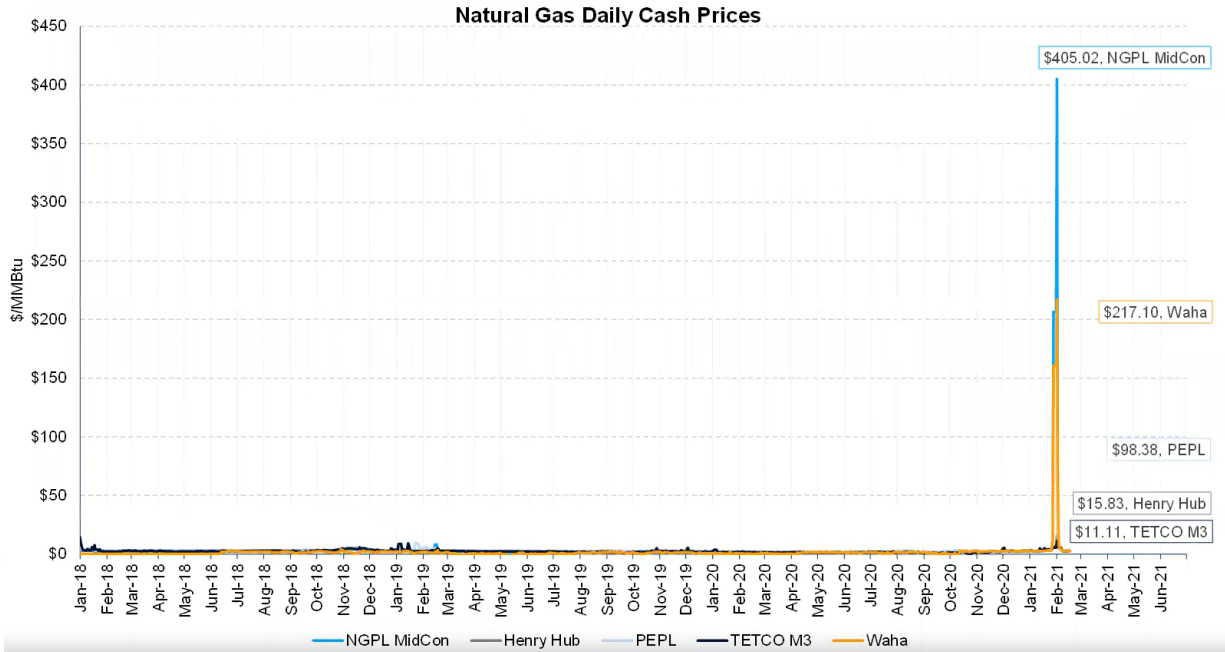
billion cubic feet per day



Source: IHS Markit

Figure 8 displays the peak cash prices at NGPL MidCon in Oklahoma, Waha in the West Texas Permian Basin, PEPL in north Texas, Henry Hub in Louisiana and TETCO in the mid-west.

Figure 8: Natural Gas Spot Daily Prices (Source: Aegis)

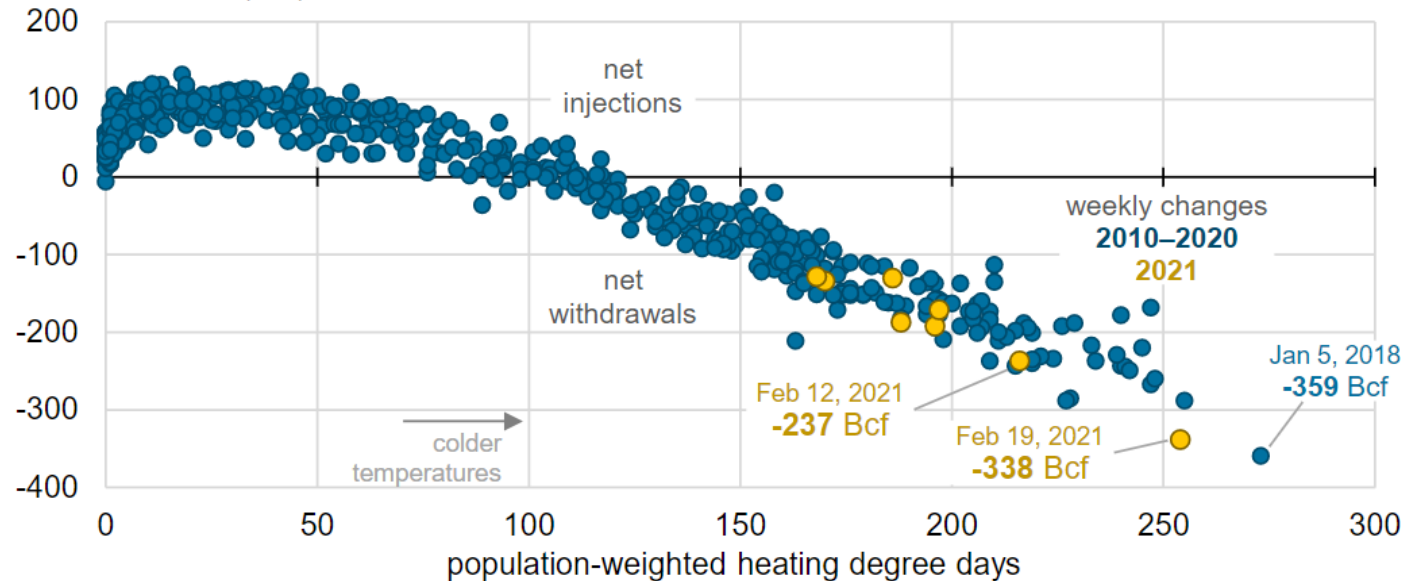


This situation is the inversion of the excess supply crisis that hit the WTI futures contract in late April 2020. This time, rather than having nowhere to put excess crude, the market was desperately short of gas supply. The price of natural gas at Waha, near large natural gas production activities in the Permian Basin, rose to over \$206/mmbtu on 16 February, the highest price recorded at the Waha hub since at least 1995. The price at the Chicago Citygate reached an all-time high of nearly \$130/mmbtu on 12 February. Prices at the Oneok Gas Transmission (OGT) pipeline in Oklahoma averaged \$1,192/mmbtu on 17 February, the highest in the country according to Natural Gas Intelligence.

Increased demand and reduced supply delivered extremely high storage withdrawals (Figure 9).

Figure 9: Weekly Change in Gas Storage (Source: EIA)

Weekly net changes of natural gas in underground storage (Jan 2010–Feb 2021)



The 338bcf withdrawal for the week ended 19 February is the largest February withdrawal in the last decade (Figure 10) and the second largest weekly withdrawal ever reported for the lower 48 states (Figure 11 – note the prior week ending 12 Feb comes in at #13 on this list).

Figure 10: Range of Weekly Gas Storage Changes (Source: EIA)

Range of weekly natural gas storage net changes, Lower 48 states (2010–2021)

billion cubic feet

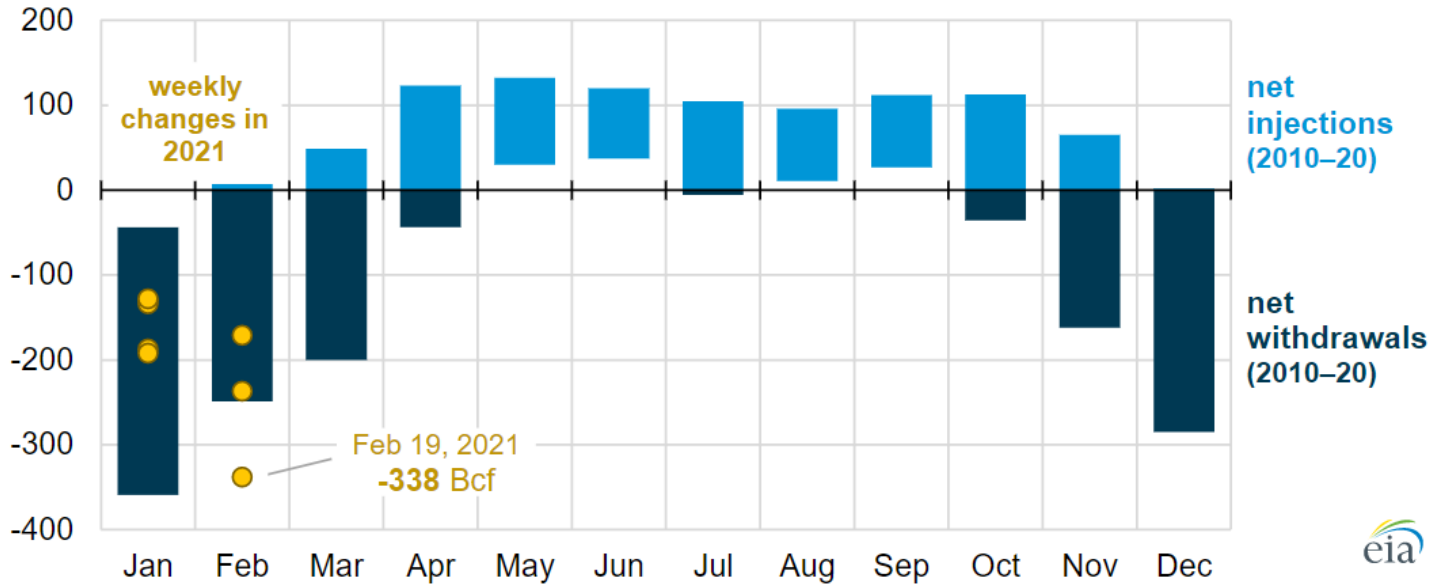
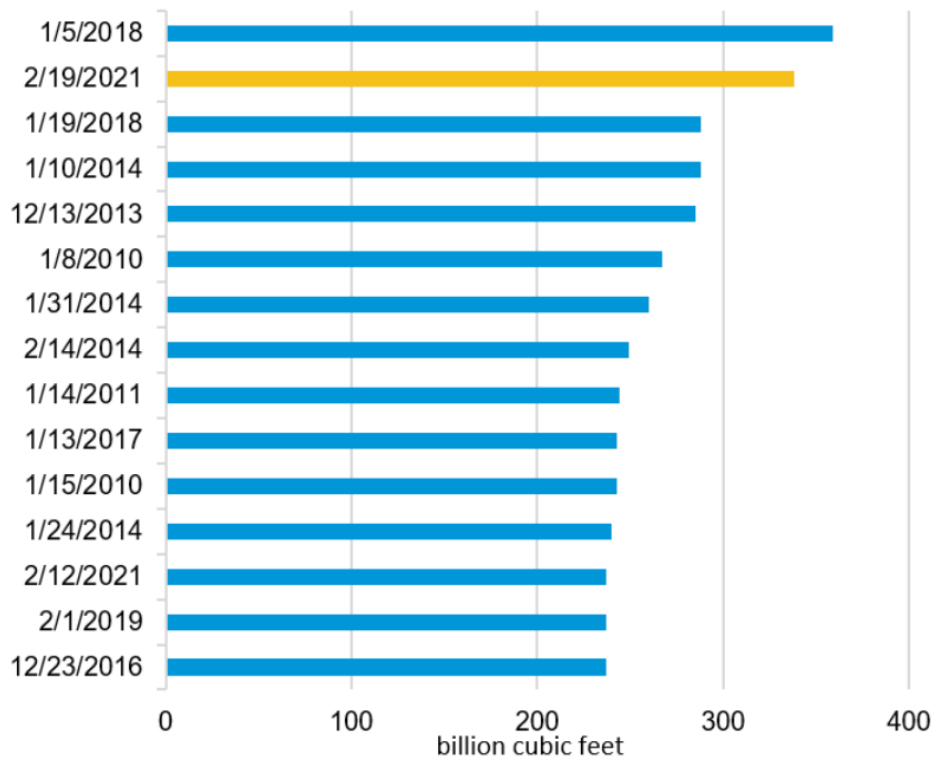


Figure 11: Top 15 Lower 48 States' Weekly Net Withdrawals (Source: EIA)

The top 15 Lower 48 states' weekly net withdrawals (2010–21)

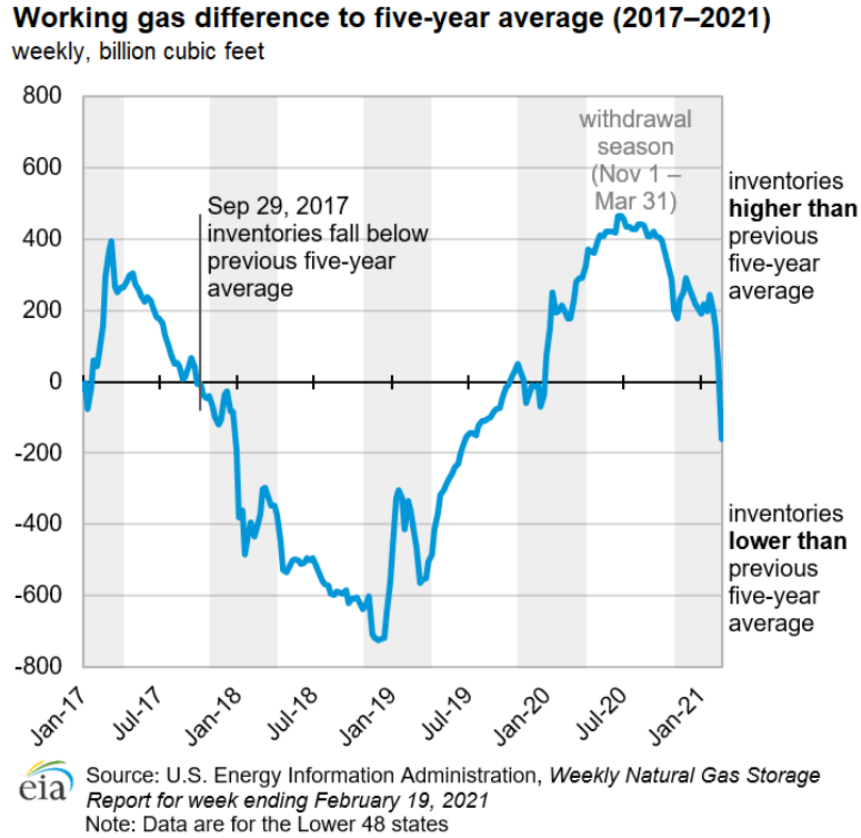
week ending



Source: U.S. Energy Information Administration, *Weekly Natural Gas Storage Report*
 Note: Data are for the Lower 48 states

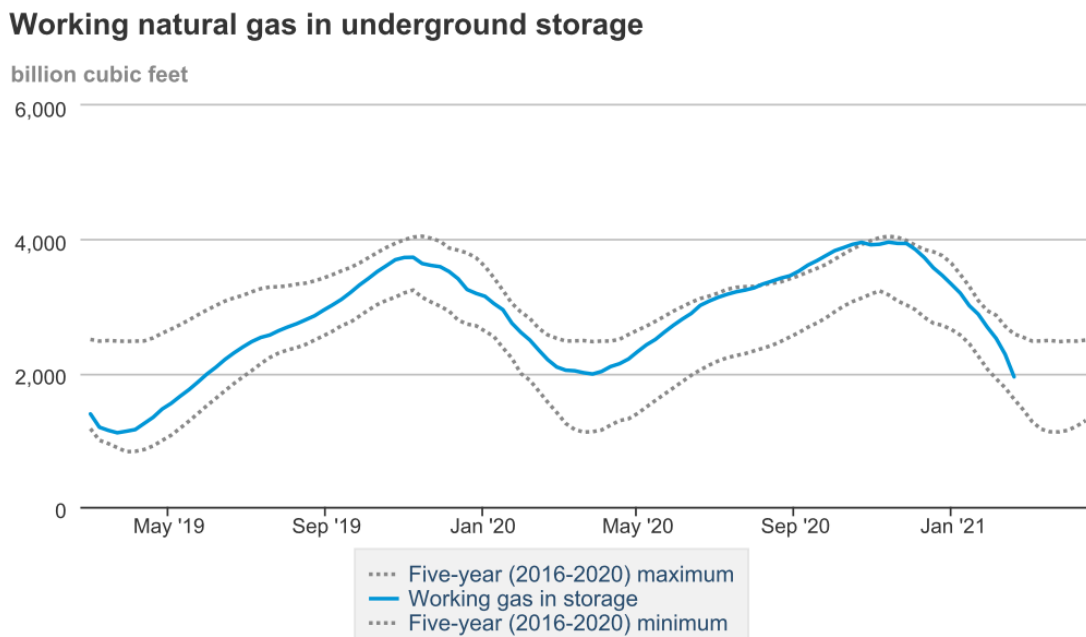
Inventories of working gas are now 161bcf below the five-year average (Figure 12).

Figure 12: Working Gas Difference to 5-Year Average, (Source: EIA)



Total working gas in storage has fallen from the top of the 5-year range in December to approach the bottom of the range by end February (Figure 13).

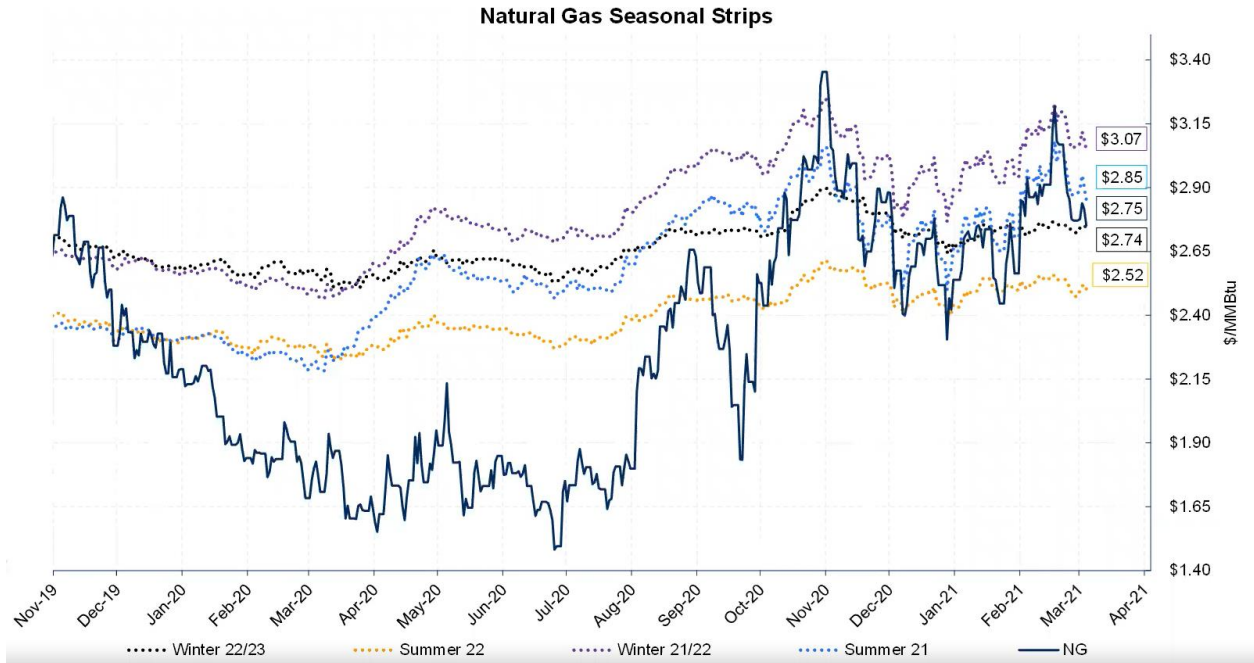
Figure 13: Working Gas in Storage (Source: EIA)



 Source: Form EIA-912, *Weekly Underground Natural Gas Storage Report*

Aegis notes that in its surveys, gas producers report an average threshold price of \$2.75/mcf required to invest in significant new supply. The current forward gas price curve (Figure 14) only has brief windows above this \$2.75/mcf threshold.

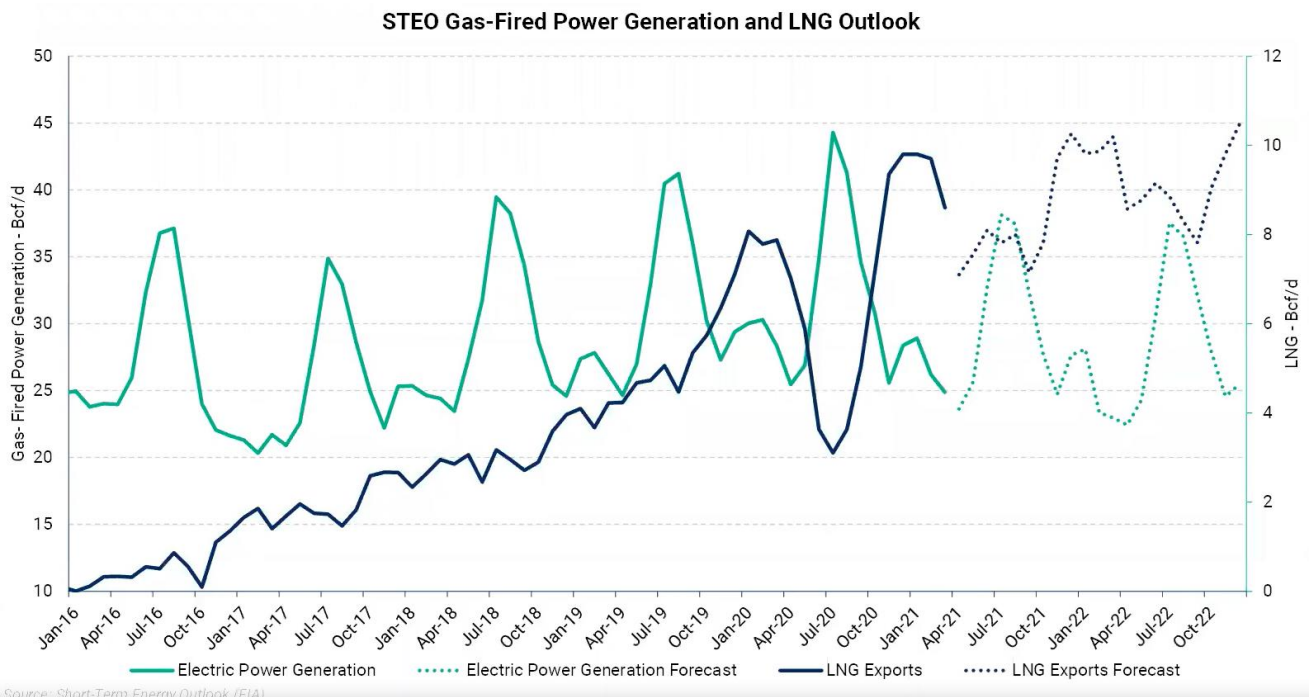
Figure 14: Natural Gas Seasonal Strips (Source: Aegis)



Without higher prices to incentivise investment, production is expected to remain at or around the current level of 90bcf/d.

In its February Short Term Energy Outlook (STEO) the EIA forecasts that to balance the market, prices need to increase to above \$3/mcf. This will both encourage production to increase and destroy demand with decreases in the most price-elastic gas users, LNG and gas fired power generation (Figure 15). A decrease in gas fired power generation will mostly be matched by a corresponding increase in use of coal.

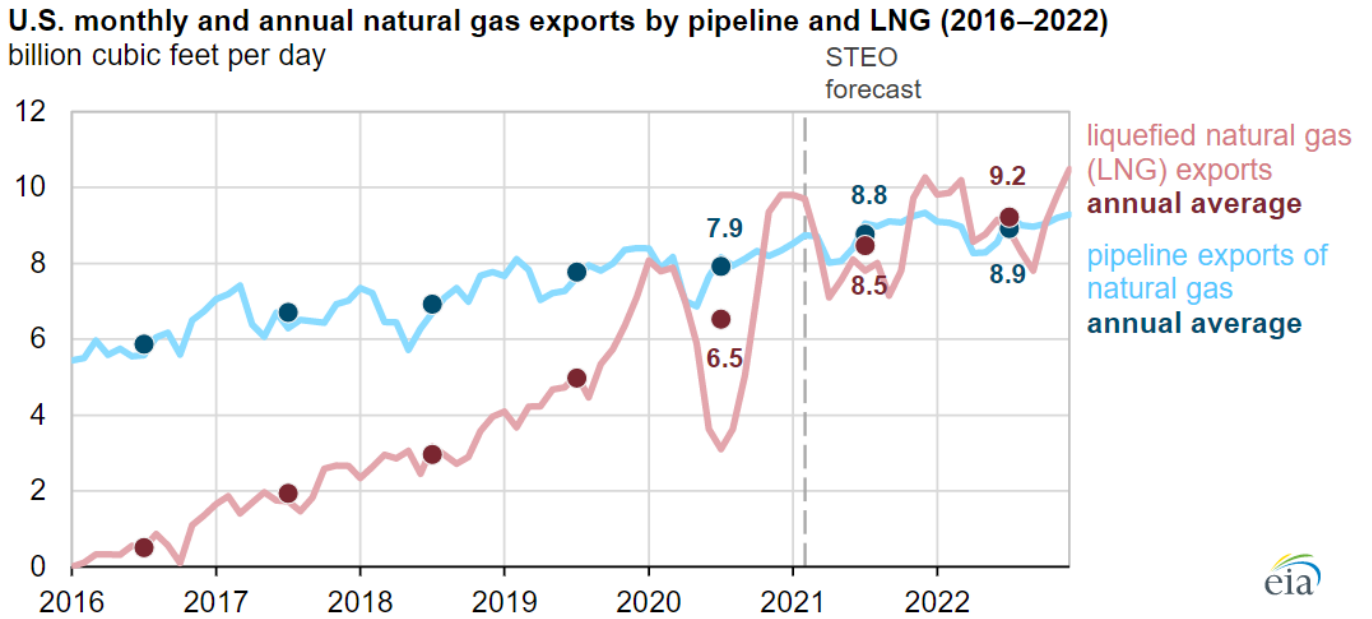
Figure 15: STEO Gas-Fired Power Generation and LNG Outlook (Source: EIA via Aegis)



Source: Short-Term Energy Outlook (EIA)

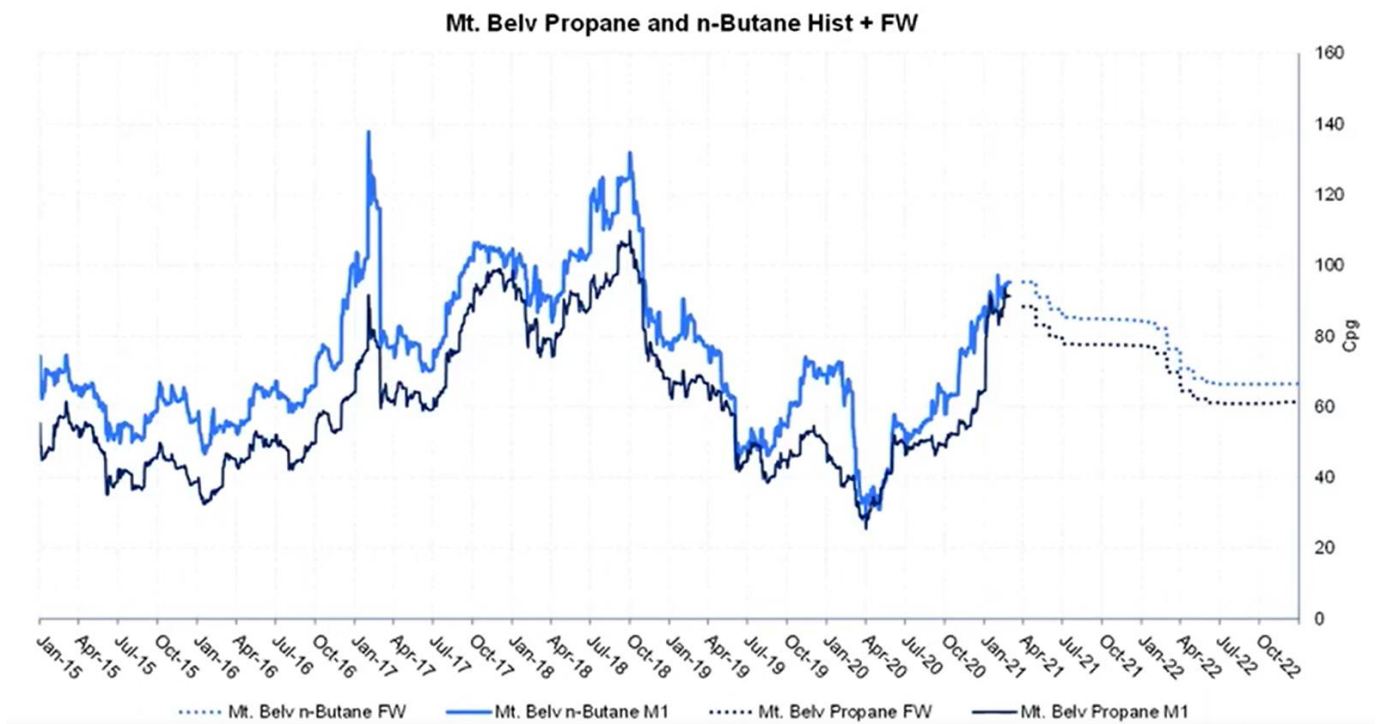
US LNG exports set consecutive monthly records of 9.4bcf/d in November and 9.8bcf/d in both December 2020 and January 2021, according to EIA estimates. EIA forecasts that US LNG gross exports will average 9.7bcf/d in February 2021, before declining to seasonal lows in the shoulder months of the spring and fall seasons. EIA forecasts LNG exports to average 8.5bcf/d in 2021 and 9.2bcf/d in 2022. Gross pipeline exports (to Mexico and Canada) are forecast to average 8.8bcf/d in 2021 and 8.9bcf/d in 2022 (Figure 16).

Figure 16: Monthly and Annual LNG and Pipeline Exports (Source: EIA)



Natural gas liquids prices have also risen strongly since the lows of April 2020 (Figure 17).

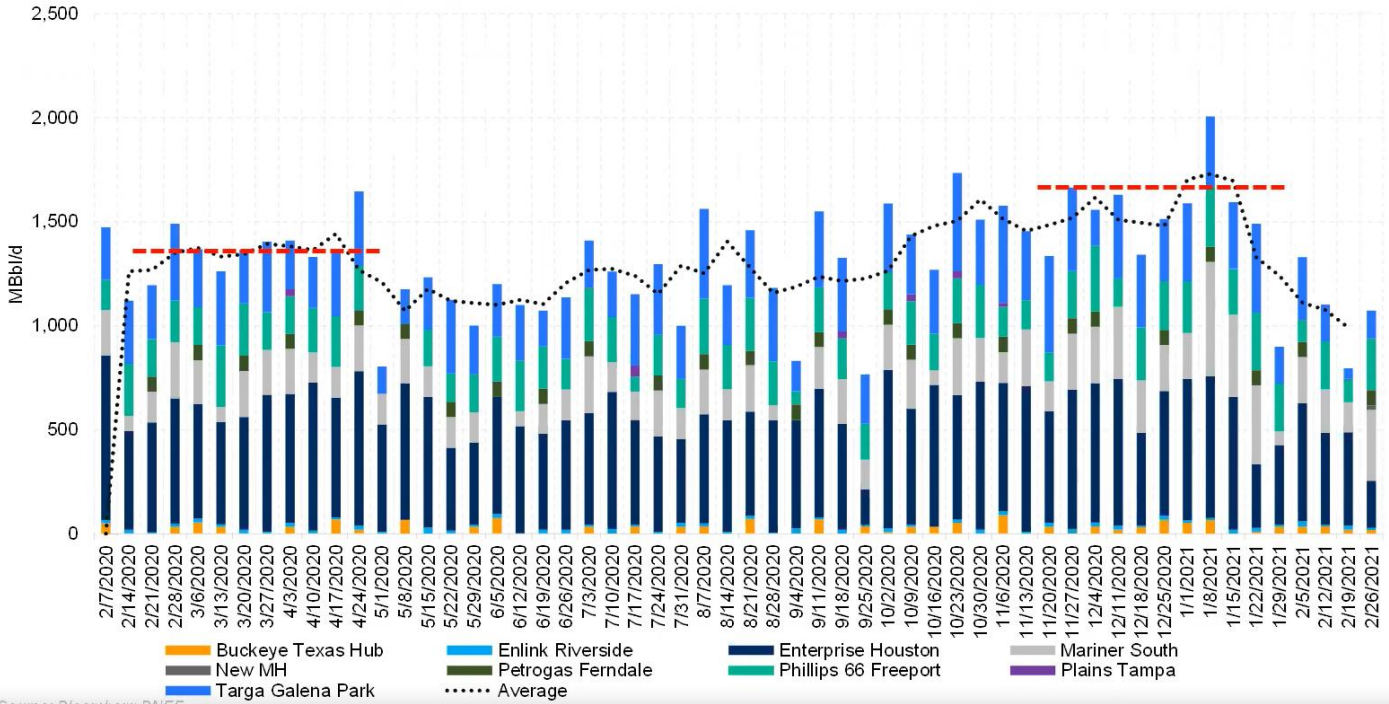
Figure 17: Propane and n-Butane Historic and Fwd Prices (Source: Aegis)



Heating of outdoor dining spaces in the northern US has driven propane demand while LPG exports have also been strong (Figure 18). High NGL prices significantly improve the economics of gas production in the basins where LEI is active.

Figure 18: LPG Exports (Source Bloomberg via Aegis)

Gulf Coast Waterborne LPG Exports by Terminal



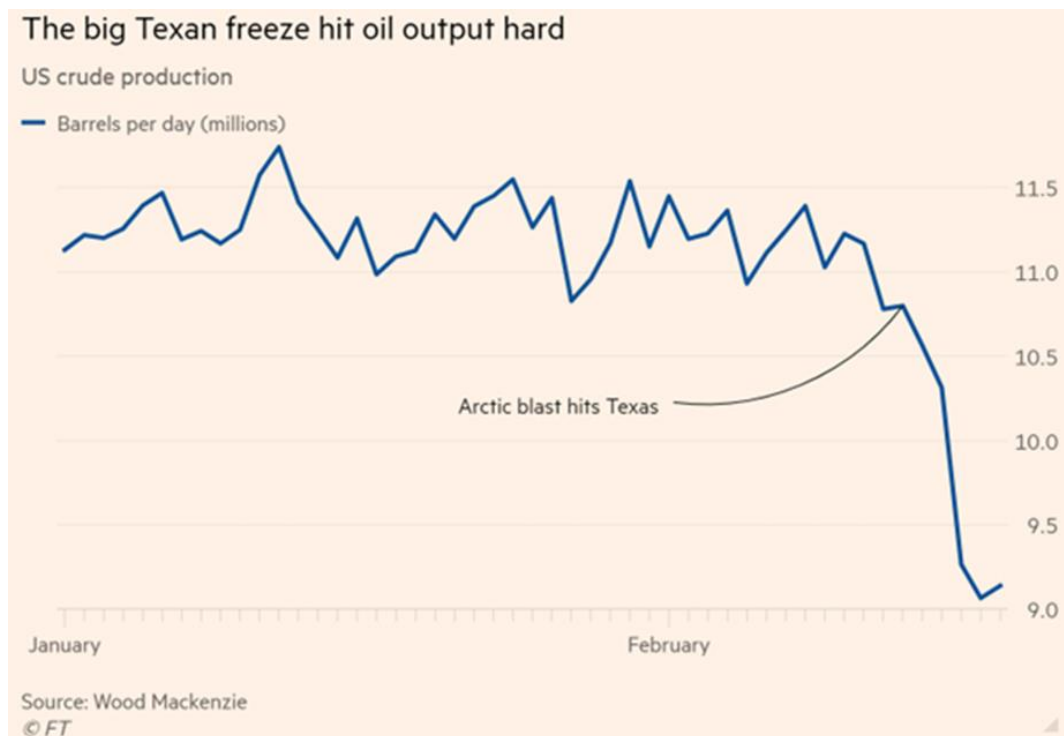
Source: Bloomberg BNEF



Oil Market

This time last month WTI was trading at 57.37/bbl. This felt like a high price based on market enthusiasm for early Covid-19 vaccines and prospects of a \$1.9 trillion stimulus package. To these factors were added cold weather induced supply distribution (Figure 18). This provided additional support as WTI reached \$61.94 at open on 1 March.

Figure 19: US Oil Production (Source: Wood Mackenzie via FT)



OPEC+ met on 4 March, the resolutions (summarised below) surprised the market by keeping 1.5 million b/d of supply shut in. WTI immediately jumped \$3/bbl on the news.

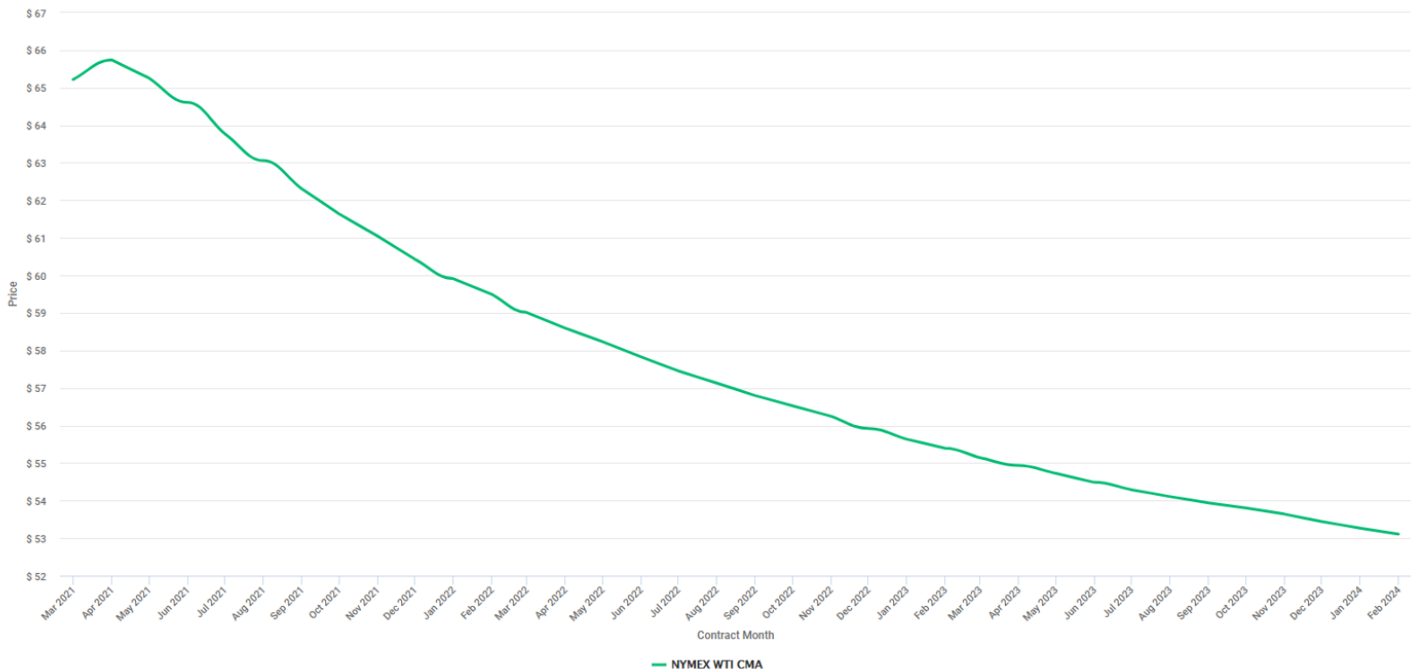
OPEC+ Meeting News

- OPEC+ agrees to keep oil output unchanged in April
- Saudi Arabia agrees to keep output unchanged in April
- The market consensus was an expected +500 MBbl/d increase from OPEC+ and the return of 1 MMBbl/d from the Saudis
- Russia gets exemption from OPEC+ supply deal, and will increase production 130 MBbl/d in April
- Kazakhstan can add 20 MBbl/d in April
- OPEC+'s next meeting will be April 7

Source: Bloomberg

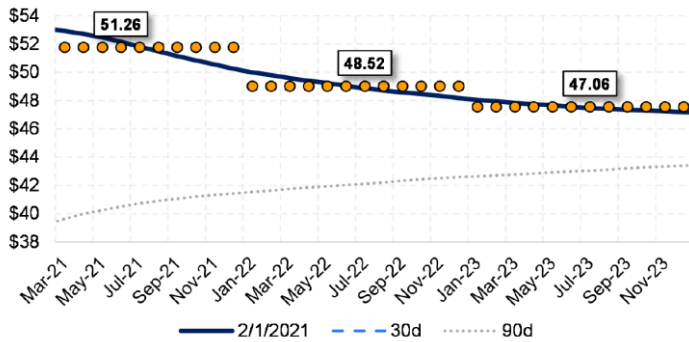


The current WTI forward is strongly backwardated, March 2021 trading at \$65.71/bbl while January 2024 is \$53.11/bbl. Notably all these prices are at least \$5/bbl up over the last month and deliver very strong financial returns for all of Longreach's oil production.

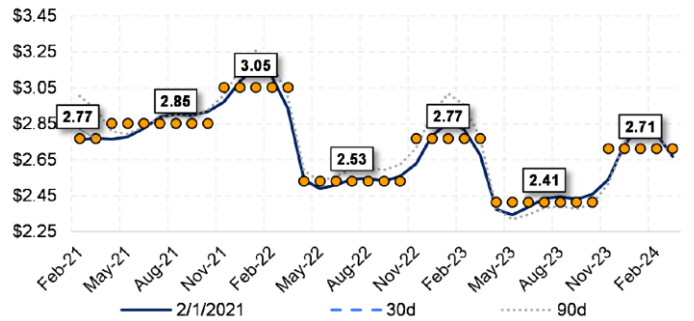


Gas and Oil Prices 1 February 2021

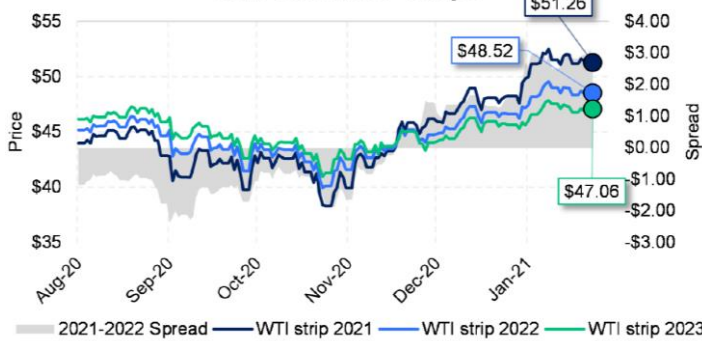
WTI Calendar Strips



NG Seasonal Strips



WTI Calendar Strips



NG Calendar Strips



Swap Pricing

| | Cal 21 | Cal 22 | Cal 23 | Cal 24 |
|-------------------------|----------|----------|----------|----------|
| NYMEX WTI Crude | \$ 51.26 | \$ 48.52 | \$ 47.06 | \$ 46.43 |
| ICE Brent Crude | \$ 54.15 | \$ 51.87 | \$ 50.82 | \$ 50.36 |
| Light Louisiana Sweet | \$ 53.20 | \$ 50.19 | \$ 48.54 | \$ 47.79 |
| TM Midland Differential | \$ 0.90 | \$ 0.70 | \$ 0.65 | |
| NYMEX Natural Gas | \$ 2.88 | \$ 2.69 | \$ 2.55 | \$ 2.54 |

Source: Bloomberg LP
Indicative only

Natural Gas Basis

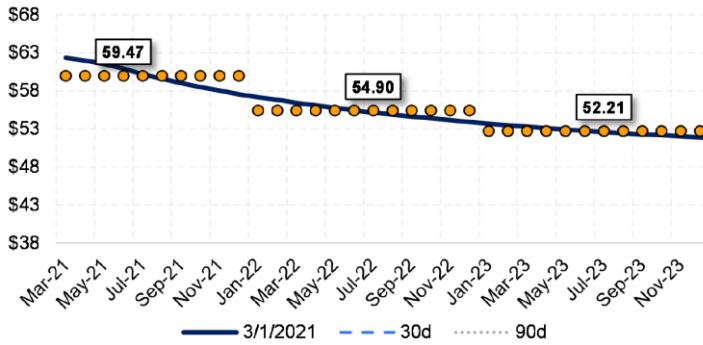
| Location | Spot | Winter '20/'21 | Summer '21 | Winter '21/'22 | Summer '22 |
|-----------------|-----------|----------------|------------|----------------|------------|
| Henry Hub Fixed | 2.65 | 2.77 | 2.71 | 2.95 | 2.49 |
| TETCO M3 | \$ 0.14 | \$ (0.14) | \$ (0.57) | \$ 0.77 | \$ (0.49) |
| Opal | \$ 0.02 | \$ (0.10) | \$ (0.22) | \$ 0.18 | \$ (0.20) |
| Chicago CG | \$ (0.02) | \$ (0.12) | \$ (0.24) | \$ (0.22) | \$ (0.18) |
| PEPL | \$ (0.10) | \$ (0.21) | \$ (0.28) | \$ (0.19) | \$ (0.30) |
| Waha | \$ (0.13) | \$ (0.23) | \$ (0.25) | \$ (0.20) | \$ (0.37) |
| Dominion S | \$ (0.27) | \$ (0.45) | \$ (0.71) | \$ (0.63) | \$ (0.68) |

All prices as previous trading day close
Source: Bloomberg

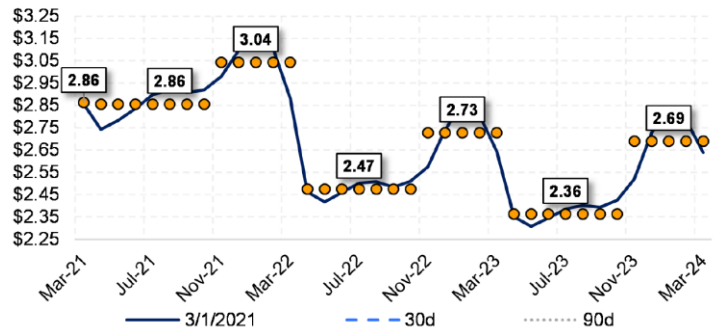


Gas and Oil Prices 1 March 2021

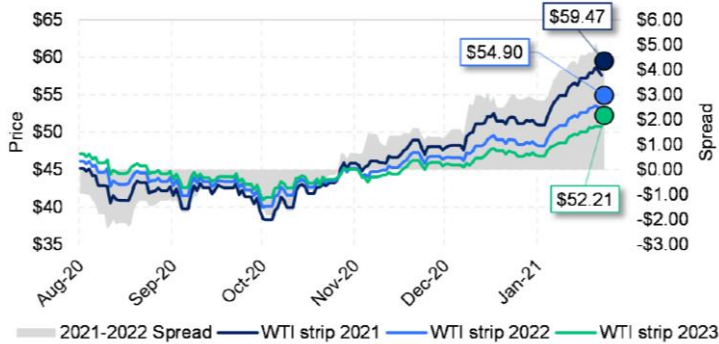
WTI Calendar Strips



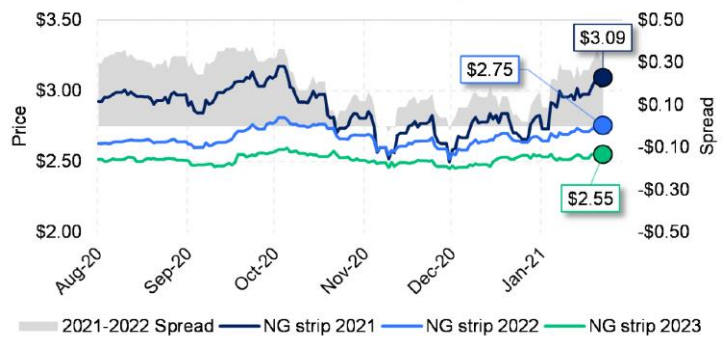
NG Seasonal Strips



WTI Calendar Strips



NG Calendar Strips



Swap Pricing

| | Bal 21 | Cal 22 | Cal 23 | Cal 24 |
|-------------------------|----------|----------|----------|----------|
| NYMEX WTI Crude | \$ 59.47 | \$ 54.90 | \$ 52.21 | \$ 50.84 |
| ICE Brent Crude | \$ 62.32 | \$ 58.47 | \$ 56.34 | \$ 55.17 |
| Light Louisiana Sweet | \$ 61.47 | \$ 56.69 | \$ 54.00 | \$ 52.59 |
| TM Midland Differential | \$ 0.92 | \$ 0.90 | \$ 0.85 | |
| NYMEX Natural Gas | \$ 2.90 | \$ 2.65 | \$ 2.51 | \$ 2.51 |

Source: Bloomberg LP

Indicative only

Natural Gas Basis

| Location | Spot | Winter '20/21 | Summer '21 | Winter '21/22 | Summer '22 |
|-----------------|-----------|---------------|------------|---------------|------------|
| Henry Hub Fixed | 2.63 | 2.86 | 2.88 | 3.06 | 2.47 |
| Chicago CG | \$ (0.02) | \$ (0.11) | \$ (0.24) | \$ (0.17) | \$ (0.20) |
| Opal | \$ (0.04) | \$ 0.21 | \$ (0.17) | \$ 0.42 | \$ (0.20) |
| PEPL | \$ (0.15) | \$ 0.00 | \$ (0.35) | \$ (0.10) | \$ (0.26) |
| Waha | \$ (0.20) | \$ 0.03 | \$ (0.18) | \$ (0.01) | \$ (0.24) |
| TETCO M3 | \$ (0.25) | \$ (0.34) | \$ (0.62) | \$ 0.81 | \$ (0.54) |
| Dominion S | \$ (0.57) | \$ (0.58) | \$ (0.77) | \$ (0.66) | \$ (0.72) |

All prices as previous trading day close

Source: Bloomberg