LONGREACH ENERGY

Monthly Report

Longreach Energy Holdings LLC

June 2021

FIRM INFORMATION

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1. Market and Macro Industry Commentary

General Market Commentary

The rise in gas and oil prices accelerated during June with both commodities surpassing two-year highs by month end. Commodity specific supply and demand factors contributed to the performance of individual gas and oil markets though at a macro level, vaccinations, money supply growth, continued recovery in global mobility (see Figures 1 and 2) and resulting economic growth boosted demand.

Figure 1: Daily Vaccinations and US M2 Growth and Federal Budget Deficit (Source: EIA, BoA)

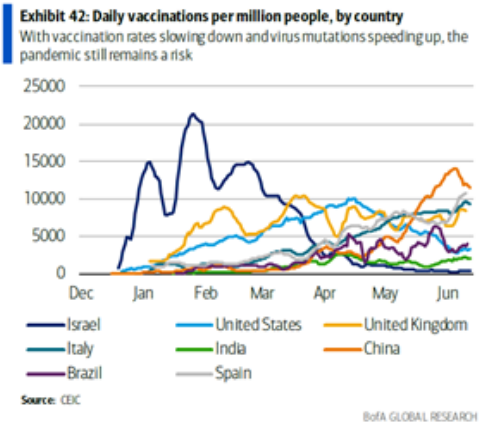
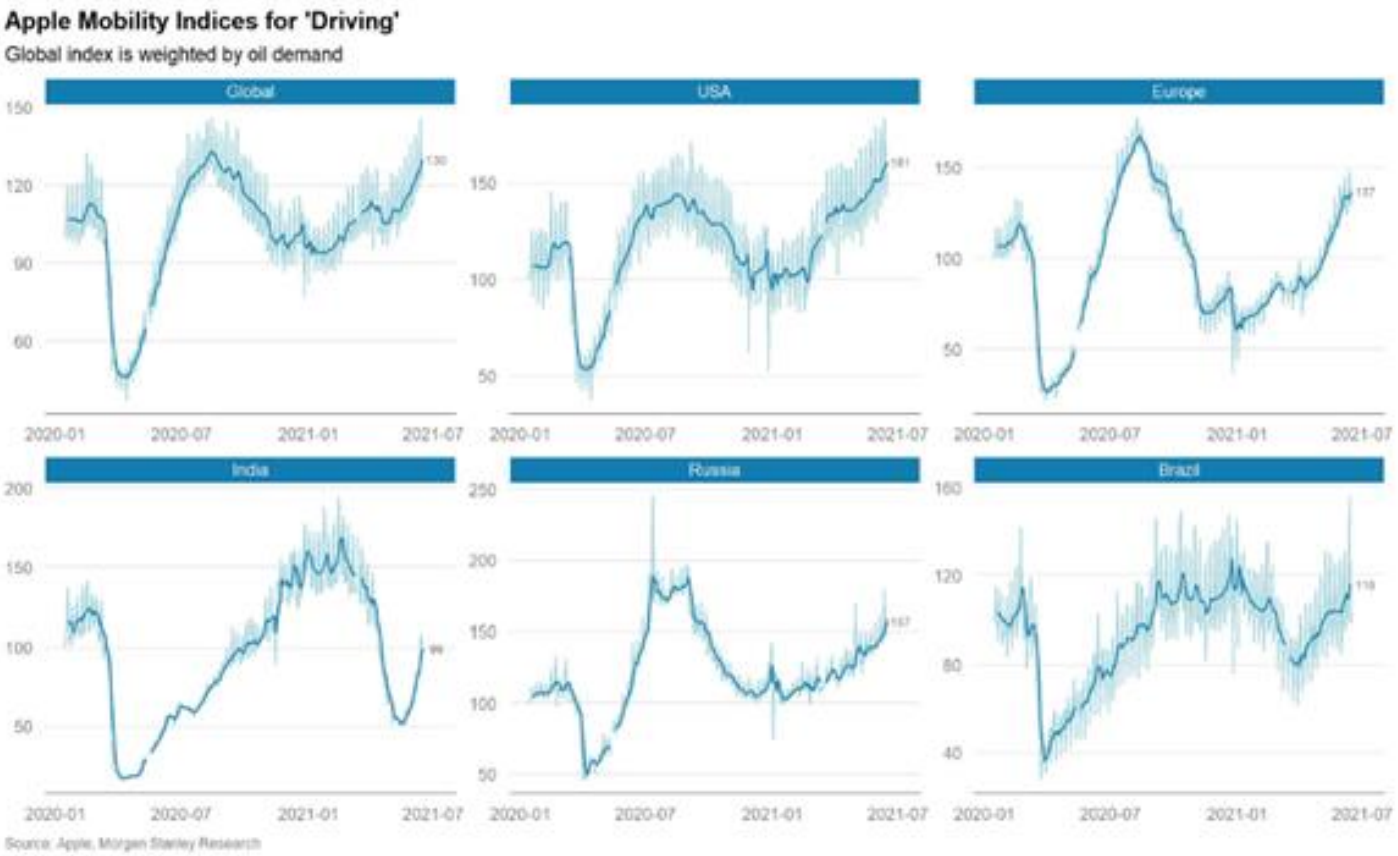
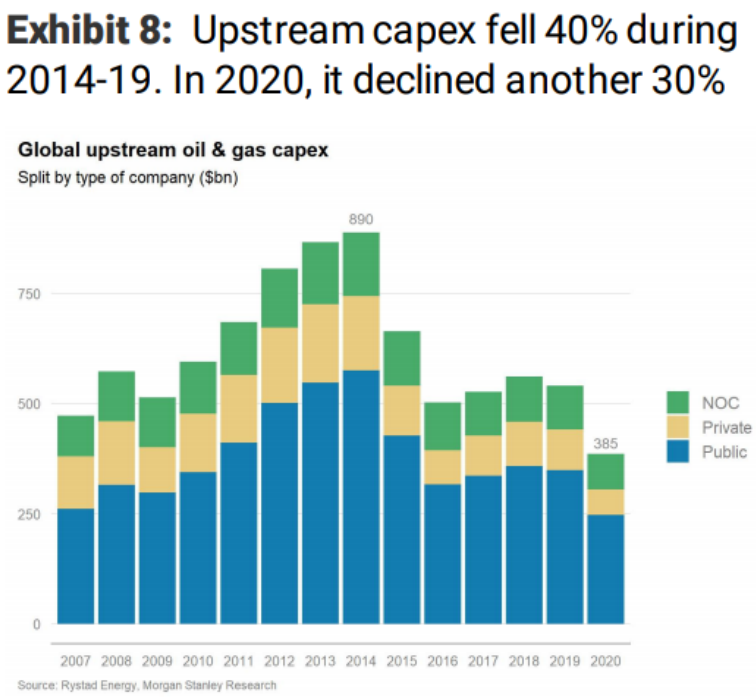


Figure 2: Apple Mobility indices for Driving (Source: Apple via Morgan Stanley Research)



Meanwhile, supply of oil and gas remains constrained by low capital spending (Figure 3).

Figure 3: Global Upstream Oil and Gas Capex (Source: Rystad Energy, Morgan Stanley Research)



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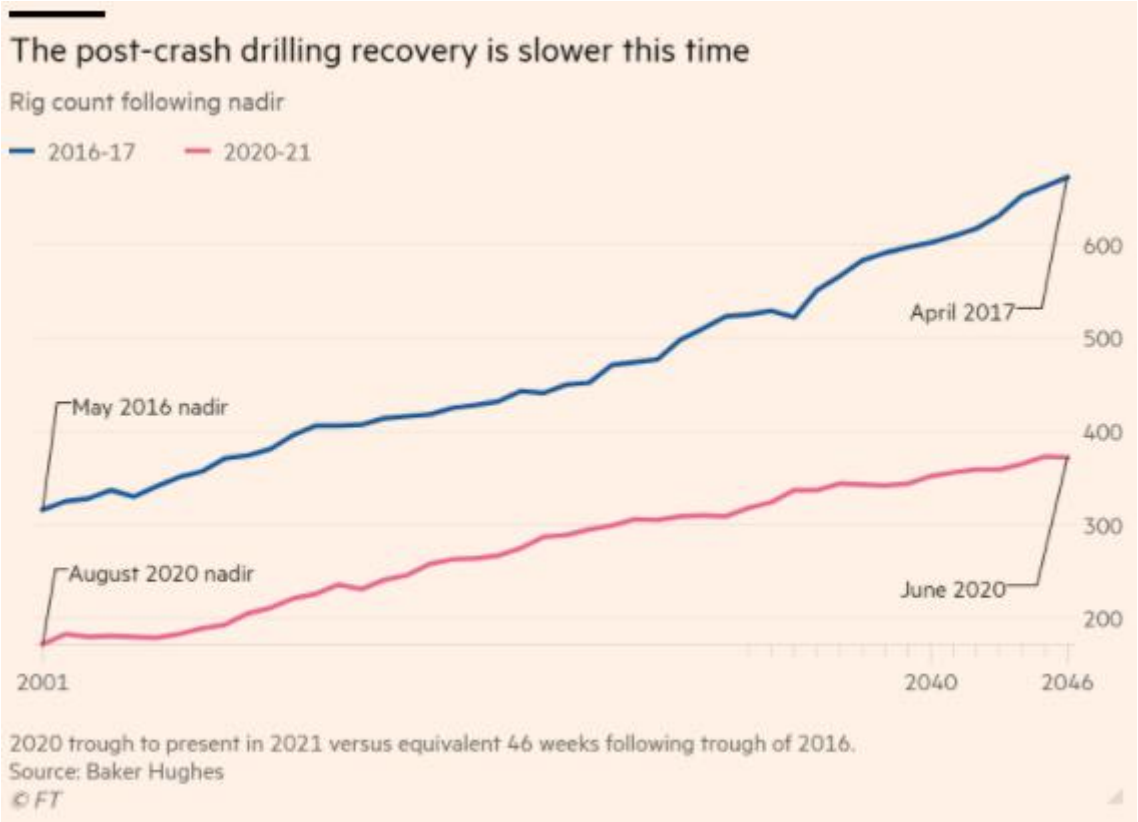
The slow supply response to higher prices is nicely summarised in Baker Hughes data by the FT (Figure 4).

Figure 4: Post Crash Rig Count Recovery (Source: Baker Hughes via the FT)



The reasons for a slow supply response, again from the FT with some Longreach Energy commentary:

1. No one trusts the rally yet; OPEC is propping up oil but still has about 5mmbbld of supply (more than the entire Permian Basin produces) to bring back online. Gas producers are still cautious after the last few years of low prices.

2. Oilfield services, damaged by the Covid induced crash, are still struggling; the bankruptcies and huge sackings in the oilfield services sector last year have left that segment underpowered. Some companies report that they are unable to rehire workers.

3. Investors are holding operators to their capital discipline pledges; Shale's history of poor returns and investors' growing focus on ESG performance have reduced the capital available to fossil fuel producers. Until the memory of recent public company losses recedes, Wall Street will not fund another drilling binge.

Long term trends in US energy consumption from the EIA are provided in Figures 5 and 6. The figures highlight the strong growth in total energy consumed, the relatively small share of energy currently provided by non-fossil fuel sources, the enduring importance of petroleum and the growing recent use of natural gas, mostly at the expense of coal.

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Figure 5: Energy Consumed in the United States 1776 - 2020 (Source: EIA)

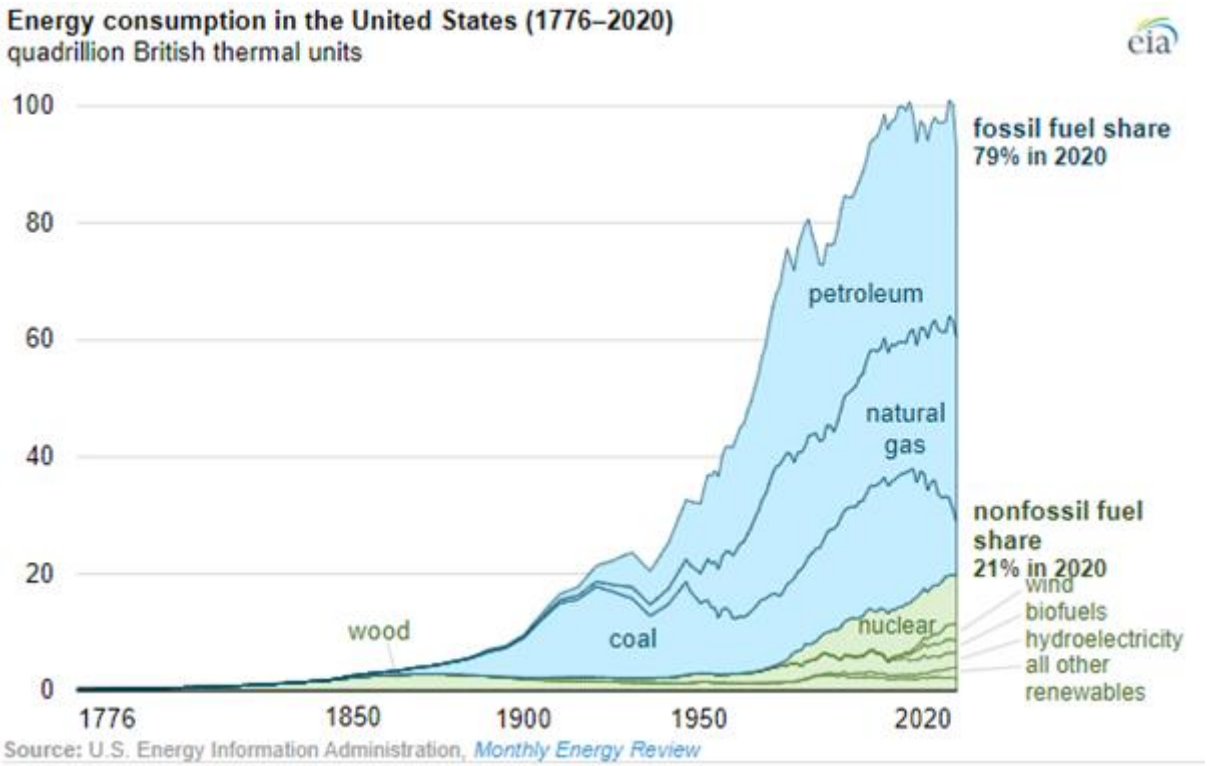
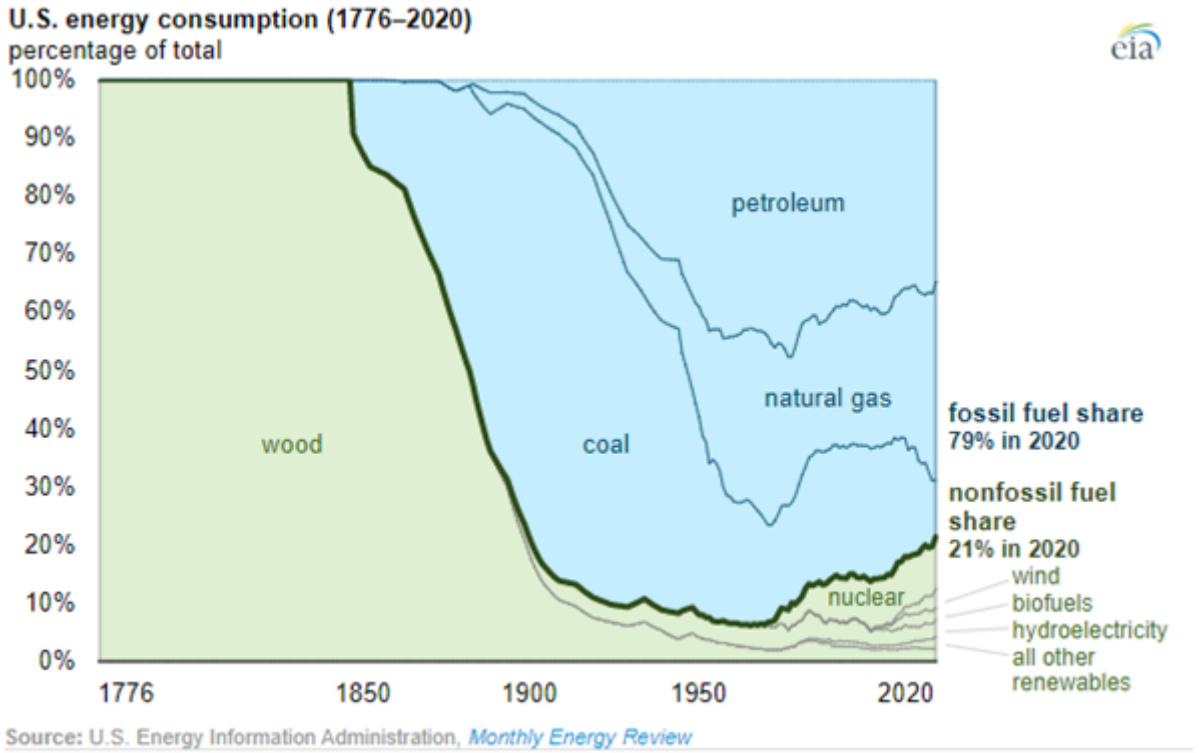


Figure 6: US Energy Consumption % of Total 1776 - 2020 (Source: EIA)



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The latest Baker Hughes rig count data follows. In the last month US total rigs have increased by 18 from 457 to 475 and land rigs increased by 17 from 442 to 459. These are similar increases to last month though are notably smaller than those seen in the 2016 energy price rebound as discussed elsewhere in this report. Oil rigs increased by 17 from 359 to 376 and there was 1 new gas rig deployed, increasing from 98 to 99.

Baker Hughes rig count

Baker Hughes

Rotary Rig Count

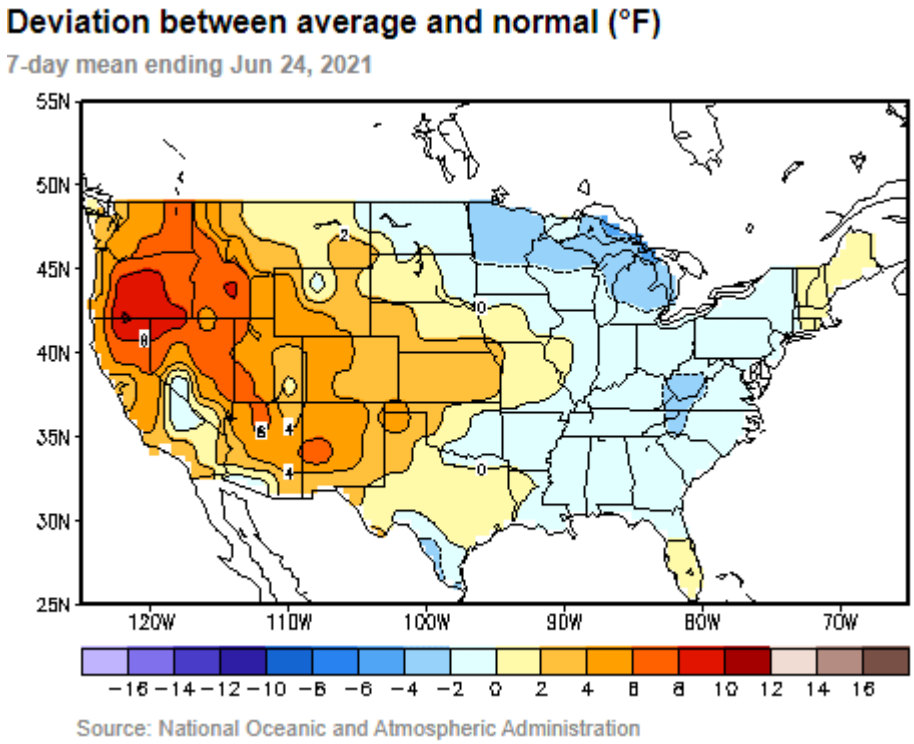
7/2/21

Location	Week	+/-	Week Ago	+/-	Year Ago
Land	459	5	454	208	251
Inland Waters	2	0	2	2	0
Offshore	14	0	14	2	12
United States Total	475	5	470	212	263
Gulf Of Mexico	14	0	14	2	12
Canada	136	10	126	118	18
North America	611	15	596	330	281
U.S. Breakout Information	**This Week**	**+/-**	**Last Week**	**+/-**	**Year Ago**
Oil	376	4	372	191	185
Gas	99	1	98	23	76
Miscellaneous	0	0	0	-2	2
Directional	30	0	30	10	20
Horizontal	429	8	421	203	226
Vertical	16	-3	19	-1	17

Gas Market

Natural gas prices increased strongly over the month. The prompt contract closed June at $3.65, an increase of $0.664 or 22% on end May. Henry Hub has rallied as record breaking temperatures in the US West and a heatwave in Texas (Figure 7) have helped expose market tightness.

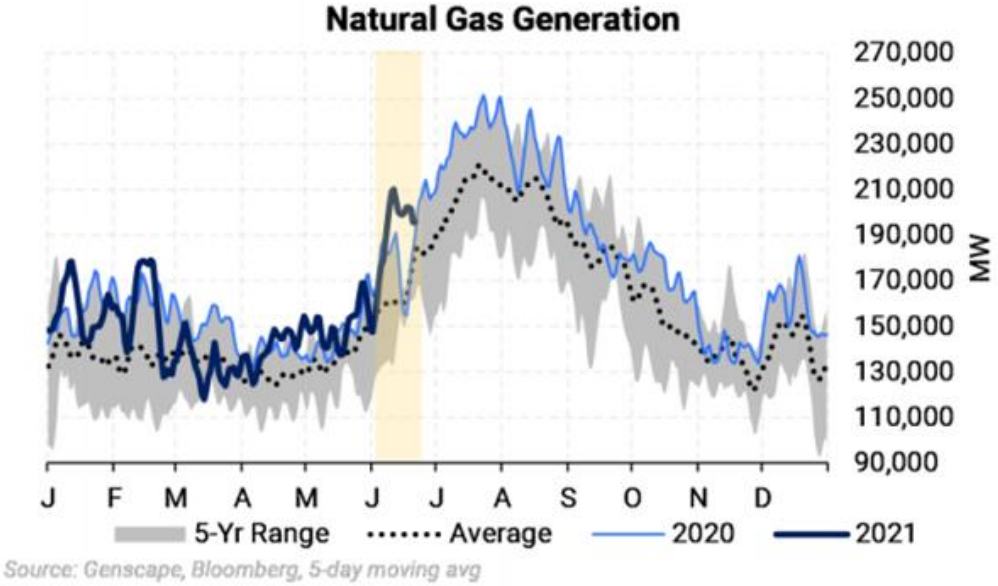
Figure 7: US Temperature Deviations Week Ending 24 June (Source: NOAA)



Source: National Oceanic and Atmospheric Administration

The pull on natural gas fired power generation for cooling has been increased by low supply from hydro (drought) and wind (Figure 8).

Figure 8: Natural Gas Generation (Source: Genscape, Bloomberg)



Source: Genscape, Bloomberg, 5-day moving avg

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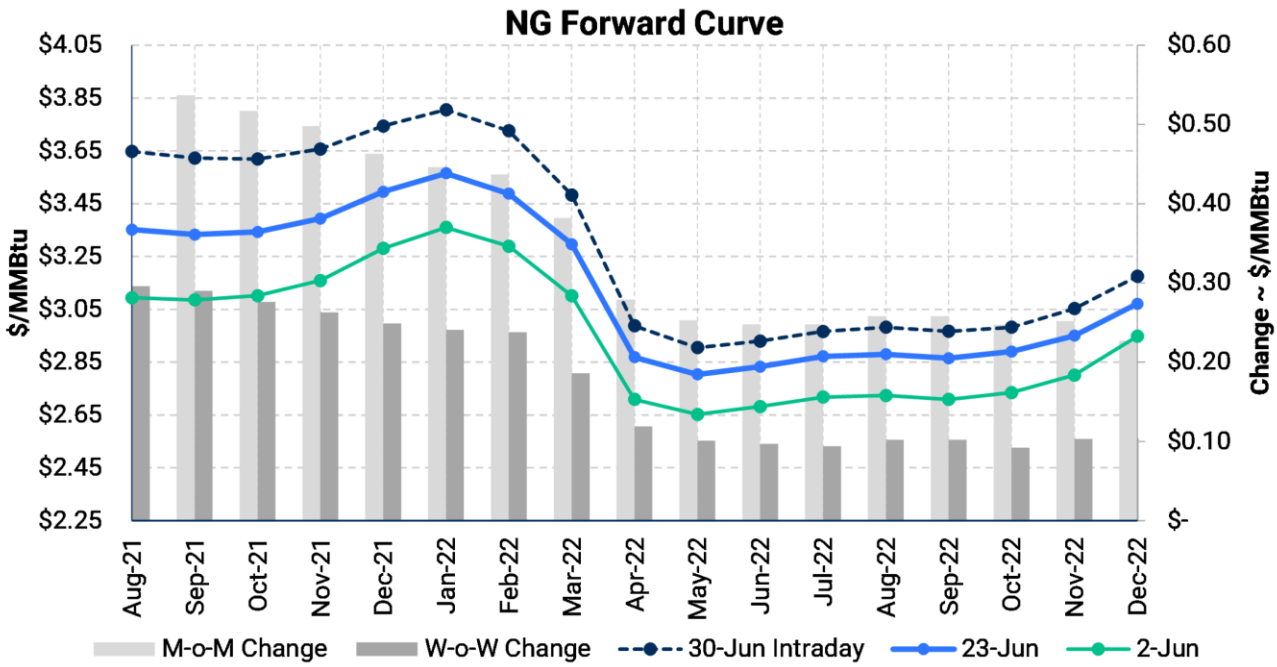
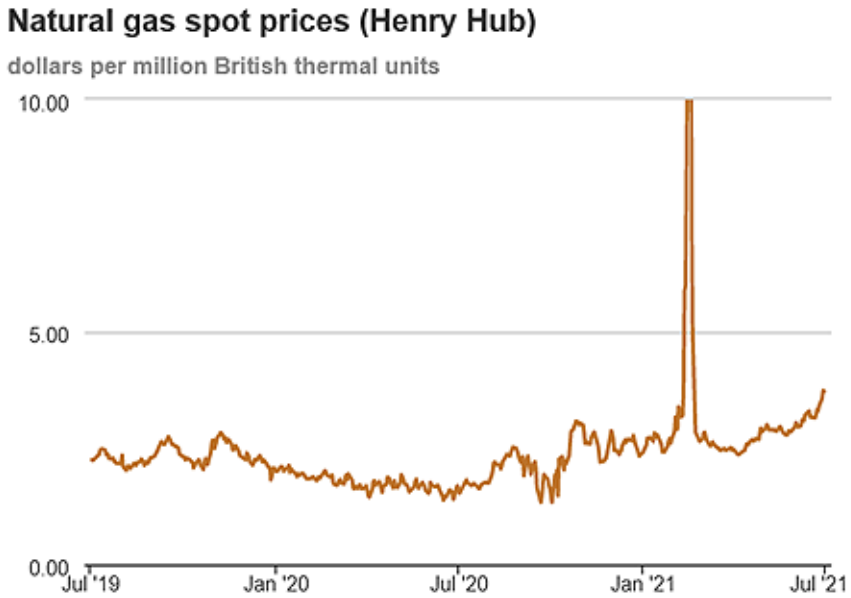
The forward curve is also stronger with the winter 2021-2022 strip up $0.46 over June. The recent increases in forward curves are shown in Figure 9.

Figure 9: HH Forward Curves (Source: Aegis)



Absent the "Snowmagedon" induced spike of February, natural gas spot prices are higher than they have been for two years (Figure 10), and this during summer which, as the forward curves indicate, generally has lower prices than winter.

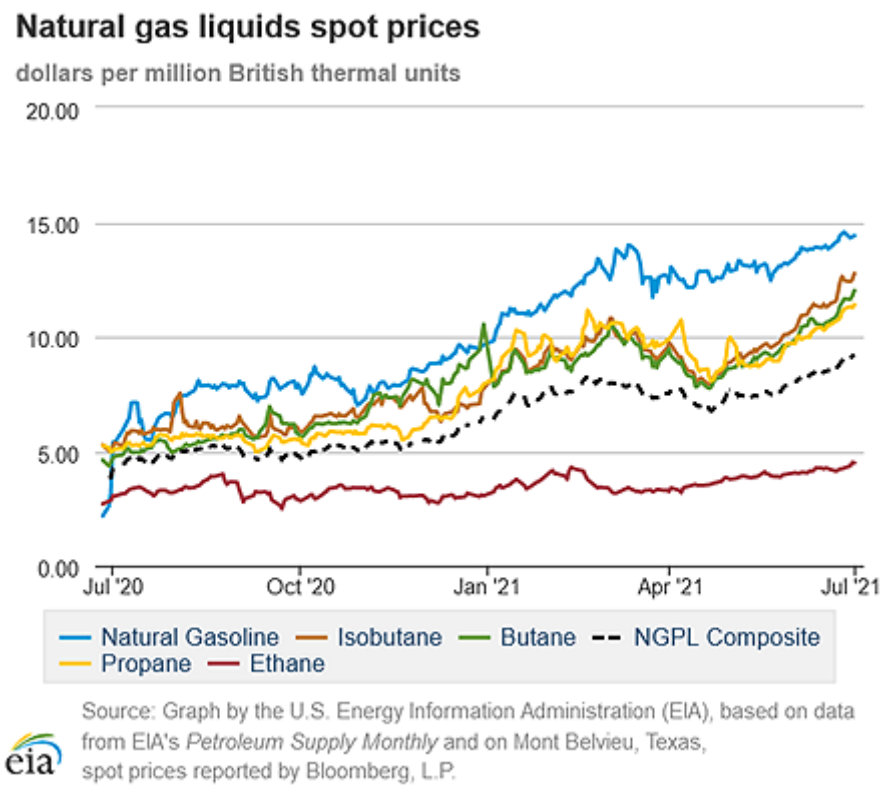
Figure 10: Natural Gas Spot Prices (Source: EIA)



Source: Graph by the U.S. Energy Information Administration (EIA), based on data from Natural Gas Intelligence
Note: Henry Hub prices reported for February 16 and 17, 2021, exceeded the published range, averaging $16.96/MMBtu and $23.61/MMBtu, respectively.

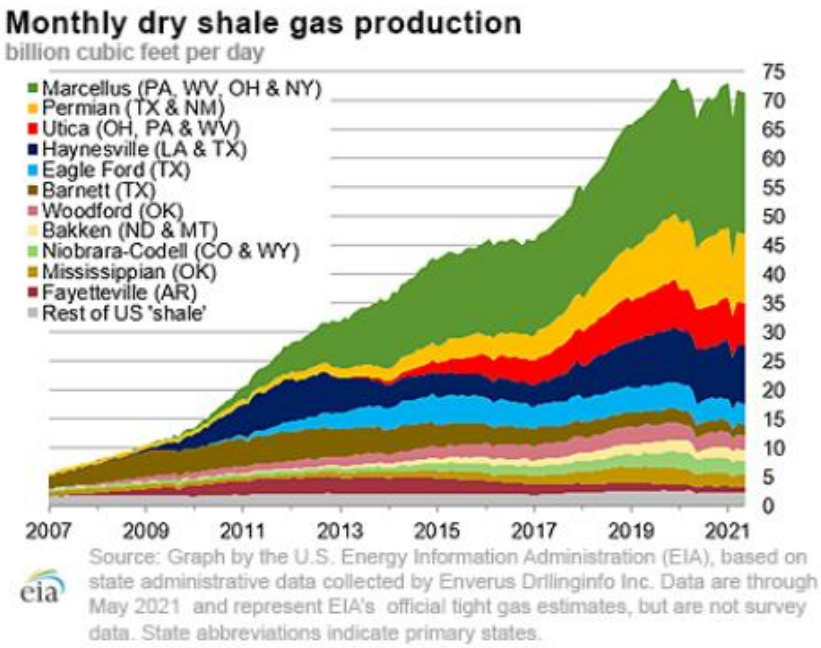
The rise in natural gas and oil has been matched by increases in natural gas liquids (Figure 11). Sales of natural gas liquids are an important revenue component for Longreach Energy.

Figure 11: Natural Gas Liquids Spot Prices (Source: EIA)



Notwithstanding higher prices and consistent with the flat rig-count, production volumes have not increased over recent months (Figure 12).

Figure 12: Monthly Dry Gas Production (Source: EIA)



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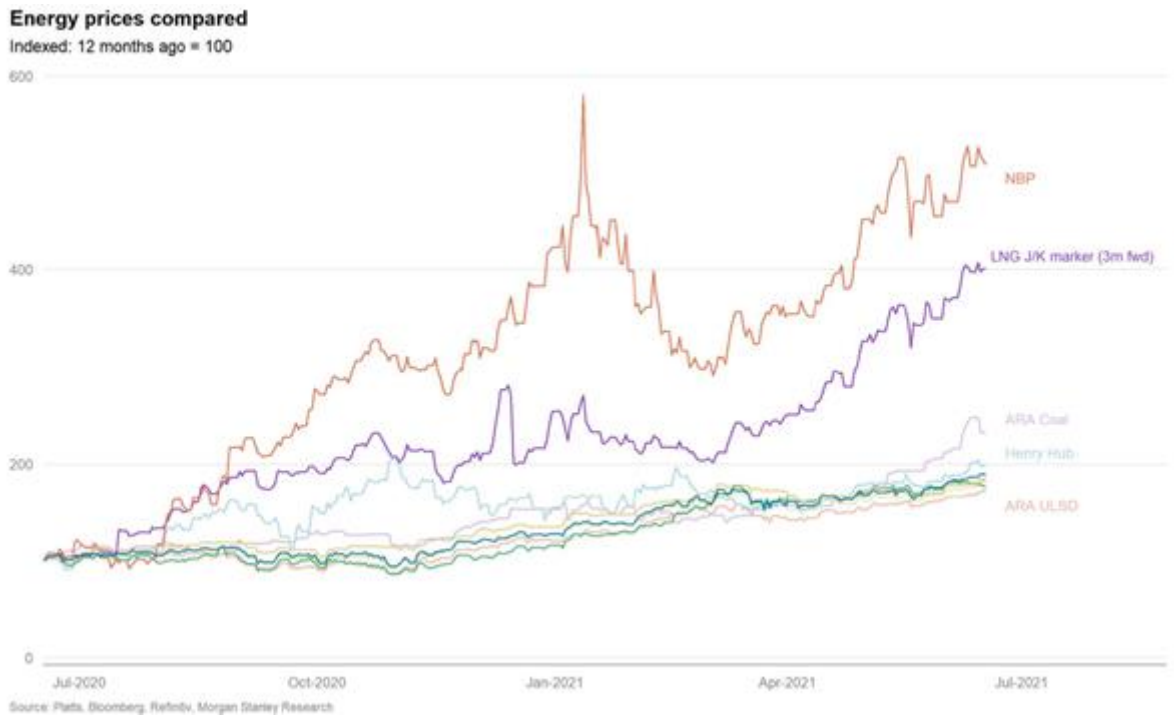
In the last week of June deliveries to US LNG export facilities averaged 11.1bcfd, 1.09bcfd higher than the previous week as scheduled maintenance was completed and trains were brought back online. The Asian JKM price is at a seasonal eight-year high trading around $12.75 while the European TTF contract is only slightly lower at $11.35. These prices provide compelling arbitrage for gas that can be purchased from Henry Hub.

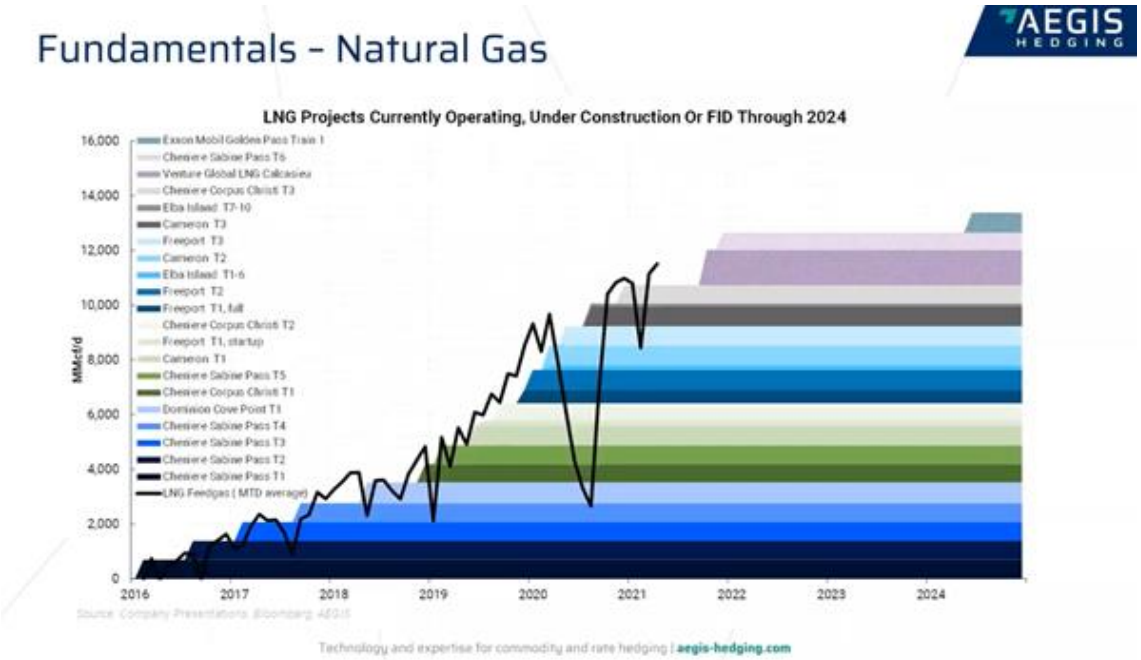
Comparative global energy price trends are provided in Figure 13.

Figure 13: Global Energy Prices Compared (Source: various via Morgan Stanley)



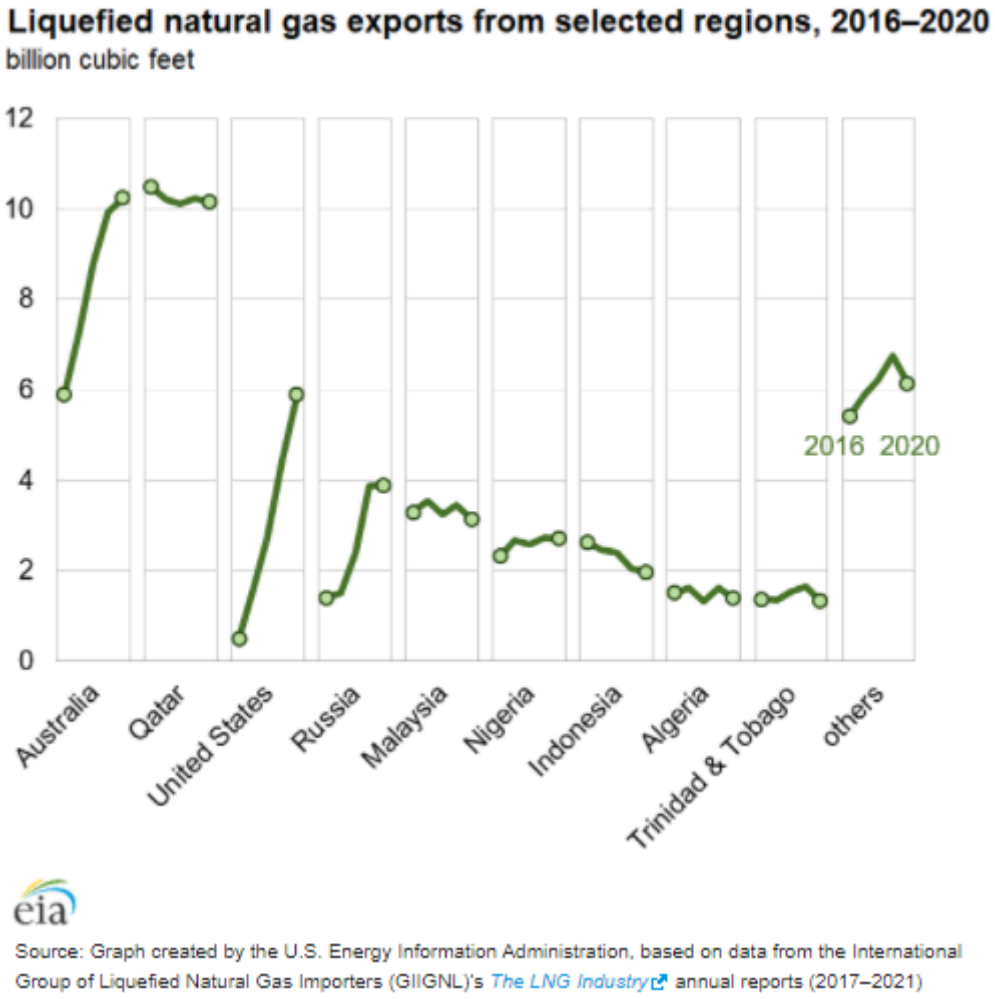
US LNG facilities are running at maximum capacity with 3 to 4 bcfd of additions due to come online in the next two-years (Figure 14).

Figure 14: US LNG Projects and Export Volumes (Source: Aegis)



National LNG export volumes in period from 2016 to 2020 are provided in Figure 15. US (and Australian) growth has been significant.

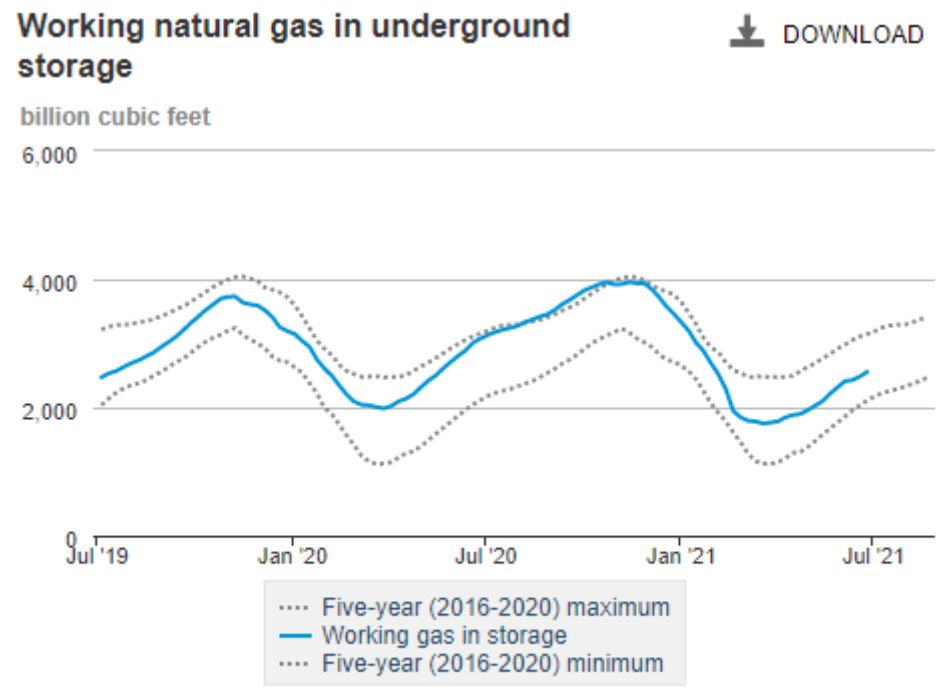
Figure 15: Global LNG Exports (Source: EIA)



Source: Graph created by the U.S. Energy Information Administration, based on data from the International Group of Liquefied Natural Gas Importers (GIIGNL)'s *The LNG Industry* annual reports (2017–2021)

The result of these supply and demand factors is that working gas in storage continues to track below the five-year average (Figure 16).

Figure 16: US Working Gas in Storage (Source: EIA)

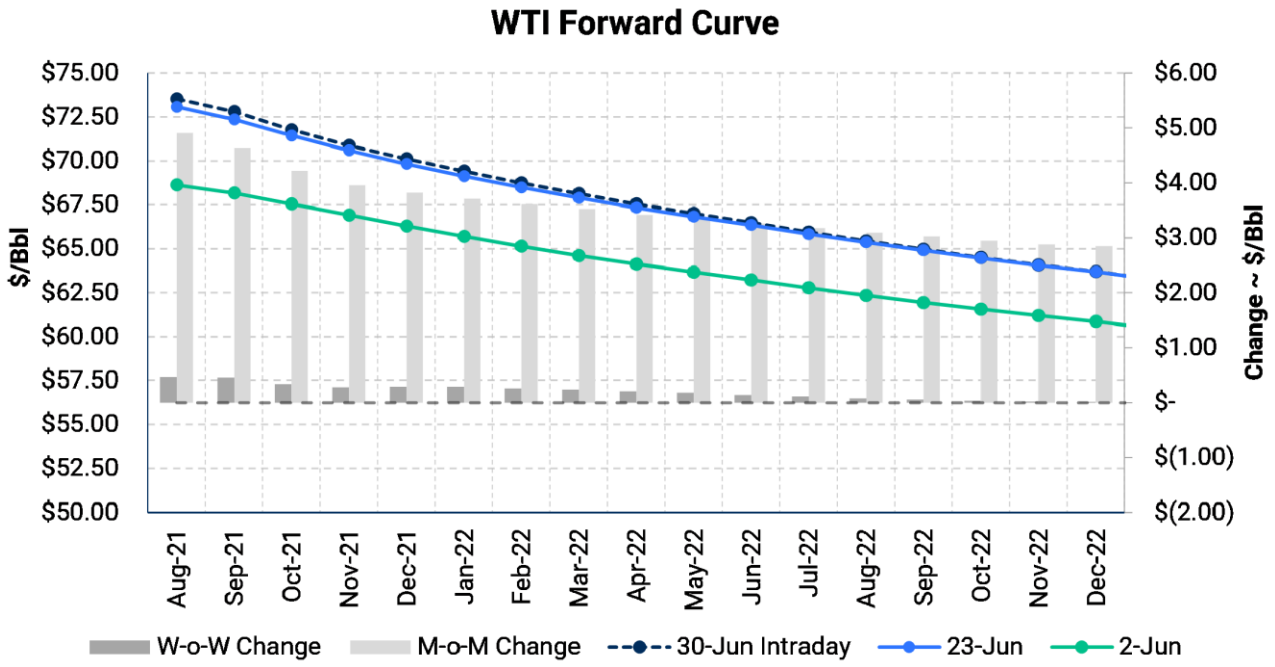


Source: U.S. Energy Information Administration Form EIA-912, *Weekly Underground Natural Gas Storage Report*

Oil Market

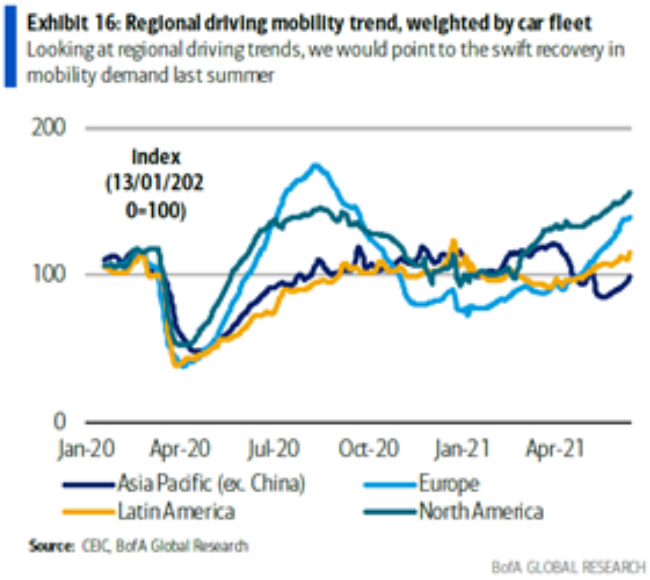
Oil prices closed the month of June with the August prompt WTI contract trading at $73.47/bbl. This is an increase of $7.15/bbl over the month and of over $14/bbl since 1 April. The monthly increase has been large across the forward curve (Figure 17).

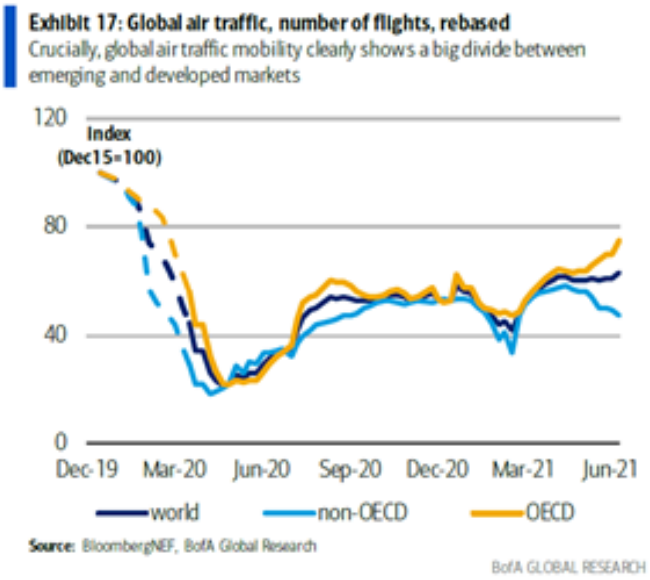
Figure 17: WTI Forward Curves (Source: Aegis)



World oil demand is well on its way to recovery. Highway traffic is back at, or even above, pre-pandemic levels in the US, China and parts of Europe. Air travel is also increasing with the US Transport Security Administration data showing the number of passengers passing through security at US airports exceeding 2 million a day for the first time since March 2020 (Figure 18).

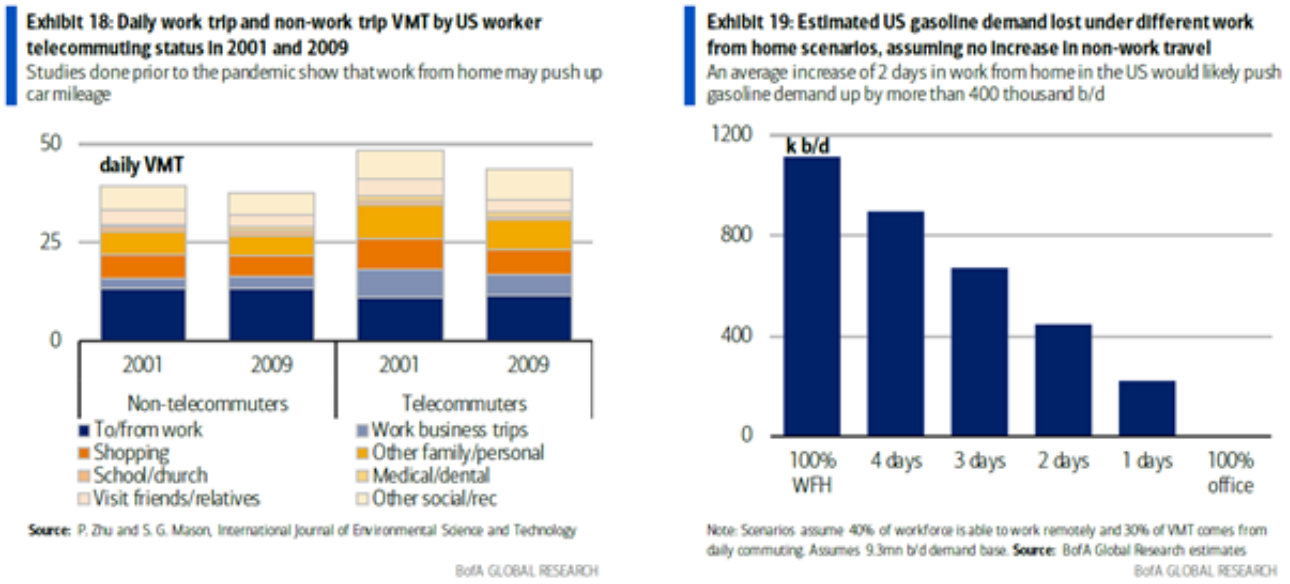
Figure 18: Driving Mobility and Global Air Traffic (Source: various via BoA)





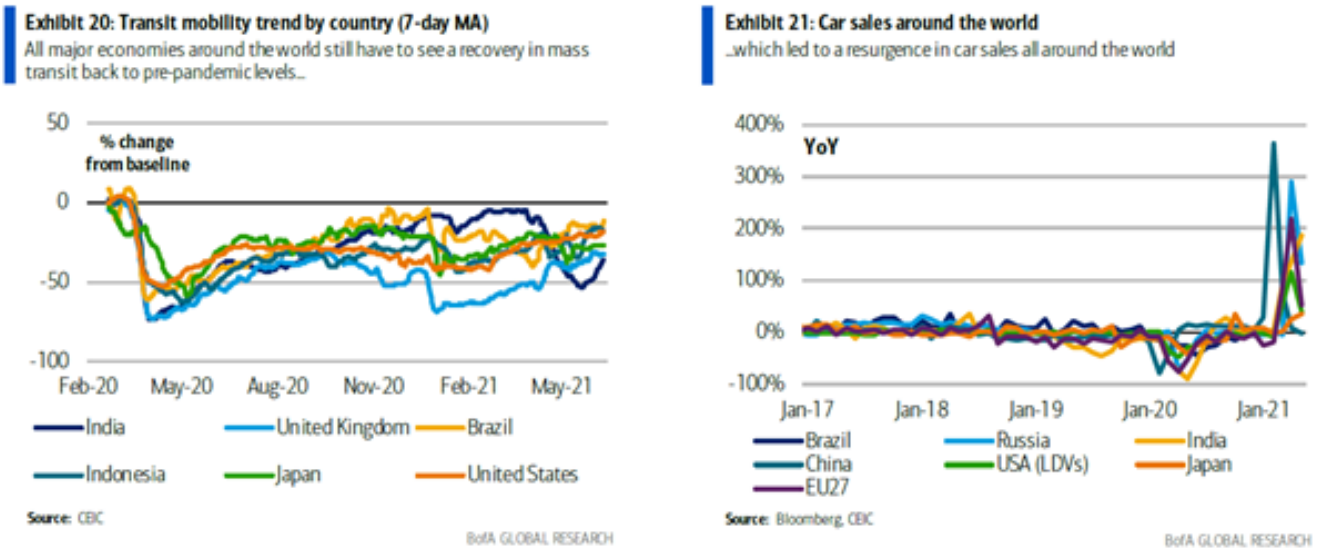
While vaccination campaigns will encourage increased mobility, it is likely that some of the recent work from home trends will remain in place for a long time. While many workers will return to their offices, flexibility has increased and many companies will allow employees to work remotely one or two days a week. Counterintuitively, studies done prior to the pandemic show that work from home may push up car milage. This is because often people use their car as their office and run errands during the day. Bank of America Research estimates that an average increase of 2 days in work from home in the US would likely increase gasoline demand by more than 400 thousand bbld (Figure 20).

Figure 20: Impact of Work from Home on Oil Demand (Source: BoA)



Another factor that will likely provide strong support to oil demand over the next 2 to 3 years is a rotation away from mass transit. Without exception, no major economy around the world has seen a recovery in mass transit back to pre-pandemic levels. The psychological scars left by the pandemic are likely to see consumers avoid mass transport as much as possible, boosting private vehicle use for years to come. This trend is already visible in a resurgence in global car sales (Figure 21).

Figure 21: Global Transit Mobility and Car Sales (Source: CEIC, Bloomberg, via BoA)



Supply is not (yet) responding to the higher prices and the prospect of further demand growth. While OPEC+'s current ~5mmbbld spare capacity is a factor, the macro drivers discussed under Figure 4 loom large. Non-OPEC production decline rates are increasing and global upstream capex is declining (Figures 22 and 23). Upstream capex fell 40% during 2014-20198. In 2020, it declined a further 30%.

Figure 22: Production Decline Rates and Global Upstream Capex (Source: IEA, Woodmac via BofA)

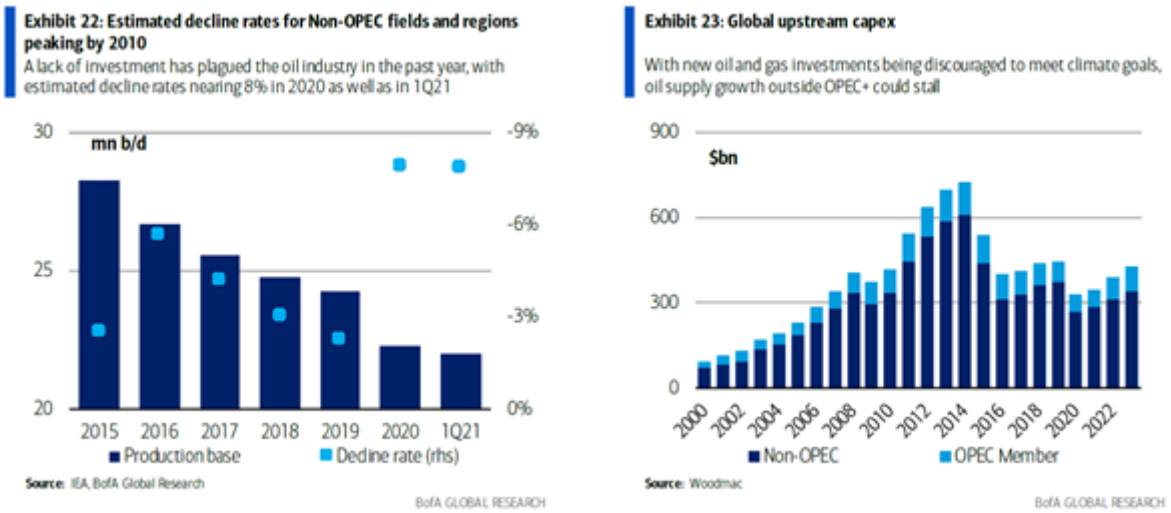
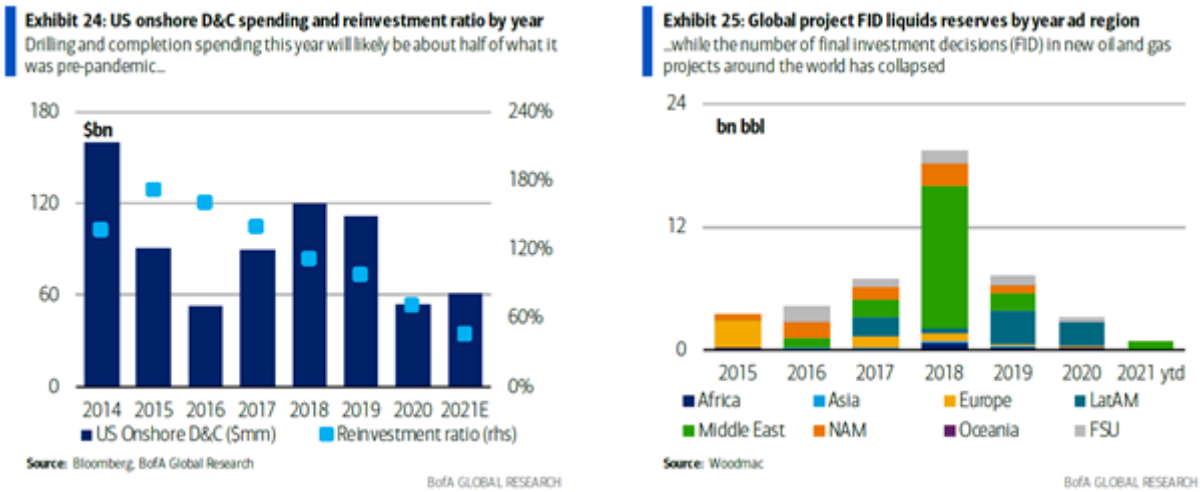


Figure 23: US Onshore D&C Spending and Global Liquid Reserves Investment (Source: Bloomberg, Woodmac via BofA)



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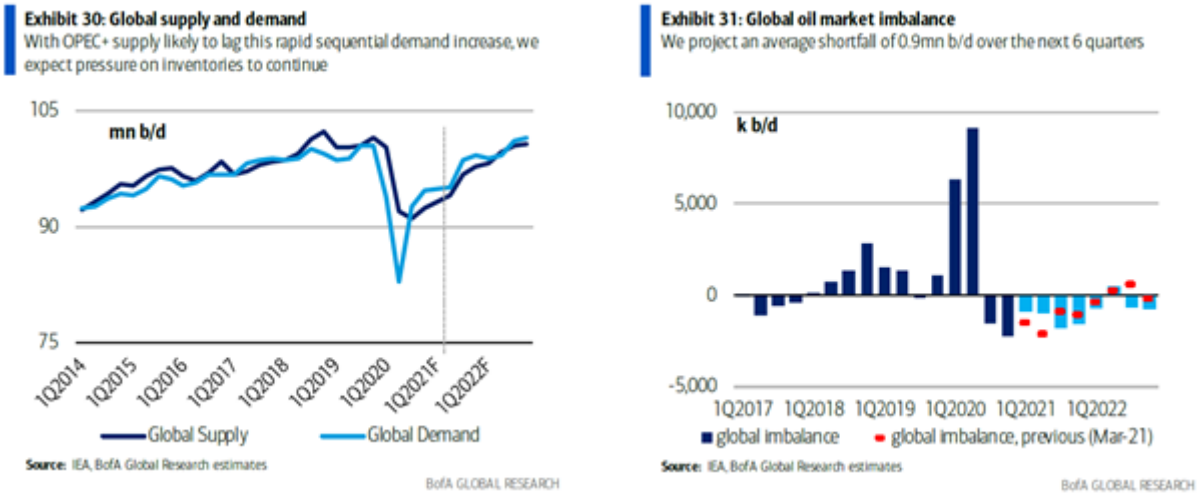
The global situation now presents real possibility that supply will struggle to meet demand with resulting continued price appreciation. There appears to be a disconnect in the market between investors' drive for renewable energy and consumers demand for oil. Figure 24 shows BofA Research's estimates of global supply and demand over the next two-years.

Figure 24: Global Supply and Demand (Source: IEA, BofA)



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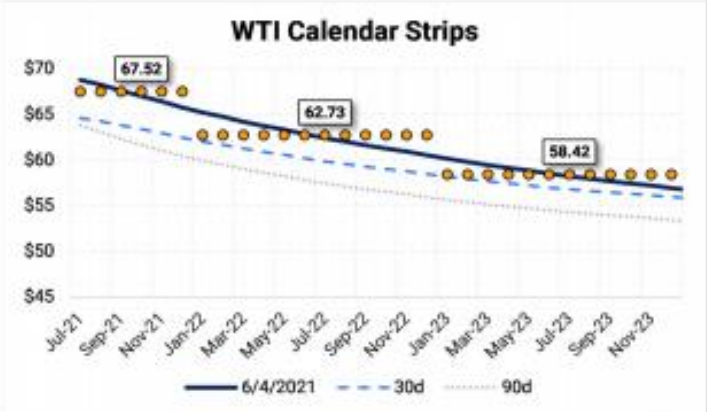
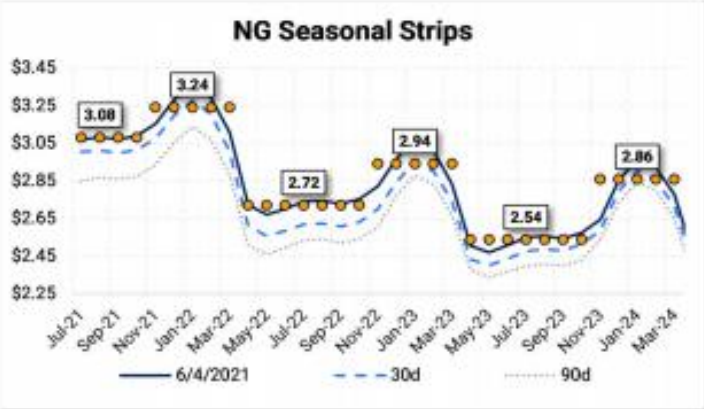
Gas and Oil Prices 4 June 2021





Swap Pricing

	Bal 21	Cal 22	Cal 23	Cal 24	Cal 25
NYMEX WTI Crude	$ 67.52	$ 62.73	$ 58.42	$ 55.59	$ 53.92
ICE Brent Crude	$ 70.05	$ 66.17	$ 62.81	$ 60.58	$ 59.13
Light Louisiana Sweet	$ 69.53	$ 65.00	$ 60.74	$ 57.78	$ 56.13
TM Midland Differential	$ 0.44	$ 0.57	$ 0.58		
NYMEX Natural Gas	$ 3.13	$ 2.88	$ 2.69	$ 2.67	$ 2.66

Source: Bloomberg LP
Indicative only

Natural Gas Basis

Location	Spot	Summer '21	Winter '21/'22	Summer '22	Winter '22/'23
Henry Hub Fixed	3.01	3.08	3.22	2.72	2.94
Opal	$ (0.04)	$ 0.21	$ 0.54	$ (0.11)	$ 0.26
Chicago CG	$ (0.15)	$ (0.17)	$ (0.16)	$ (0.18)	$ (0.14)
PEPL	$ (0.29)	$ (0.17)	$ 0.01	$ (0.18)	$ (0.07)
Waha	$ (0.30)	$ (0.04)	$ (0.03)	$ (0.35)	$ (0.32)
TETCO M3	$ (0.98)	$ (0.79)	$ 0.96	$ (0.62)	$ 0.82
Dominion S	$ (1.06)	$ (1.05)	$ (0.71)	$ (0.79)	$ (0.69)

All prices as previous trading day close
Source: Bloomberg

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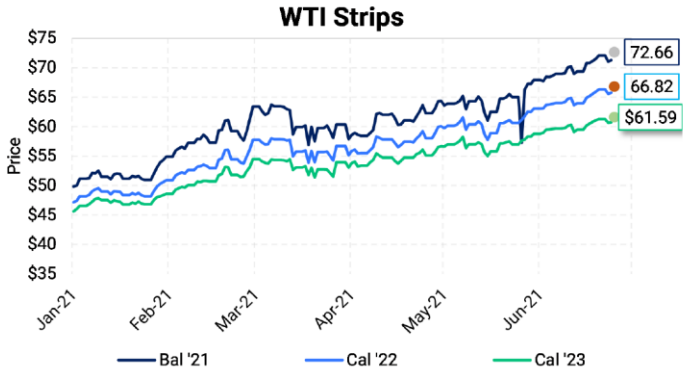
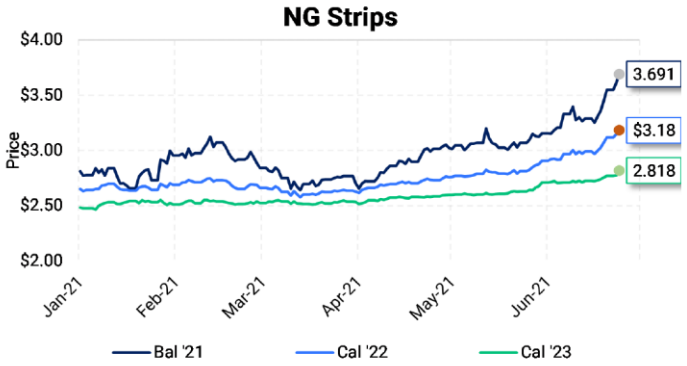
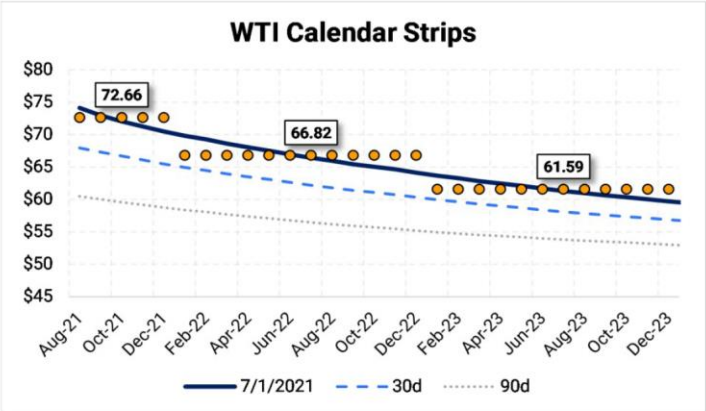
Gas and Oil Prices 1 July 2021







Swap Pricing

	Bal 21	Cal 22	Cal 23	Cal 24	Cal 25
NYMEX WTI Crude	$ 72.66	$ 66.82	$ 61.59	$ 58.02	$ 55.84
ICE Brent Crude	$ 74.18	$ 69.62	$ 65.47	$ 62.49	$ 60.62
Light Louisiana Sweet	$ 73.99	$ 68.47	$ 63.49	$ 62.13	$ 60.10
TM Midland Differential	$ (0.05)	$ 0.04	$ 0.28		
WCS Differential	$ (13.75)	$ (12.92)	$ (13.87)	$ (16.55)	$ (20.08)
NYMEX Natural Gas	$ 3.72	$ 3.18	$ 2.81	$ 2.71	$ 2.72

Source: Bloomberg LP
Indicative only

Natural Gas Basis

Location	Spot	Summer '21	Winter '21/'22	Summer '22	Winter '22/'23
Henry Hub Fixed	3.72	3.69	3.68	2.97	3.14
Opal	$ (0.13)	$ 0.13	$ 0.38	$ (0.21)	$ 0.20
Waha	$ (0.19)	$ (0.11)	$ (0.05)	$ (0.47)	$ (0.41)
Malin	$ (0.20)	$ 0.30	$ 0.51	$ (0.06)	$ 0.28
Chicago CG	$ (0.20)	$ (0.17)	$ (0.18)	$ (0.21)	$ (0.16)
PEPL	$ (0.23)	$ (0.18)	$ (0.01)	$ (0.28)	$ (0.16)
Sumas	$ (0.26)	$ 0.35	$ 0.78	$ (0.28)	$ 0.57
AECO	$ (0.27)	$ (0.66)	$ (0.60)	$ (0.72)	$ (0.73)
TETCO M3	$ (0.79)	$ (0.93)	$ 1.23	$ (0.67)	$ 0.94
Dominion S	$ (0.89)	$ (1.23)	$ (0.80)	$ (0.93)	$ (0.71)

All prices as previous trading day close
Source: Bloomberg