



# Longreach Energy Holdings LLC

## FIRM INFORMATION

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## 1. Market and Macro Industry Commentary

### General Market Commentary

In May, the International Energy Agency (IEA) released its 2020 World Energy Investment Report. Quantifying the effect of Covid-19 induced lockdowns the report notes that:

*A key insight from the analysis of daily data (through mid-April) is that countries in full lockdown are experiencing an average 25% decline in energy demand relative to typical levels and countries in partial lockdown an average 18% decline.*

*Oil is bearing the brunt of this shock because of the curtailment in mobility and aviation, which represent nearly 60% of global oil demand (although note aviation alone is only 8%). At the height of the lockdowns in April, when more than 4 billion people worldwide were subject to some form of confinement, year-on-year demand for oil was down by around 25 mmbbl/d. For the year as a whole, oil demand could drop by 9 mmbbl/d on average, returning oil consumption to 2012 levels.*

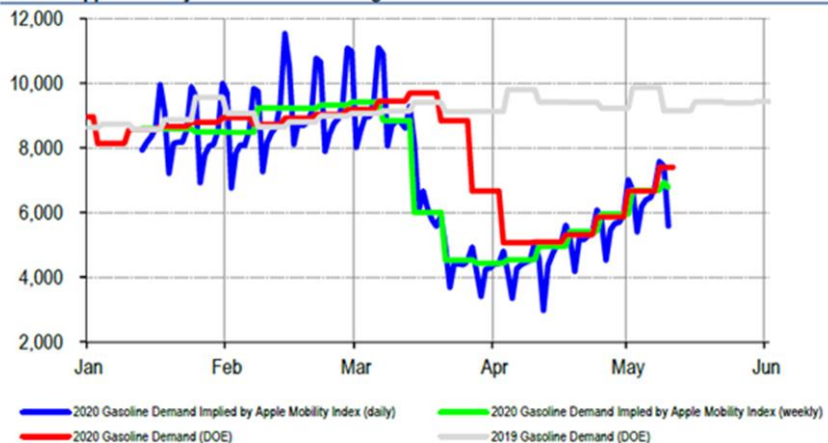
*The impact of the pandemic on gas demand in the first quarter of the year was more moderate, at around 2% year-on-year, as gas-based economies were not strongly affected.*

These demand reduction numbers are consistent with forecasts from late March and early April. We discuss supply issues in the specific gas and oil market commentaries, although the key to near term market balances is the trajectory of demand. Recent data support the idea that the worst has passed. An example is Apple mobility data measuring the number of inbound requests for directions by region, which provides a useful indicator for driving activity and by extension gasoline demand. The US Department of Energy also provides data on implied gasoline demand, this generally lags the Apple mobility data.

The data in Figure 1 is indexed from 13 January and is reported on a 3-day lag (the data published by Apple on the 13th contains data as of 10 May).

Figure 1: Apple Mobility and DOE Gasoline Demand (source Bloomberg, BofA Global Research)

Chart 6: Apple Mobility consistent with DOE gas demand rebound



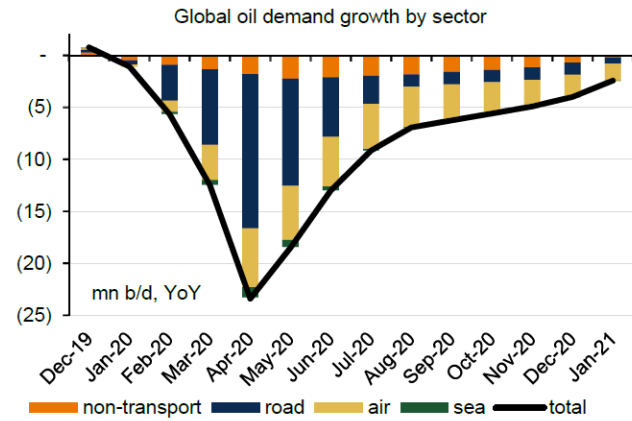
Source: Bloomberg, BofA Global Research

The recent trend shows direction requests have accelerated since the second week of April, consistent with increase in gasoline product supplied.

Bank of America research from 15 May in Figure 2 highlights the recovery in demand of global oil (chart 15) and US gasoline (chart 16).

Figure 2: Global Oil and US Gasoline Consumption (source BoA, Bloomberg)

**Chart 15: We project a recovery in global oil consumption into year-end driven by road transportation...**



**Chart 16: ...and US gasoline consumption so far has staged a remarkable recovery in the past few weeks**

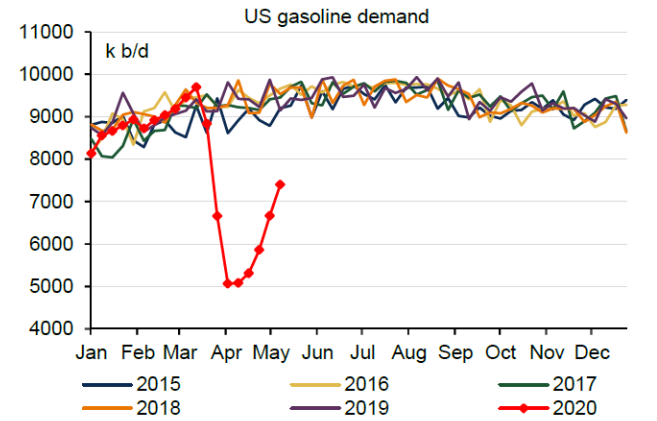
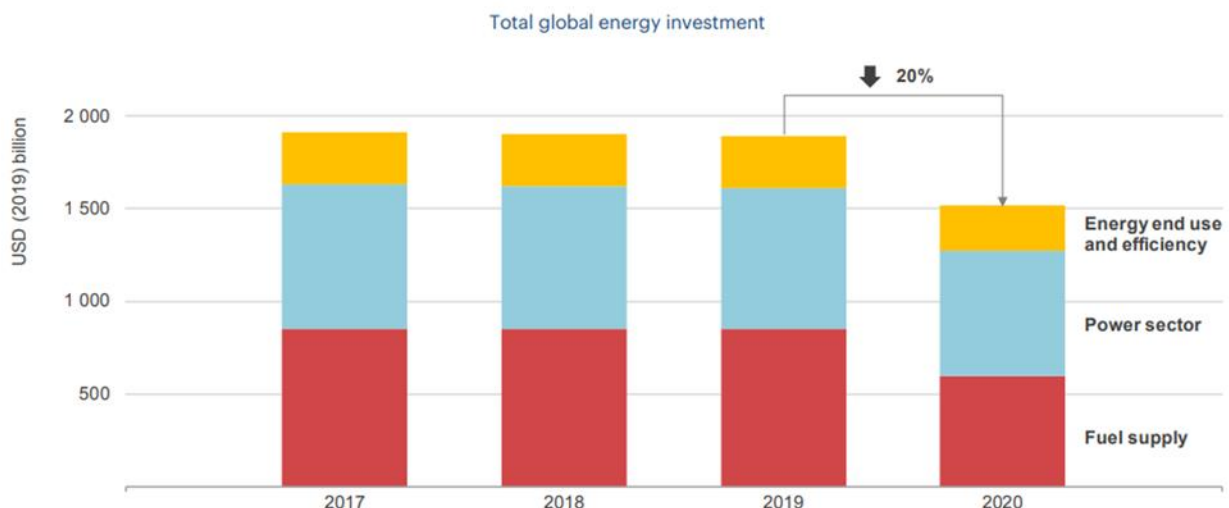


Figure 3 below, displays IEA estimates that worldwide energy investment will fall by 20%, or US\$400b, in 2020 due to the Covid-19 pandemic.

Figure 3: Total Global Energy Investment (source IEA)



Notes: Investment is measured as the ongoing capital spending in energy supply capacity and, in the case of energy efficiency, the incremental spending on more efficient equipment and goods. The scope and methodology for tracking energy investments is available [here](#). "Fuel supply" includes all investments associated with the production, transformation and provision of solid, liquid and gaseous fuels to consumers; these consist mainly of investments in oil, gas and coal supply, but include also biofuels and other low-carbon fuels. "Power sector" includes the capital spending on all power generation technologies, as well as ongoing investments in grids and storage. "Energy end use and efficiency" includes the investment in efficiency improvements across all end-use sectors, as well as end-use applications for renewable heat.

Investment activity has been disrupted by lockdowns and also by a sharp fall in revenues, especially for oil. As seen in Figure 4 below, globally oil and gas will see the largest fall, falling 32%. The short cycle and highly responsive US upstream industry sees the largest correction, with industry Investment in US shale estimated to fall by 50% in 2020.

Figure 4: Total Global End-Use Spending on Energy and Change 2020 Versus 2019 (source IEA)

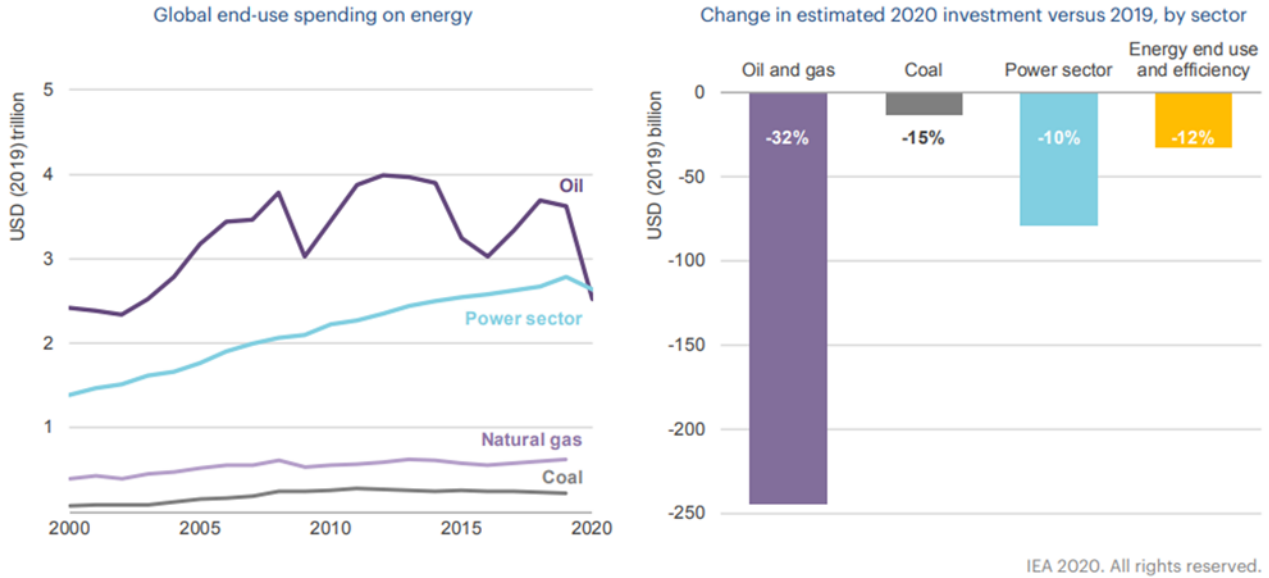
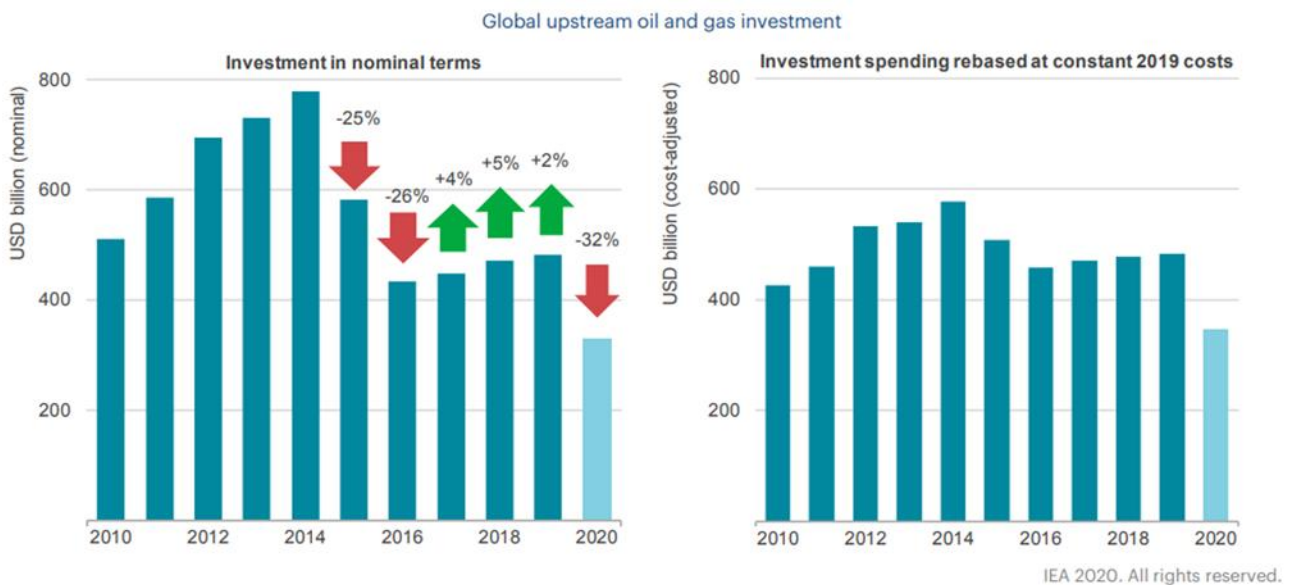


Figure 5 below, shows global upstream oil and gas investment over the last 10 years. The investment collapse in 2020 will have an enduring impact upon supply and set the market up for higher gas and oil prices in coming years.

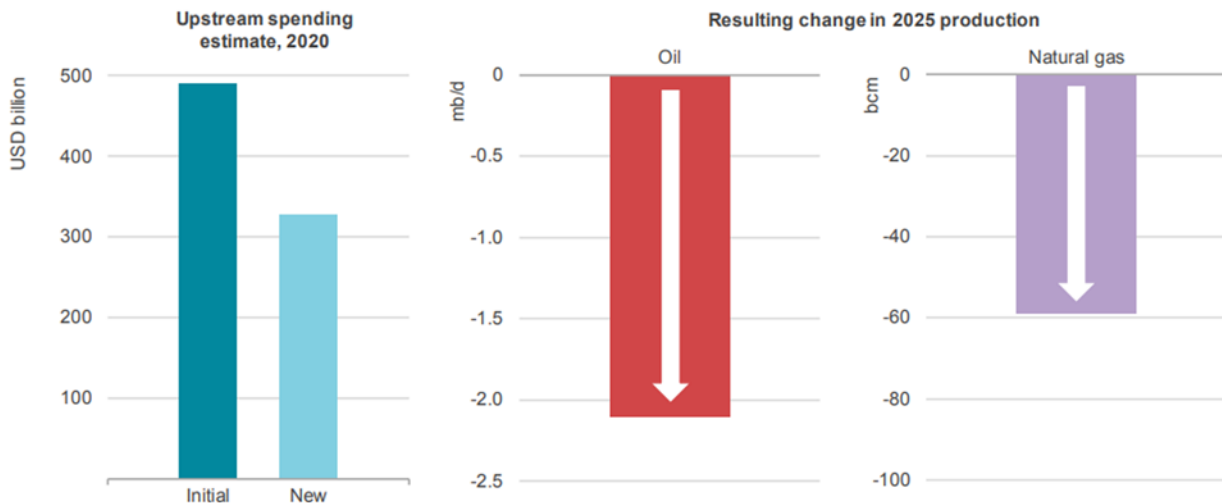
Figure 5: Global Upstream Oil and Gas Investment (source IEA)



Note: The right-hand figure adjusts the entire time series using 2019 upstream costs; it therefore strips out the effects of underlying changes in costs over this period.

Figure 6 below, shows the IEA's projections of the effect of lower upstream investment in 2020 on oil and gas balances in 2025.

Figure 6: 2020 Investment Impact on 2025 Supply (source IEA)



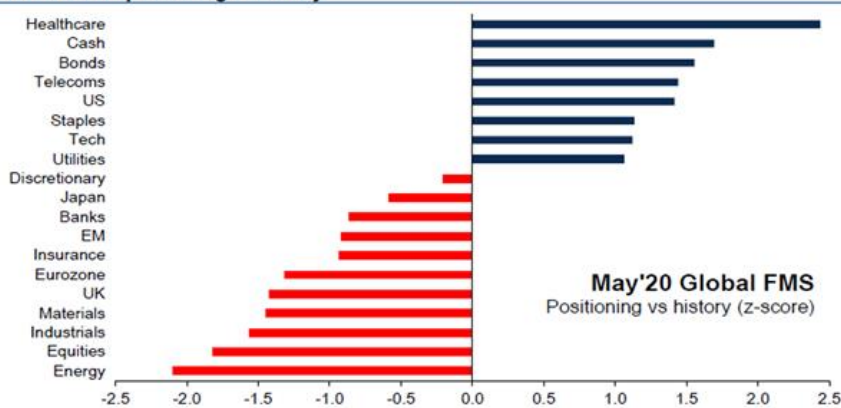
IEA 2020. All rights reserved.

Note: The initial estimate reflects the early guidance provided by companies as to their upstream spending for 2020, before the spread of the Covid-19 pandemic.

The current investment opportunity is further highlighted by data compiled by Bank of America on Fund Management Sector (FMS) sector weightings (Figure 7) and by Rystad Energy on US oil and gas sector debt and interest by maturity (Figure 8).

Figure 7: FMS Positioning vs. History (source BoA)

**Exhibit 5: FMS positioning vs. history**

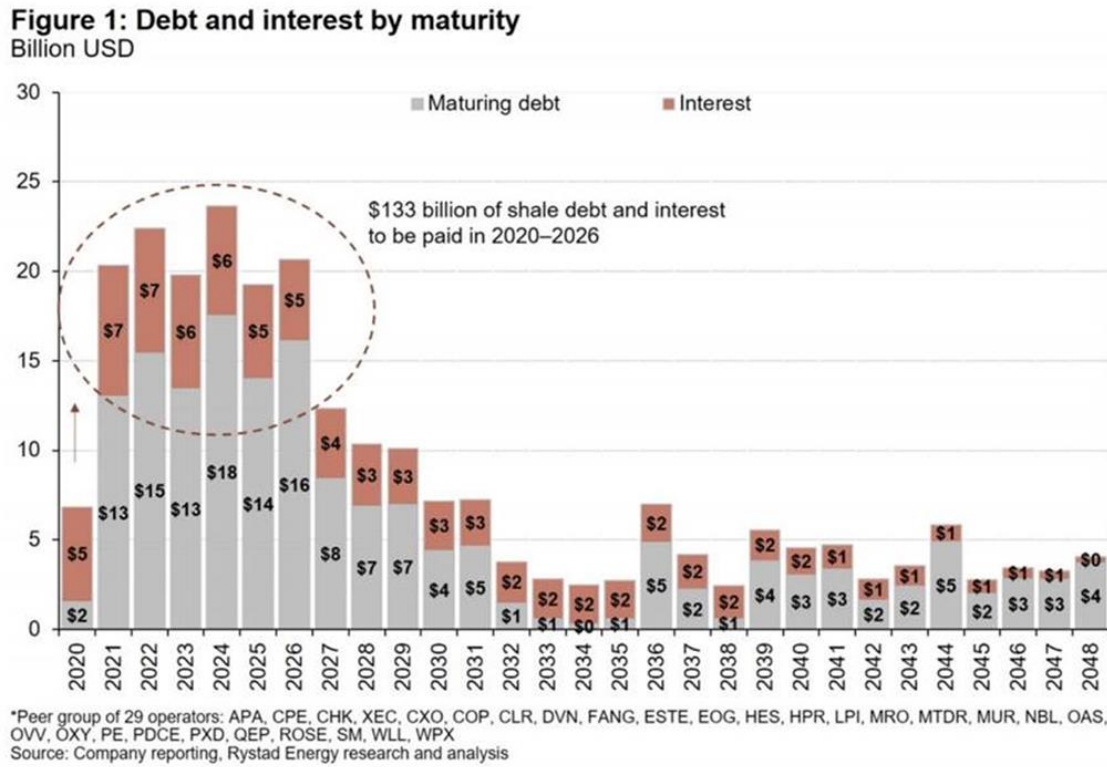


In May, FMS investors are underweight cyclical assets (energy, equities, Europe) & overweight defensive assets (healthcare, cash, bonds).

Source: BofA Global Fund Manager Survey

The low investment from the Funds Management Sector is perfectly understandable given the general poor returns on investment provided from the listed oil and gas sector. Evercore ISI estimates that over the last decade large US producers have invested US\$1.18 trillion yet returned to investors only \$819 billion. The dearth of institutional investment in the sector means a relative scarcity of capital for listed oil and gas companies, reducing the availability of industry capital, and therefore lowering competition for deals.

Figure 8: Debt and Interest by Maturity (source Rystad Energy)

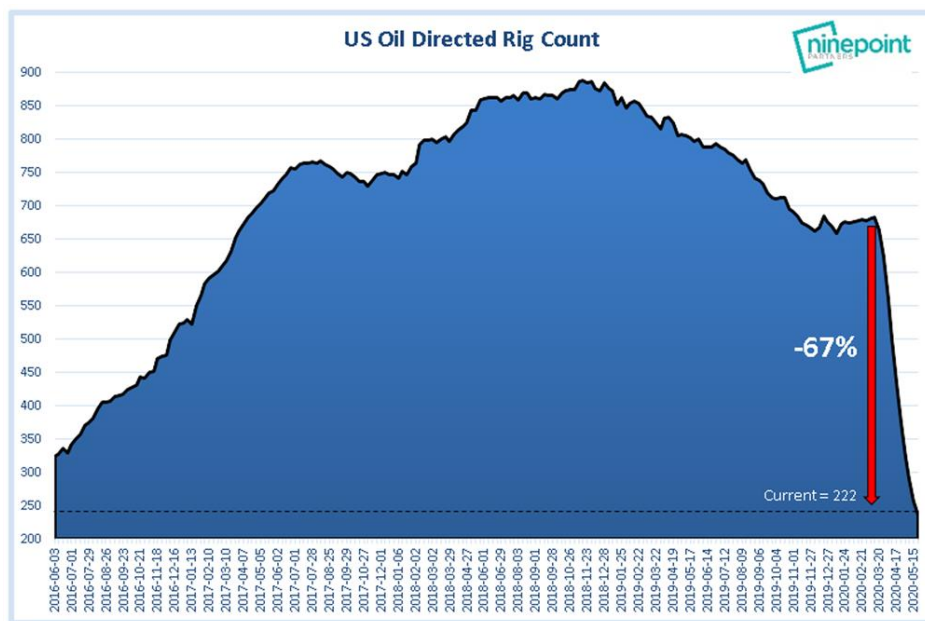


The impending debt and interest obligations that must be paid by upstream oil and gas borrowers will also drive asset sales, often forcing companies to sell their higher quality assets to raise cash.

Overall the Covid-19 pandemic is accelerating a shift from 'grow-it and flip-it' to something more sustainable. A smaller, more rational sector will deliver a very attractive environment and allow Longreach Energy and its investors, to prosper.

US rig count is still falling with both oil and gas directed rig numbers at all-time lows. By 6 June there were only 271 rigs running onshore US, 677 fewer than that time last year. Figure 9 data are from the 2 June release, oil directed rig count is currently 206 (down 16 in last week), gas rig count fell by one last week to 76, a 110 rig reduction in the last 12 months.

Figure 9: Natural Gas Rig Counts in Select Basins (source EIA, Baker Hughes)



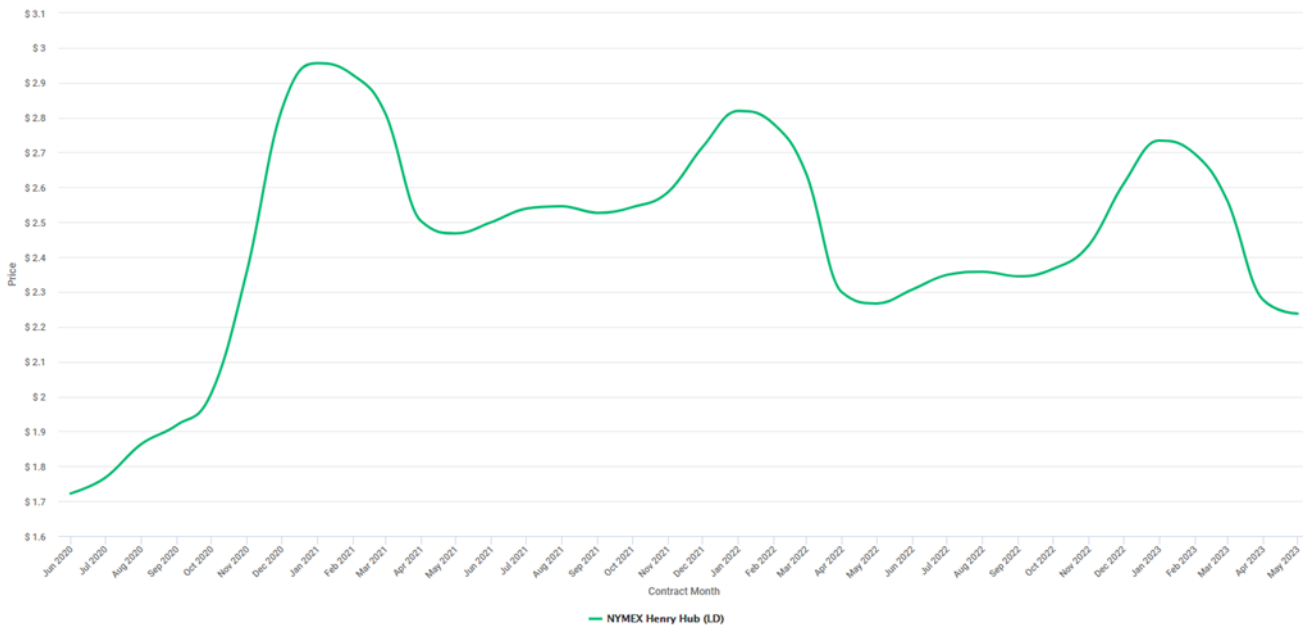




## Gas Market

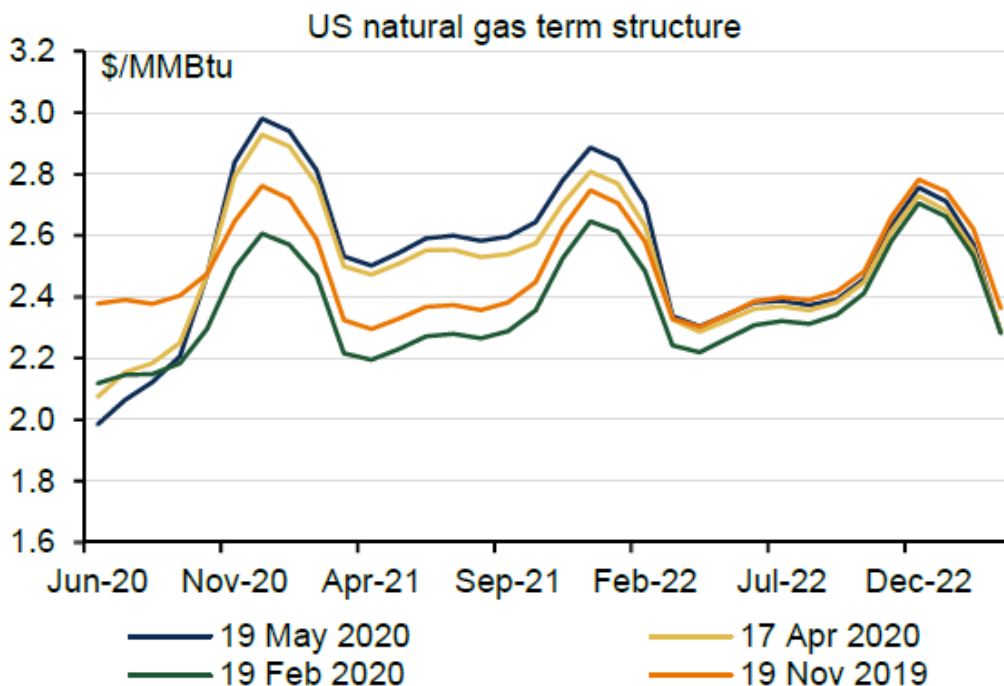
US natural gas prices have been stable over the last month. The forward curve as at closing on 9 June is shown in Figure 10.

Figure 10: Henry Hub Prices 9 June (source Aegis Energy)



The evolution of the natural gas term structure (Figure 11) from 13 Nov 2019 to 13 May 2020 shows near dated weakness, driven by a relatively warm winter and then Covid-19 power demand declines, with 2021 and 2022 strengthening in recent weeks primarily because of reduced supply and resilient demand.

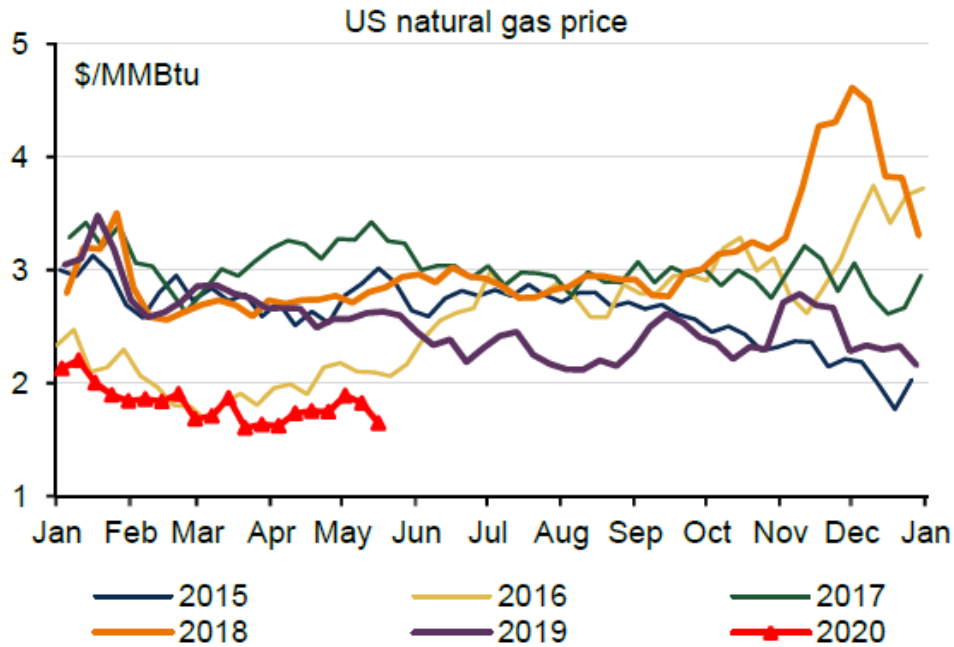
Figure 11: US Natural Gas Term Structure (source NYMEX, Reuters, BoA)



NYMEX, Reuters

Spot prices (Figure 12) remain at 5-year lows, close to 2016 levels.

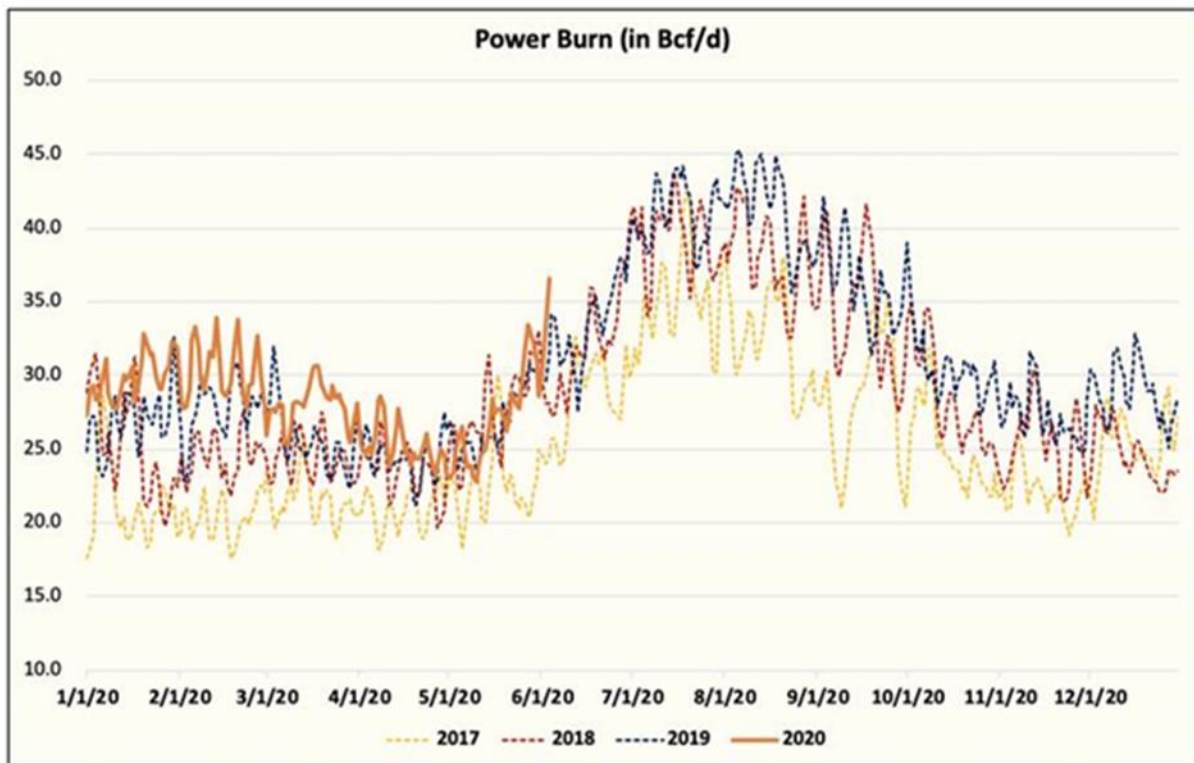
Figure 12: US Natural Gas Spot Prices (source NYMEX, Reuters, BoA)



Source: NYMEX, Reuters

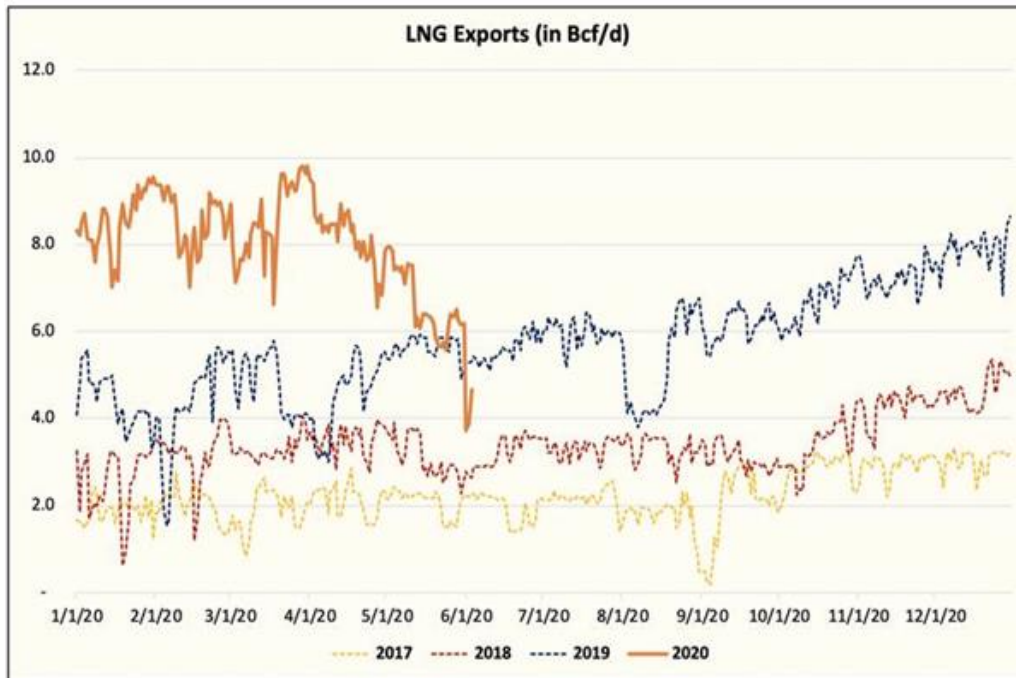
Natural gas consumed to generate electricity, or Power Burn, has been steadily increasing over the last few years with a large jump compared to 2017 (Figure 13). Covid-19 induced reduction in power demand has brought Power Burn down to 2018/2019 levels however the structural factors driving increased gas use, primarily switching from coal, mean that as commercial and industrial activity is restored natural gas consumption will increase.

Figure 13: US Power Burn (source Crossbank First)



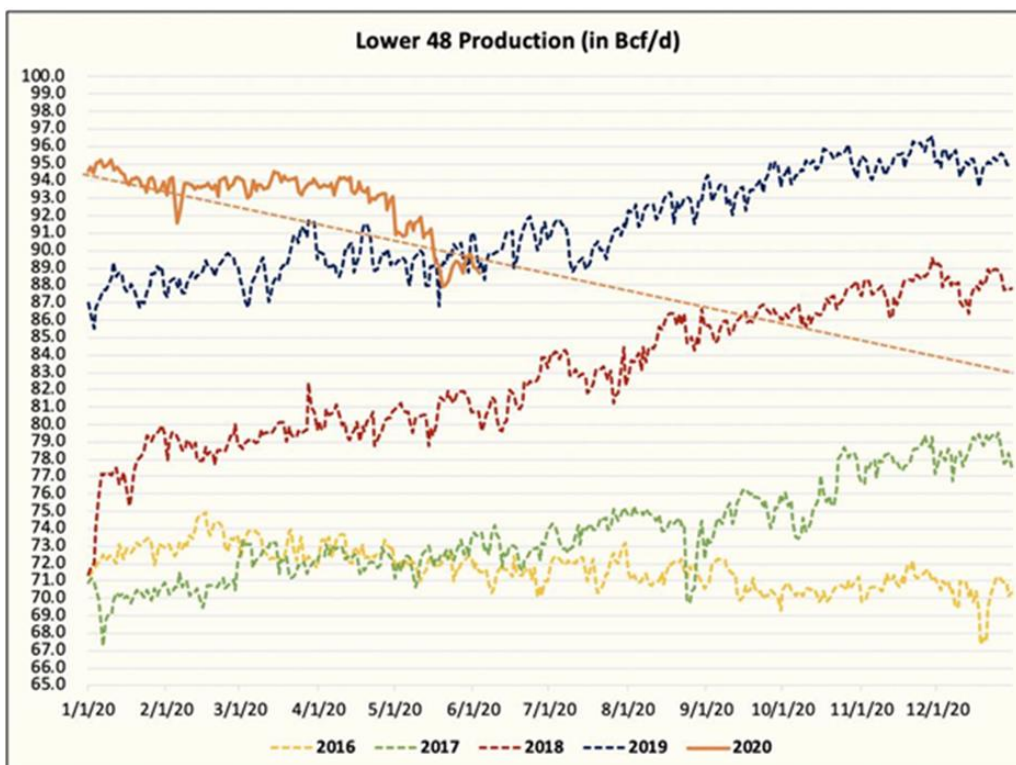
LNG demand has also decreased after rapid growth in recent years (Figure 14). Data collected by HIS Markit indicate that US LNG is taking on the new role of global swing supplier. This trend is consistent with our gas market expectations and should provide support to US natural gas prices over the medium term.

Figure 14: US LNG Exports (source Crossbank First)



Decline in natural gas drilling has delivered the first sustained decline in natural gas production since 2016 (Figure 15). Dry gas production remains about 5bcfd lower than last year. These declines cannot be easily reversed because of the time it takes to resume drilling activity and bring those new wells onto production. Significantly higher prices will be required to incentivise the drilling needed to meet forecast supply over the coming years.

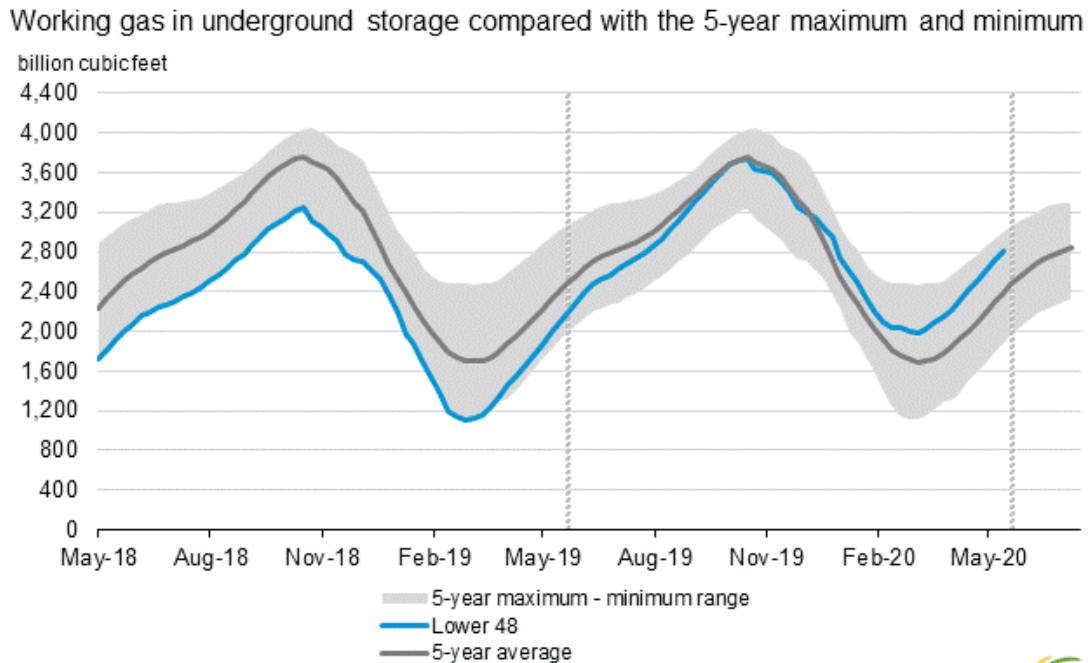
Figure 15: Lower 48 Natural Gas Production (source Crossbank First)





Working gas in storage (Figure 16), while high, is within 5-year historic range. This is in contradistinction to the oil market which has seen storage levels reach all-time highs.

Figure 16: US Natural Gas Storage (source EIA)



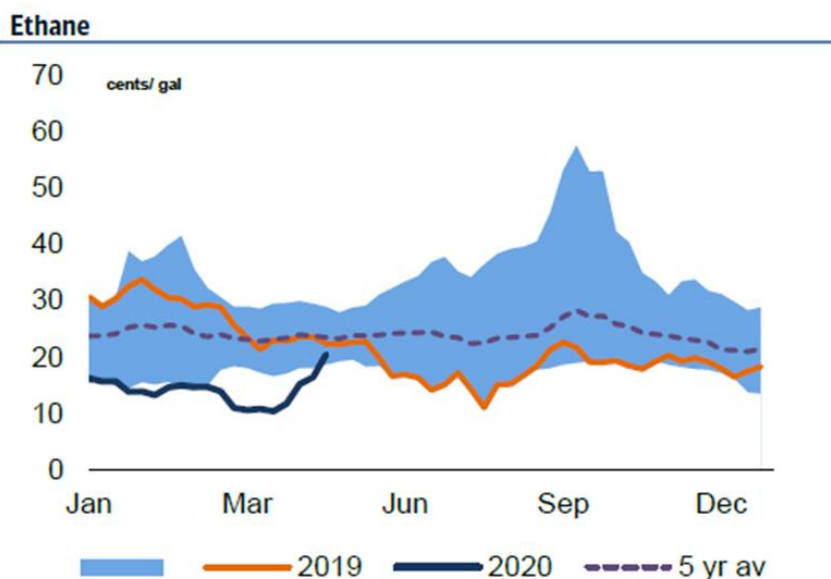
Source: U.S. Energy Information Administration



Much of Longreach Energy’s natural gas production is wet gas, this is gas that has a high proportion of natural gas liquids (NGLs, principally ethane, propane, and butane). In the Arkoma Basin of eastern Oklahoma Longreach Energy has significant wet gas production with a high concentration of ethane. High NGL supply, particularly from oil focused wells in the Permian Basin, lead to NGL weakness from 2Q19. With price and capital induced oil supply reductions and significantly less demand loss than anticipated from plastics, especially polyethylene, demand remained strong throughout the Covid-19 shut-ins and US LPG exports held firm. NGL prices have performed well during the pandemic.

Figure 17 below, shows recent recovery in Ethane.

Figure 17: Ethane Price (source Bloomberg, BoA)

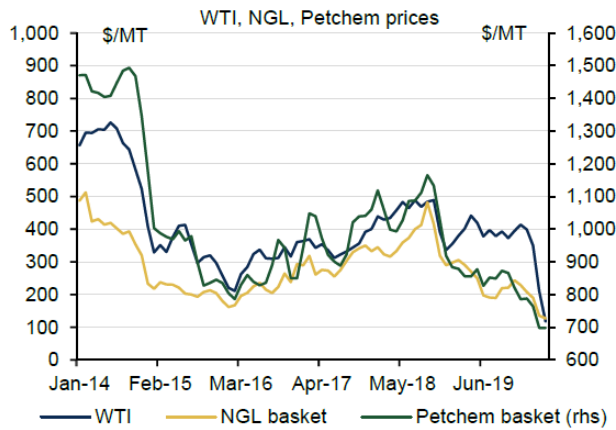


Source: Bloomberg

The series of charts below (Figure 18) from Bank of America Global Research provide recent price performance and supply factors that suggest continued strength in US NGL prices.

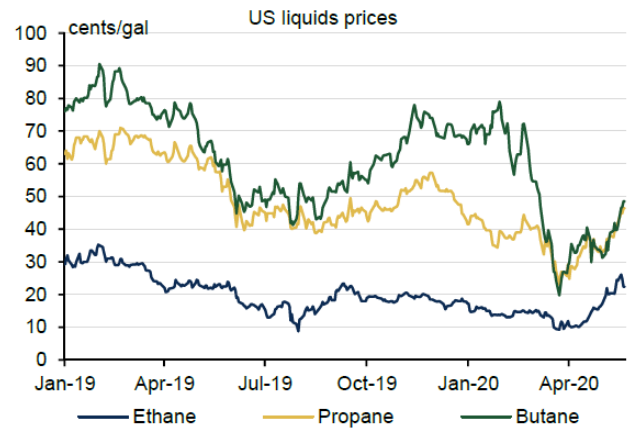
Figure 18: NGL Prices and Market Factors (source various, via BoA)

**Chart 1: NGL and petchem prices have outperformed oil during the recent downturn**



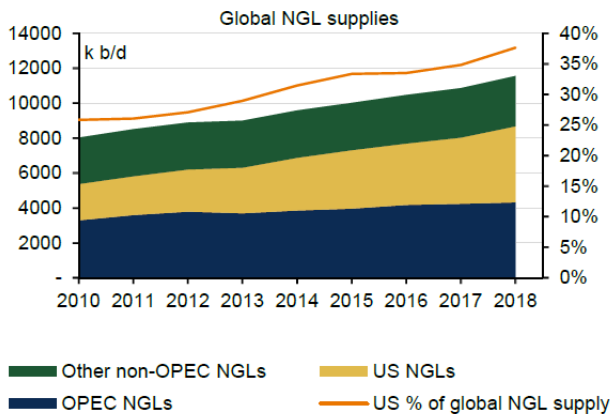
Source: Bloomberg

**Chart 2: Ethane, propane, and butane have all rallied since bottoming in late March**



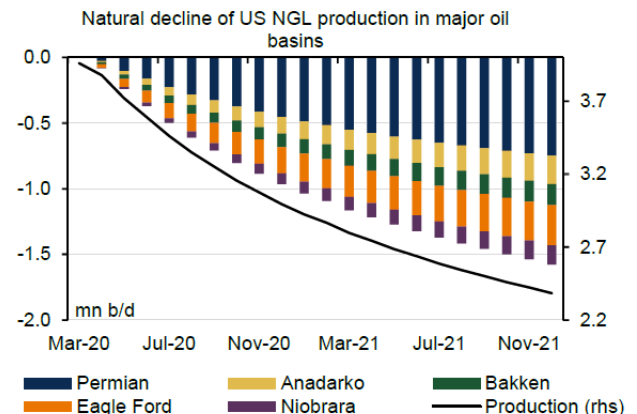
Source: Bloomberg

**Chart 3: The US accounts for a disproportionate percentage of global NGL production**



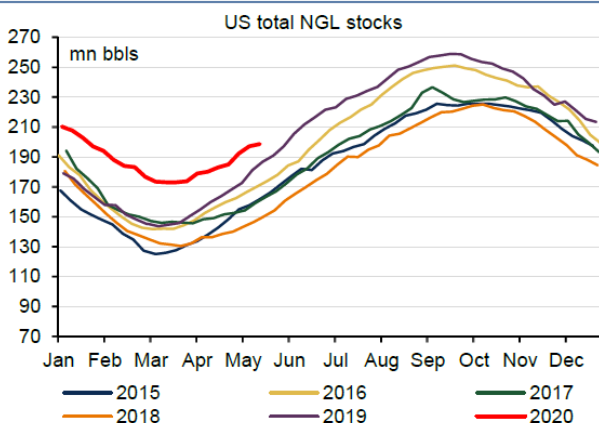
Source: BP Statistical Review

**Chart 4: Frac holidays could lead to a swift reduction in US NGL supply due to steep decline rates in the shale basins**



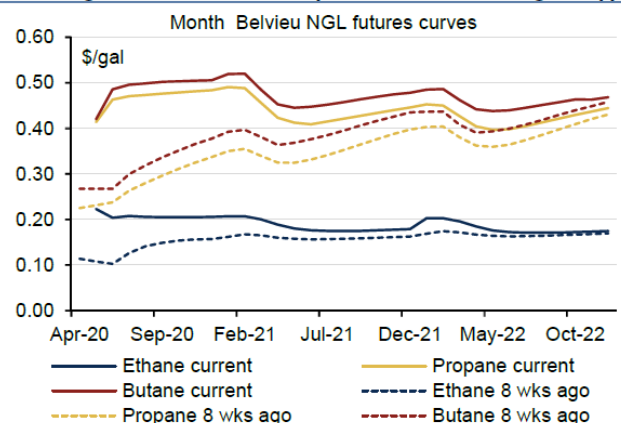
Source: Rystad Energy

**Chart 29: NGL stocks remain high, but refinery runs cuts and production shut-ins have limited stock builds in recent weeks**



Source: Bloomberg

**Chart 30: NGL forwards have rebounded from steep contango just two months ago, but could see renewed pressure near-term on higher supply**



Source: Bloomberg

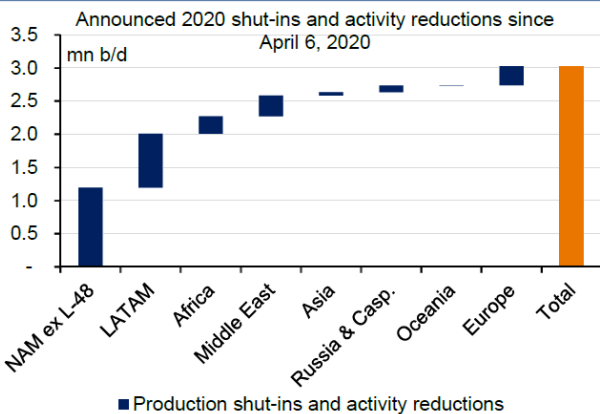
## Oil Market

A combination of returning demand and a large reduction in oil supply have been the main catalysts for the multi-week rally in oil prices. The IEA's outlook for global oil markets had improved by mid-May with demand a little stronger than expected and supply down.

1 May saw the start of OPEC+ group's promised 10mmbbl/d supply cuts. Compliance within OPEC+ has thus far been good and production curtailments, to deal with surplus of supply over demand, have occurred in many countries around the world (Figure 19).

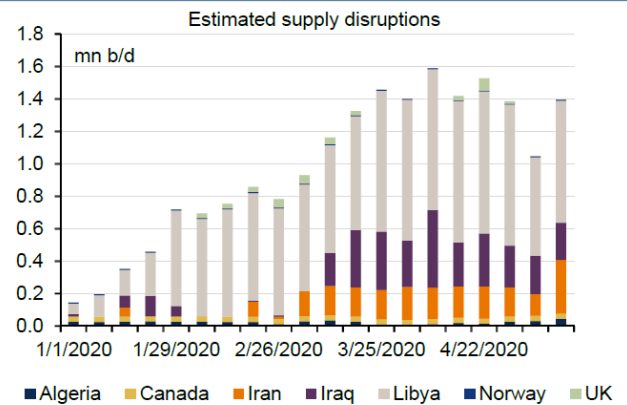
Figure 19: Oil Production Curtailments (source various, via BoA)

**Chart 13: Production curtailments to deal with the surplus have occurred in many countries around the world**



Source: Woodmackenzie

**Chart 14: In addition to economic curtailments, supply disruptions have also helped tighten available supply**

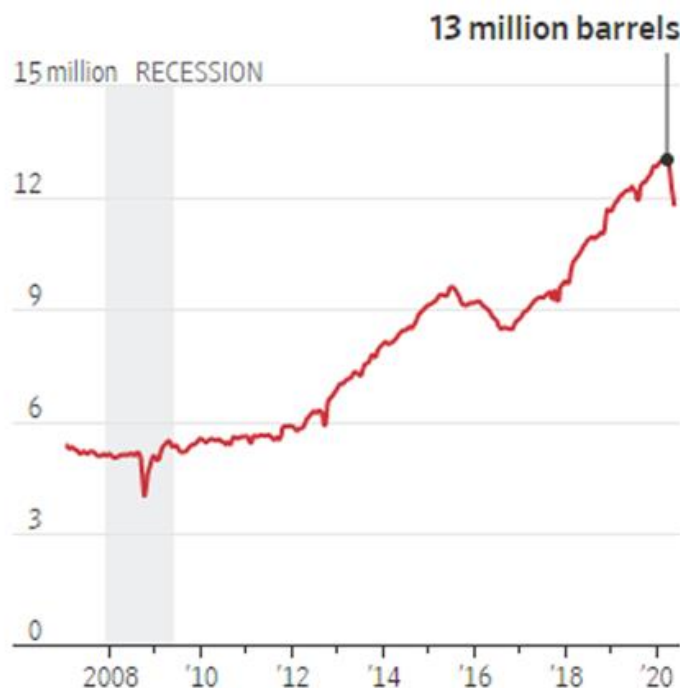


Source: Kayrros

US Production has fallen sharply from its recent peak of 13 mmbbl/d (Figure 20).

Figure 20: Oil Capex Declines (source DOE, via BoA)

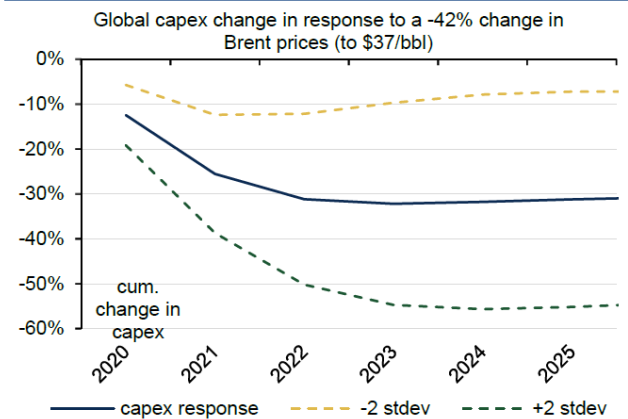
**U.S. field production of crude oil, in millions of barrels a day\***



In addition to near term curtailments, as discussed earlier in this report, there has been a large decline in global oil capital expenditure (Figure 21).

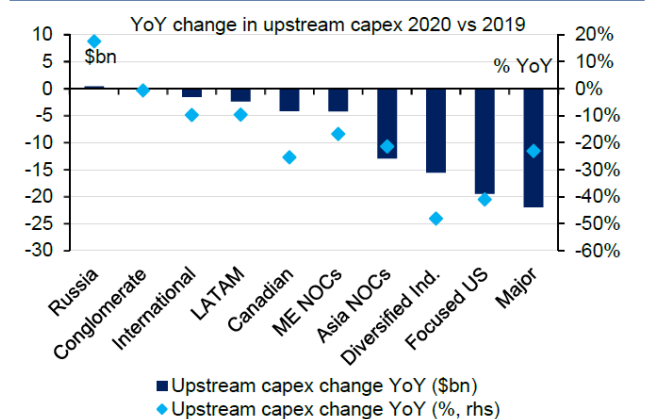
Figure 21: Oil Capex Declines (source Wood Mackenzie, via BoA)

**Chart 21: We have previously estimated that the drop in prices will lead to a large decline in global oil capex**



Source: Woodmackenzie, BofA Global Research estimates

**Chart 22: So far, companies have announced a total of more than \$80bn worth of capex declines for 2020**

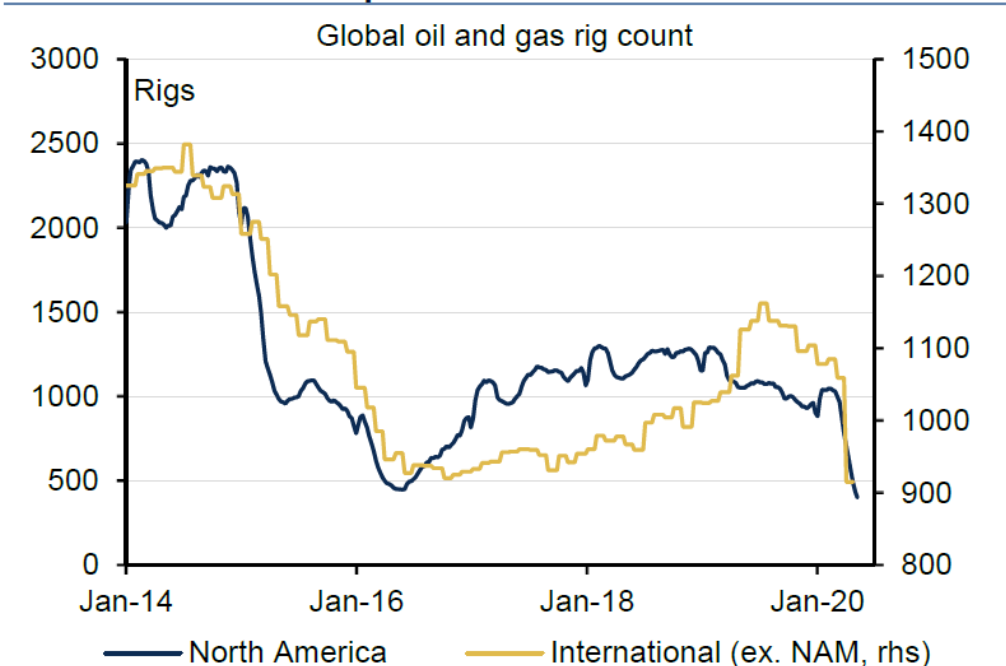


Source: Woodmackenzie

While short-term curtailments will be swiftly reversed as demand is restored, the massive decline in the rig count in the US and globally will likely lead to a structural oil production capacity decline (Figure 22) well into 2021.

Figure 22: Rig Count and Production (source Bloomberg, via BoA)

**Chart 23: The decline in the rig count in the US and globally will likely lead to a structural oil output decline**



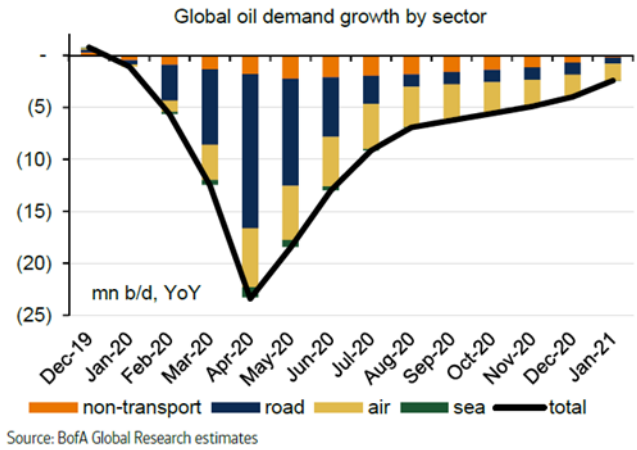
Source: Bloomberg



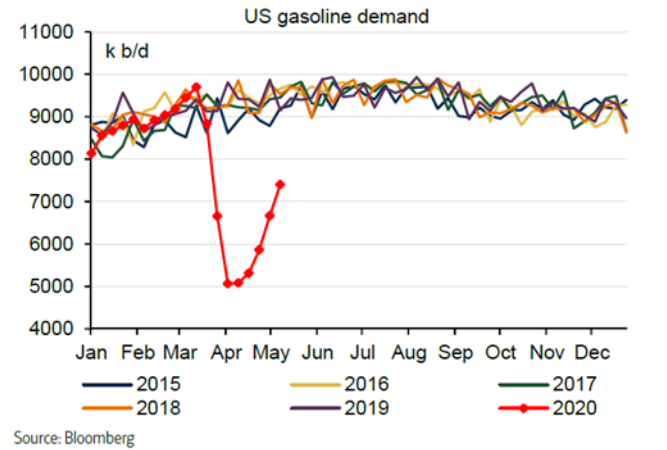
The pick-up in activity and resulting recovery in oil consumption is exceeding many expectations (Figure 23, chart 15). Recent data indicate that US gasoline consumption has staged a remarkable recovery in just a few weeks (Figure 23, chart 16).

Figure 23: Oil Demand (source BoA, Bloomberg)

**Chart 15: We project a recovery in global oil consumption into year-end driven by road transportation...**



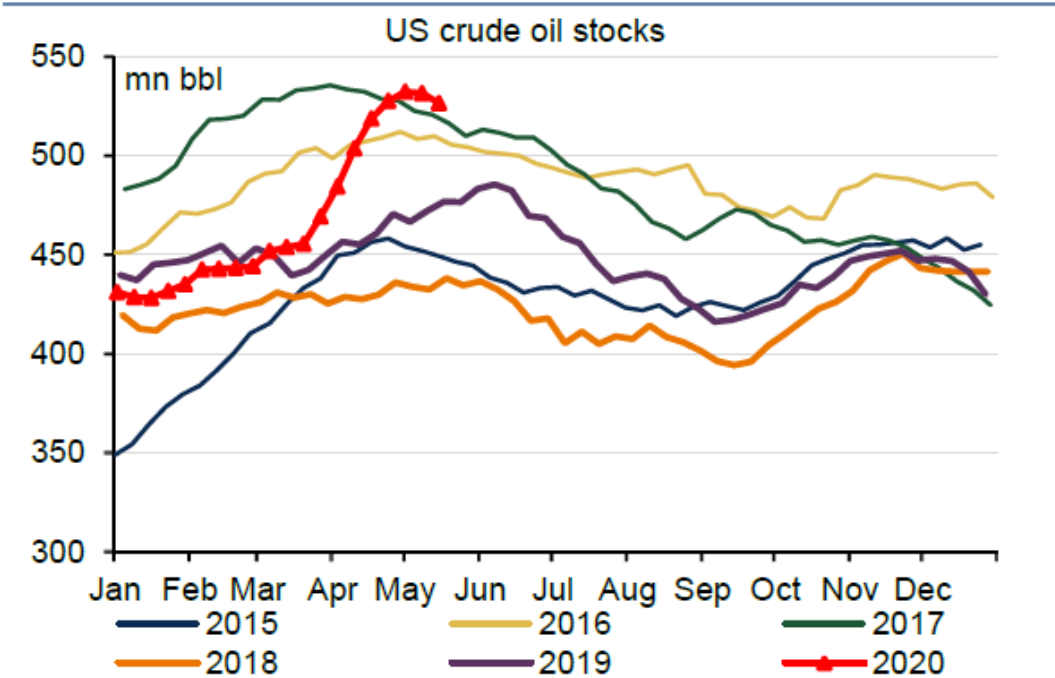
**Chart 16: ...and US gasoline consumption so far has staged a remarkable recovery in the past few weeks**



Reduced supply and increased demand mean that crude stock builds look to have reached their peak. On the 14<sup>th</sup> of May and each reporting week thereafter, the EIA has announced reductions in oil stocks at Cushing (Figure 24).

Figure 24: US Crude Stocks (source US DOE, BoA)

**Chart 31: US crude oil stocks**



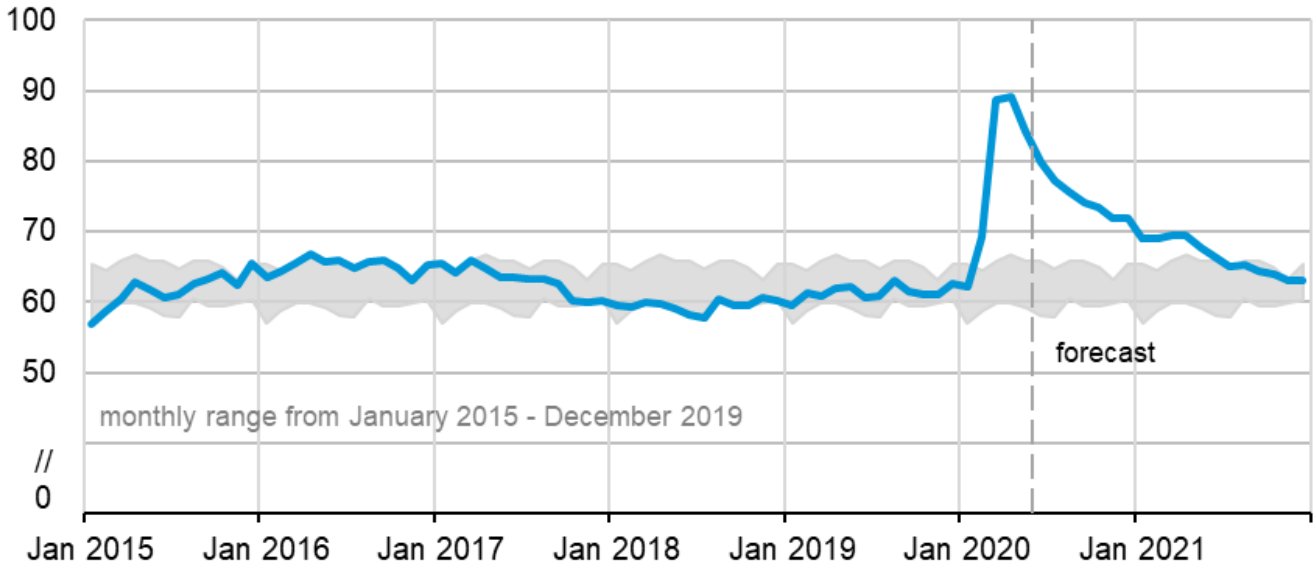
Source: US Department of Energy

The June WTI contract expiry on 21 May saw no repeat of April's negative pricing after the June contract finished higher than July, primarily thanks to massive US and global production cuts.

Total OECD oil inventories look to be on a similar trend to inventories in the US (Figures 25 and 26 illustrate this).

Figure 25: OECD Inventories (source EIA)

**Organization for Economic Cooperation and Development (OECD)  
commercial inventories of crude oil and other liquids  
days of supply**

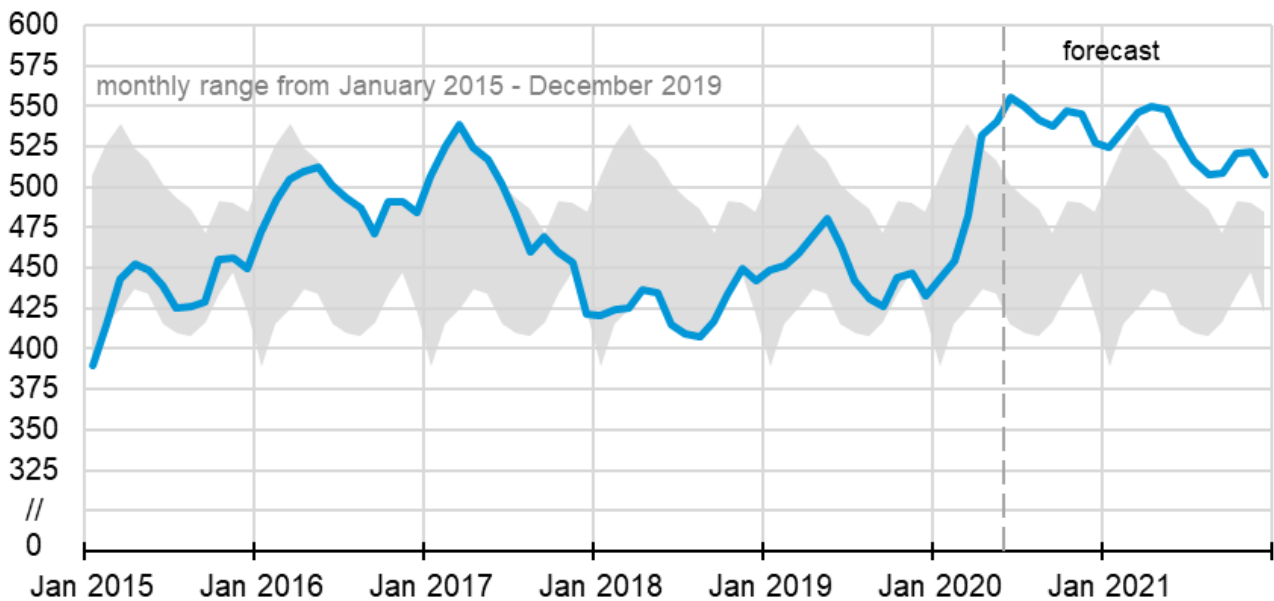


Source: Short-Term Energy Outlook, June 2020



Figure 26: US Inventories (source EIA)

**U.S. commercial crude oil inventories  
million barrels**



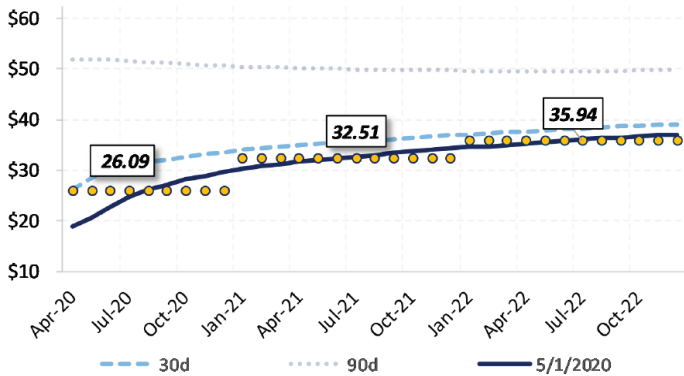
Source: Short-Term Energy Outlook, June 2020



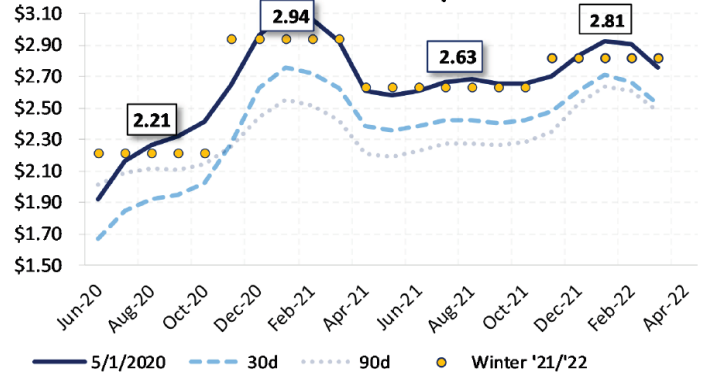


### Gas and Oil Prices 1 May 2020

#### WTI Calendar Strips



#### NG Seasonal Strips



#### Swap Pricing

	Bal 20	Cal 21	Cal 22	Cal 23
NYMEX WTI Crude	\$ 26.09	\$ 32.51	\$ 35.94	\$ 38.41
ICE Brent Crude	\$ 30.69	\$ 36.53	\$ 40.59	\$ 43.58
Light Louisiana Sweet	\$ 28.64	\$ 33.42	\$ 37.05	\$ 39.58
TM Midland Differential	\$ 0.19	\$ 0.50	\$ 0.38	
NYMEX Natural Gas	\$ 2.38	\$ 2.75	\$ 2.52	\$ 2.46

Source: Bloomberg LP

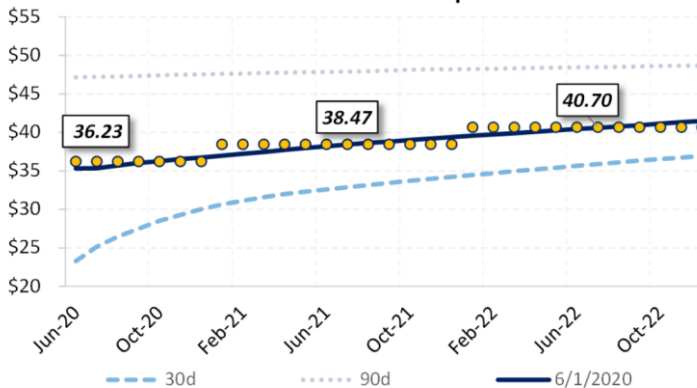
Note: Midland diff changed to TM computation Oct 1. All prices indicative only.

#### Natural Gas Basis

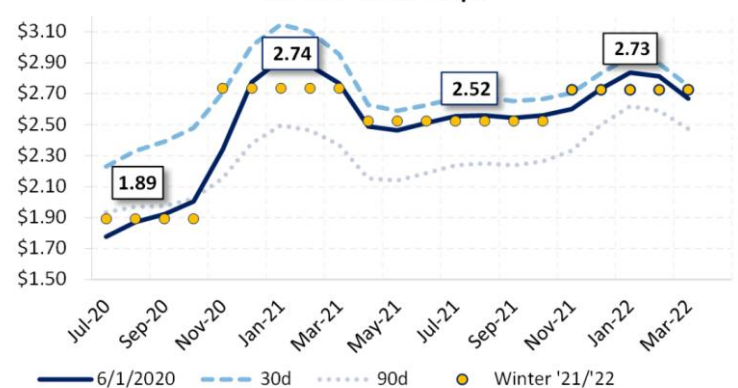
Location	Spot	Summer '20	Winter '20/'21	Summer '21
Henry Hub Fixed	\$1.66	\$2.23	\$2.95	\$2.64
MichCon	\$ 0.09	\$ (0.15)	\$ (0.12)	\$ (0.19)
CIG	\$ (0.05)	\$ (0.29)	\$ (0.24)	\$ (0.52)
NGPL-Midcon	\$ (0.11)	\$ (0.25)	\$ (0.31)	\$ (0.38)
TETCO M3	\$ (0.24)	\$ (0.41)	\$ 0.95	\$ (0.41)
Dominion S	\$ (0.28)	\$ (0.53)	\$ (0.42)	\$ (0.54)
TETCO M2	\$ (0.30)	\$ (0.54)	\$ (0.41)	\$ (0.55)
Waha	\$ (0.33)	\$ (0.38)	\$ (0.47)	\$ (0.57)

### Gas and Oil Prices 1 June 2020

#### WTI Calendar Strips



#### NG Seasonal Strips



#### Swap Pricing

	Bal 20	Cal 21	Cal 22	Cal 23
NYMEX WTI Crude	\$ 36.23	\$ 38.47	\$ 40.70	\$ 42.68
ICE Brent Crude	\$ 38.98	\$ 42.06	\$ 44.86	\$ 47.31
Light Louisiana Sweet	\$ 37.82	\$ 40.68	\$ 43.02	\$ 45.00
TM Midland Differential	\$ 0.66	\$ 0.45	\$ 0.45	
NYMEX Natural Gas	\$ 2.11	\$ 2.63	\$ 2.48	\$ 2.43

Source: Bloomberg LP

Note: Midland diff changed to TM computation Oct 1. All prices indicative only.

#### Natural Gas Basis

Location	Spot	Summer '20	Winter '20/'21	Summer '21
Henry Hub Fixed	\$1.70	\$1.96	\$2.77	\$2.54
MichCon	\$ (0.10)	\$ (0.23)	\$ (0.14)	\$ (0.20)
CIG	\$ (0.10)	\$ (0.32)	\$ (0.22)	\$ (0.48)
NGPL-Midcon	\$ (0.21)	\$ (0.29)	\$ (0.27)	\$ (0.36)
Waha	\$ (0.21)	\$ (0.37)	\$ (0.45)	\$ (0.47)
TETCO M3	\$ (0.39)	\$ (0.49)	\$ 0.96	\$ (0.42)
TETCO M2	\$ (0.45)	\$ (0.60)	\$ (0.42)	\$ (0.54)
Dominion S	\$ (0.46)	\$ (0.59)	\$ (0.44)	\$ (0.54)