



Longreach Energy Holdings LLC

FIRM INFORMATION

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1. Market and Macro Industry Commentary

General Market Commentary

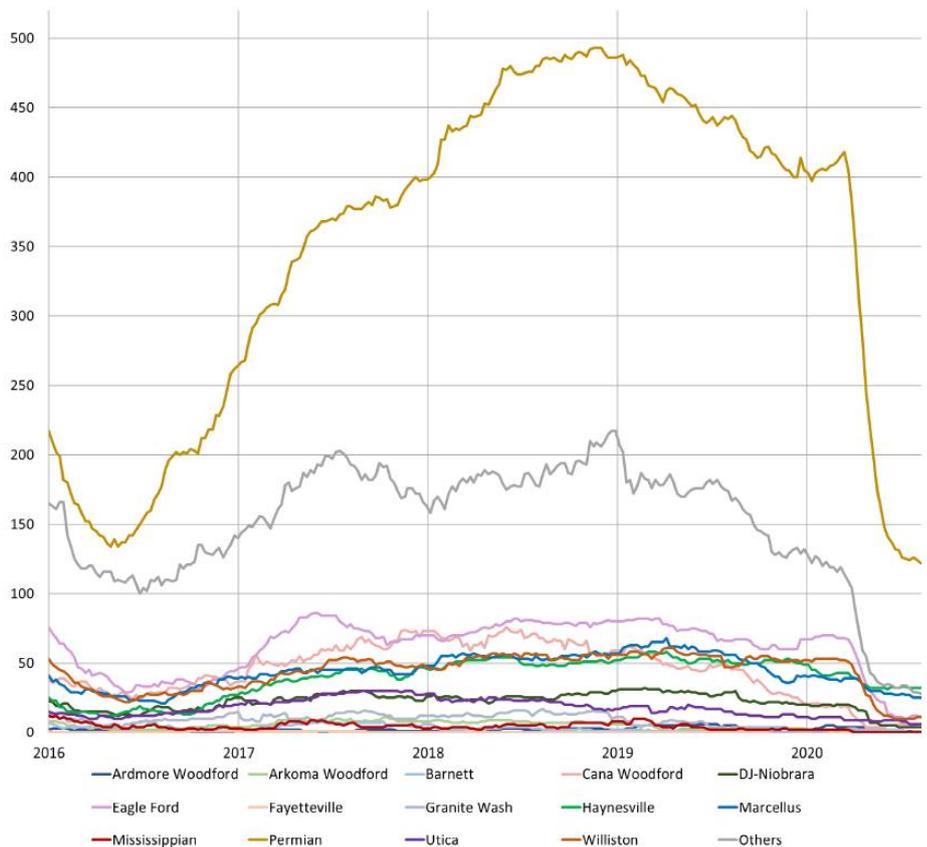
Natural gas rallied strongly in August, prompt HH was up 46% over the month. In July, the HH spot price averaged \$1.77/mmbtu, by 3 September the October contract was trading at \$2.46/mmbtu while the February contract closed at \$3.33/mmbtu. The price increase was driven by a combination of hot weather induced cooling demand and declining production. These factors are detailed in the Gas Market discussion below.

WTI was up a modest 5.5% during August and remained in the low \$40's/bbl as the Covid-19 pandemic continues to muddy the demand outlook for oil.

The US rig count appears to have reached a floor, on 17 August the oil rig count fell to 172 with natural gas rigs at 72. Gas rigs have been stable but oil directed drilling is now climbing. On 24 August the oil rig count increased to 183, the first week on week rise since January. Data from 4 September has oil rig count at 181 with gas still at 72.

Figure 1: Total US Rig Count by Region (source Baker Hughes)

TOTAL US RIG COUNT BY US REGION

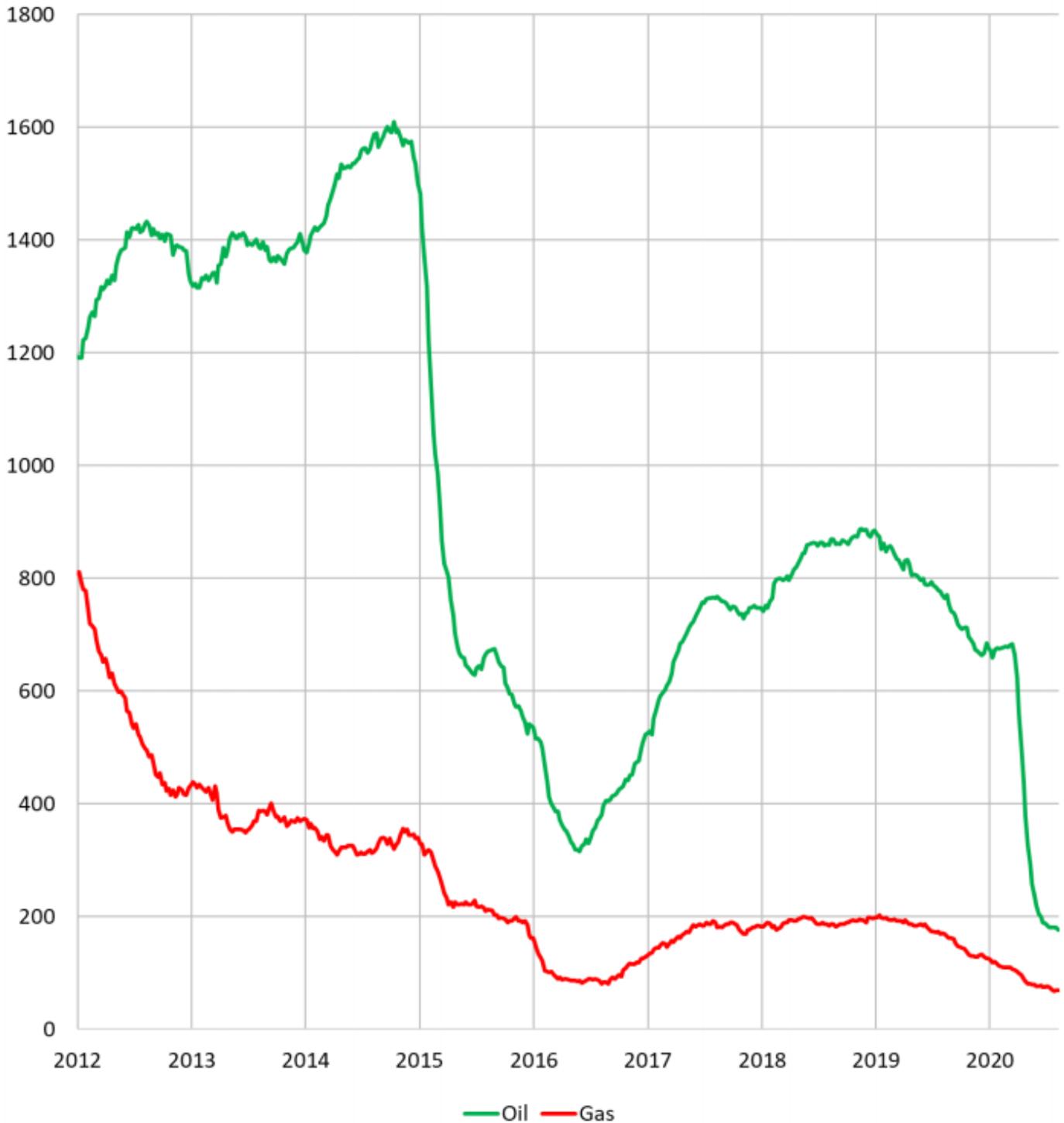


*Source—Baker Hughes North America Rotary Rig Count



Figure 2: Total US Rig Count by Product (source Baker Hughes)

RIG ACTIVITY BY PRODUCT

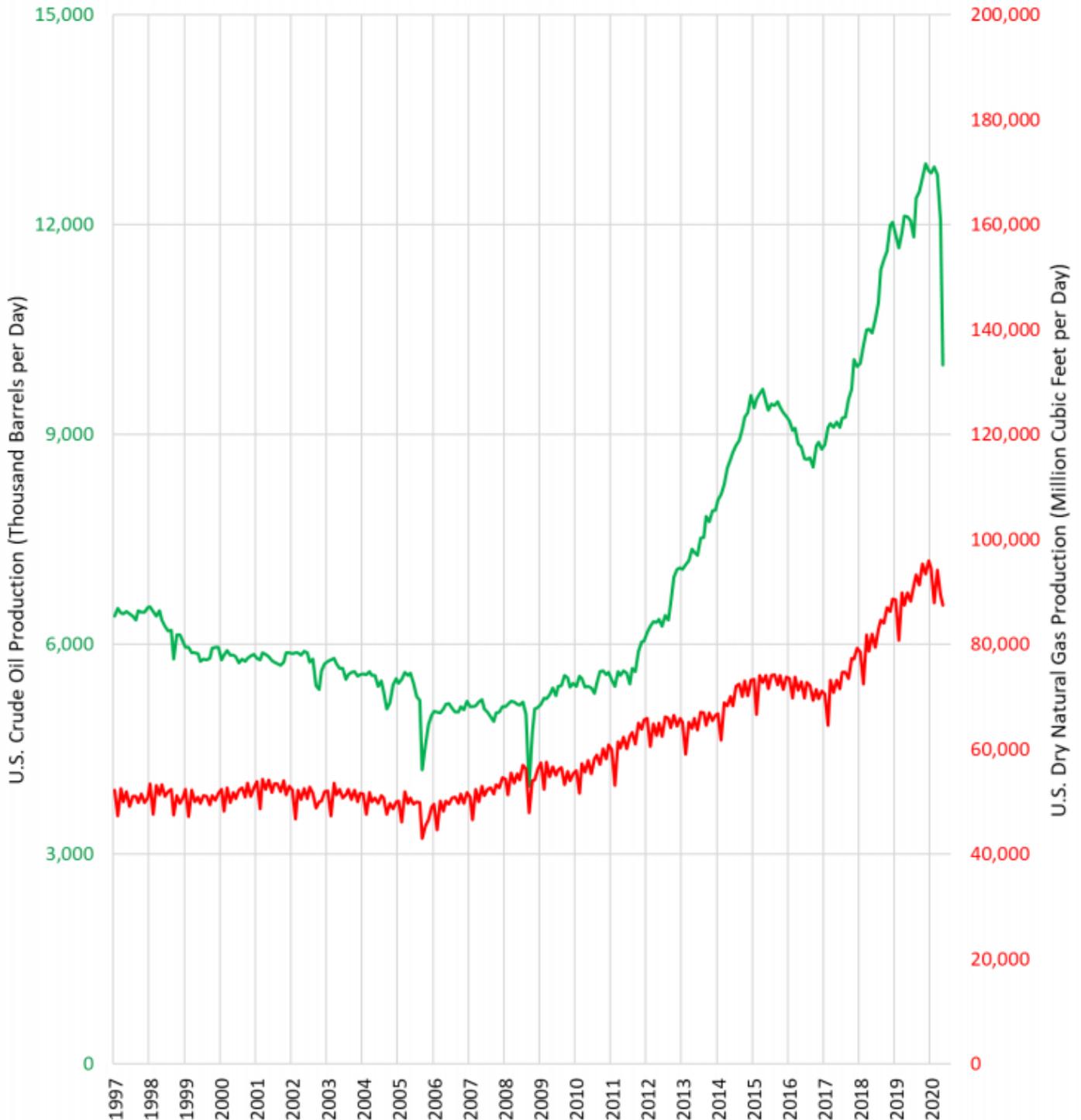


*Source—Baker Hughes North America Rotary Rig Count

Gas and oil production continue to fall. The sharp decline in oil production observed in Figure 3 is heavily influenced by voluntary shut-ins due to low oil prices. Future production forecasts from the US Energy Information Administration (EIA) are discussed in the Gas and Oil market commentaries below.

Figure 3: US Crude Oil and Natural Gas Production (source EIA)

US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)

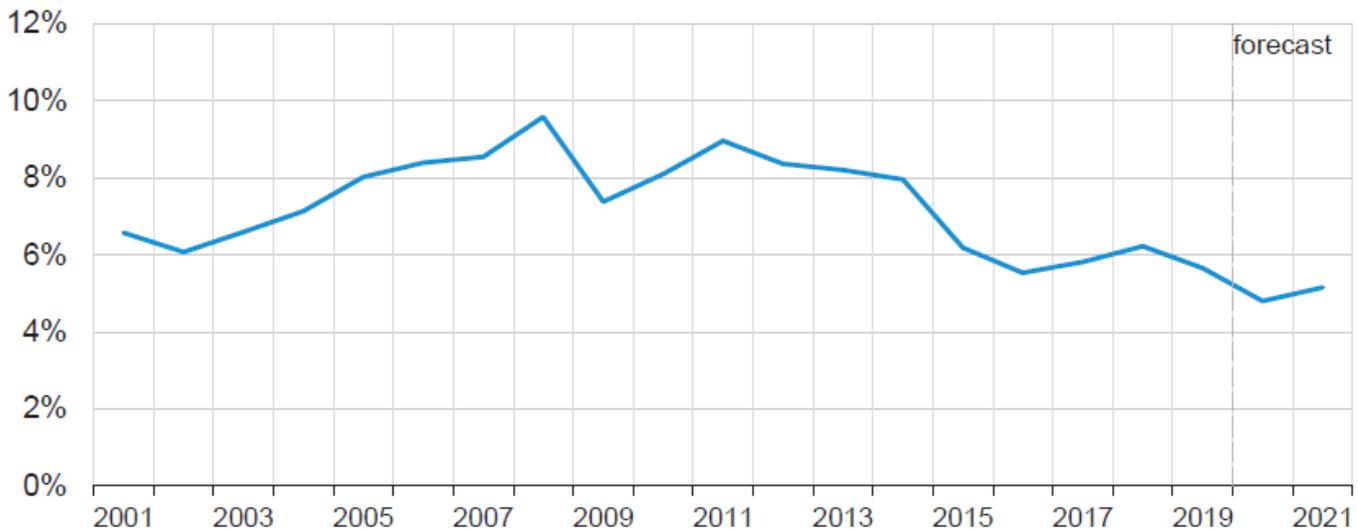


*Source—Energy Information Administration, United States (EIA)

US energy costs as share of gross domestic product continue to drift lower, providing wide sections of the US economy with significant structural advantages over competitors in other, higher cost, jurisdictions.

Figure 4: US Energy Expenditures as Share of GDP (source EIA)

U.S. annual energy expenditures share of gross domestic product



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2020



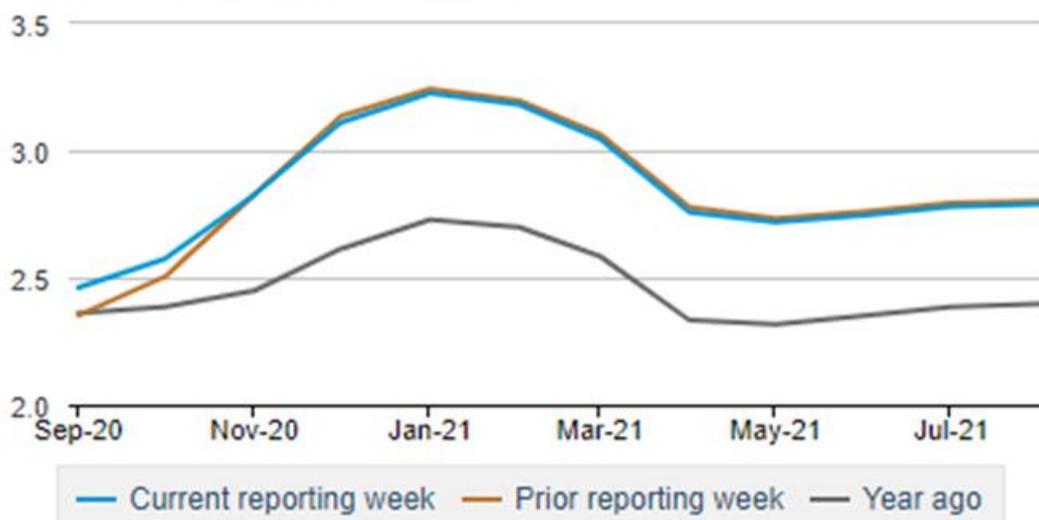
Gas Market

The increase in natural gas prices in the last 12 months, notwithstanding the impact of Covid-19, is highlighted in Figure 5.

Figure 5: Natural Gas Futures 12 Month Strip (Source: EIA, 27 August)

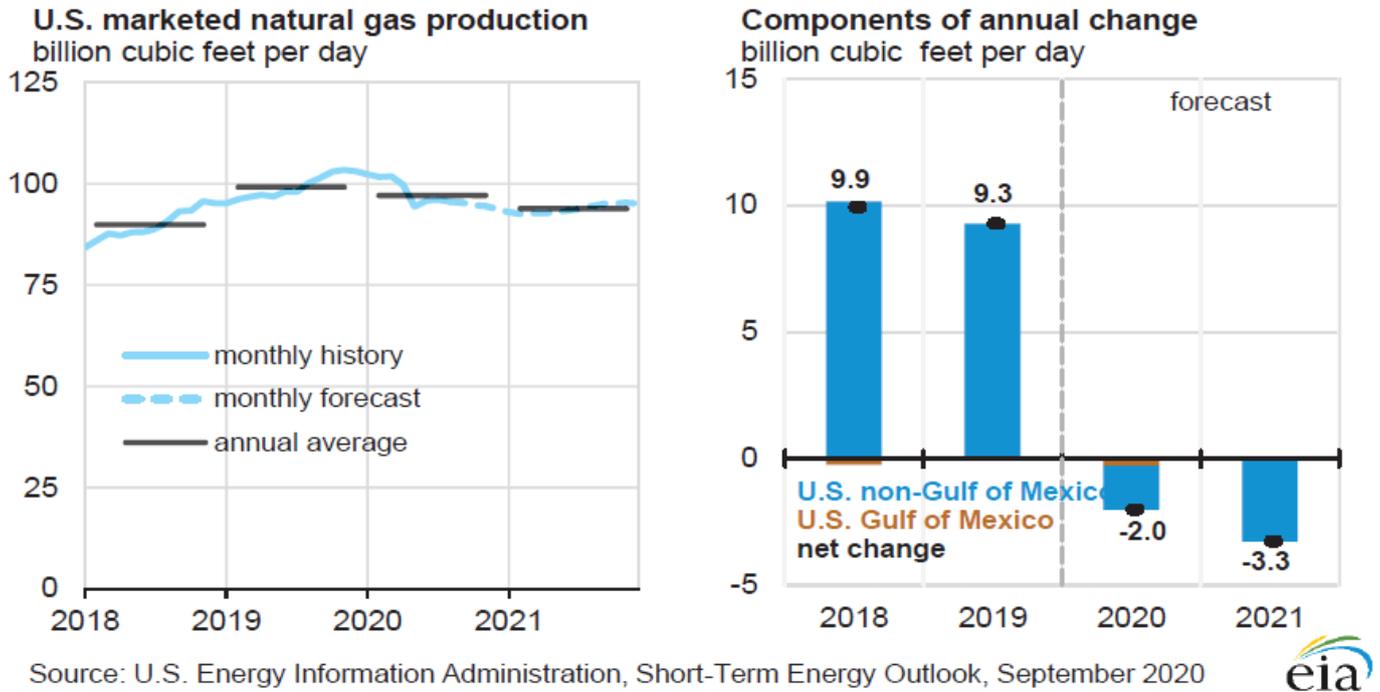
Natural gas futures price (twelve-month strip)

dollars per million British thermal units



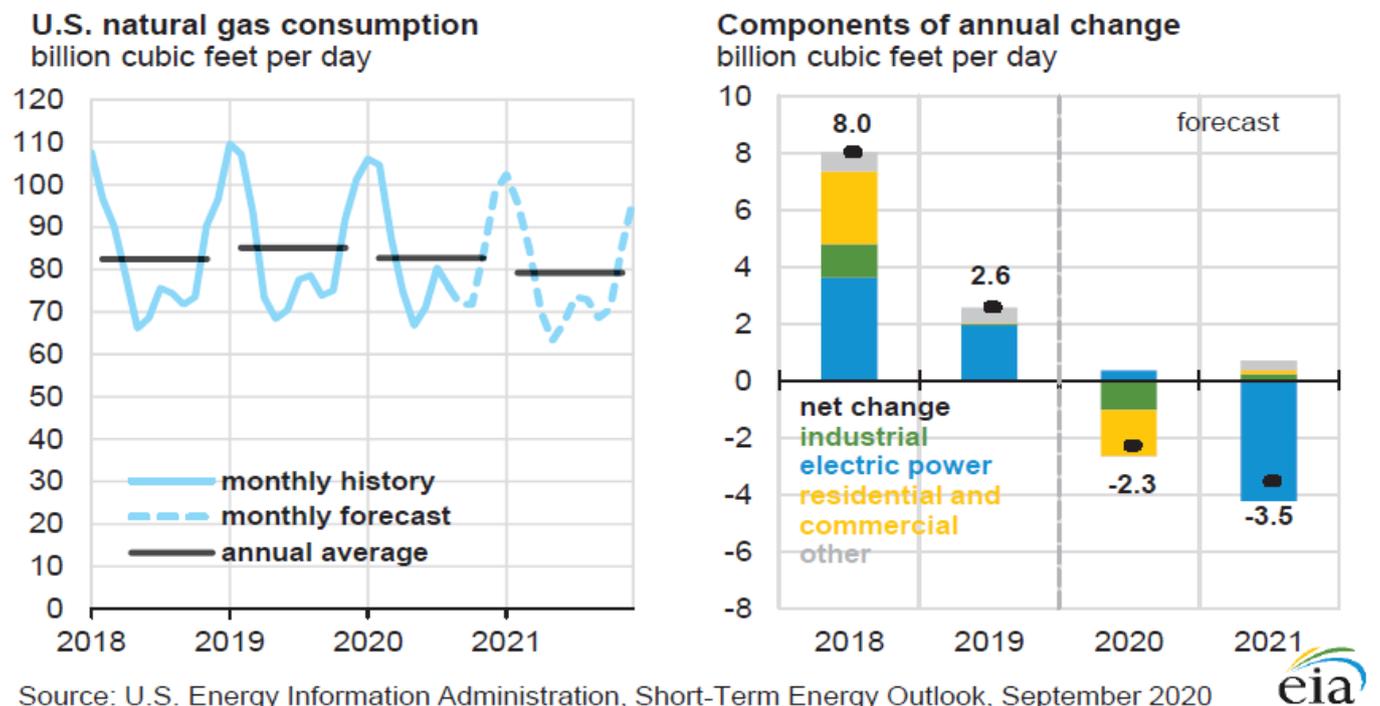
The EIA's August Short Term Energy Outlook (STEO) contains updated projections for gas production and consumption to the end of 2021. US natural gas production set an annual record of 92.2bcf/d in 2019. In 2020 that is forecast to decline to 88.7bcf/d and to 84bcf/d by 2021.

Figure 6: US Natural Gas Production Forecast (Source: EIA)



US natural gas consumption is expected to average 82.4bcf/d in 2020, a 3% fall from 2019. Consumption in 2021 is expected to average 78.7bcf/d. The largest decline in consumption has occurred in the industrial sector (down 1bcf/d in 2020 to 22bcf/d), a result of reduced manufacturing activity. Lower heating demand in early 2020 contributed to declines in residential and commercial demand this year.

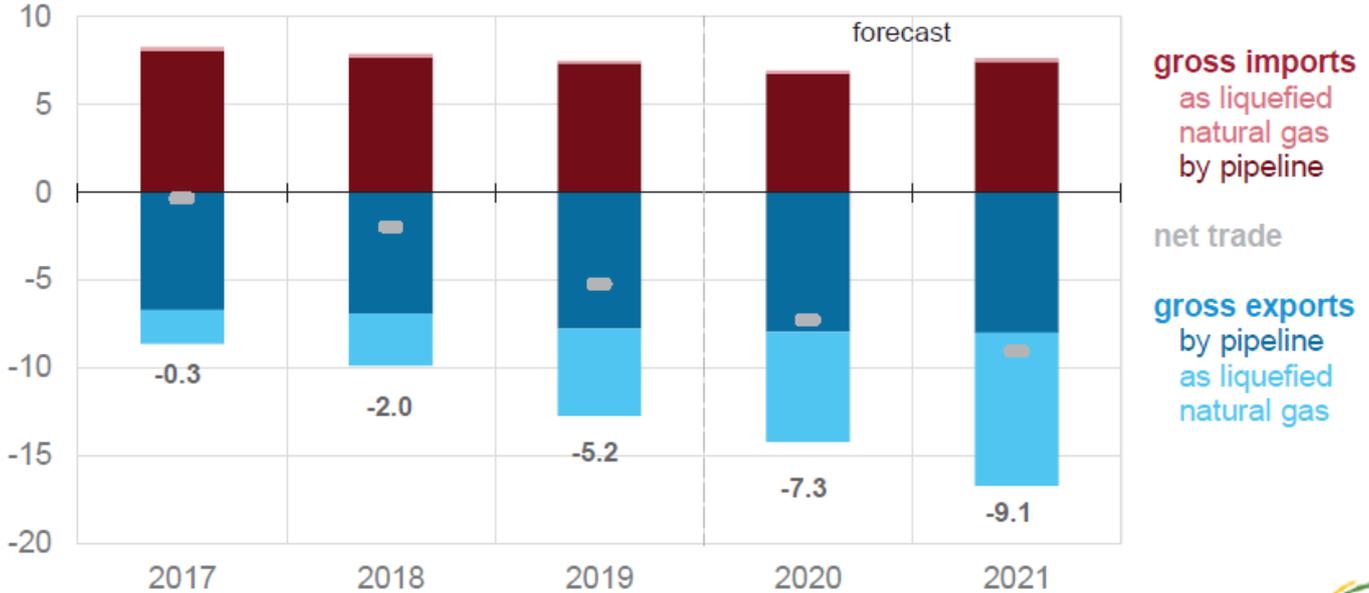
Figure 7: US Natural Gas Consumption Forecast (Source: EIA)



LNG Export capacity is approximately 9bcf/d with net exports expected to add net 7.1bcf/d of demand in 2021.

Figure 8: US Natural Gas Trade (Source: EIA)

U.S. annual natural gas trade billion cubic feet per day



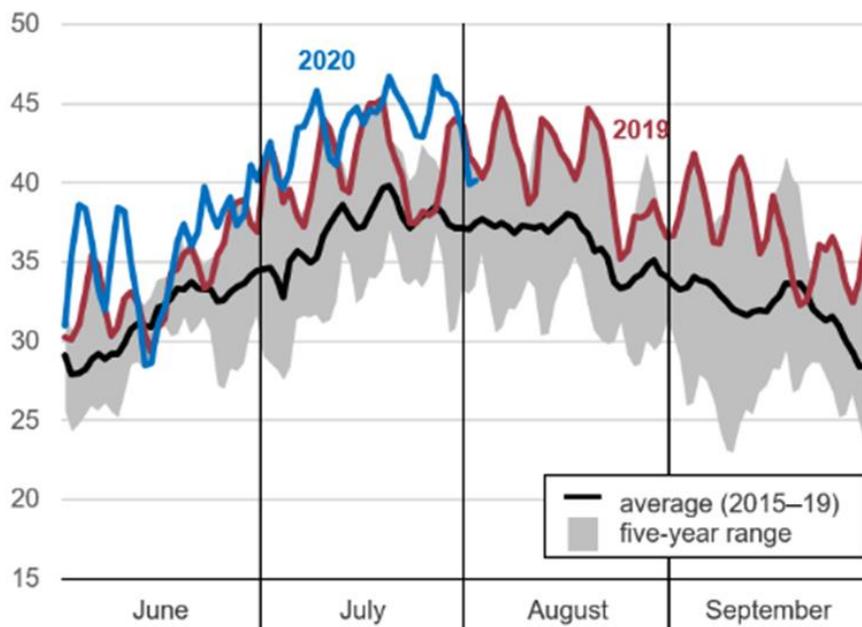
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2020



Year on year natural gas consumption for electric power has been higher than recent years notwithstanding Covid-19.

Figure 9: Natural Gas Consumption for Electric Power (Source: EIA)

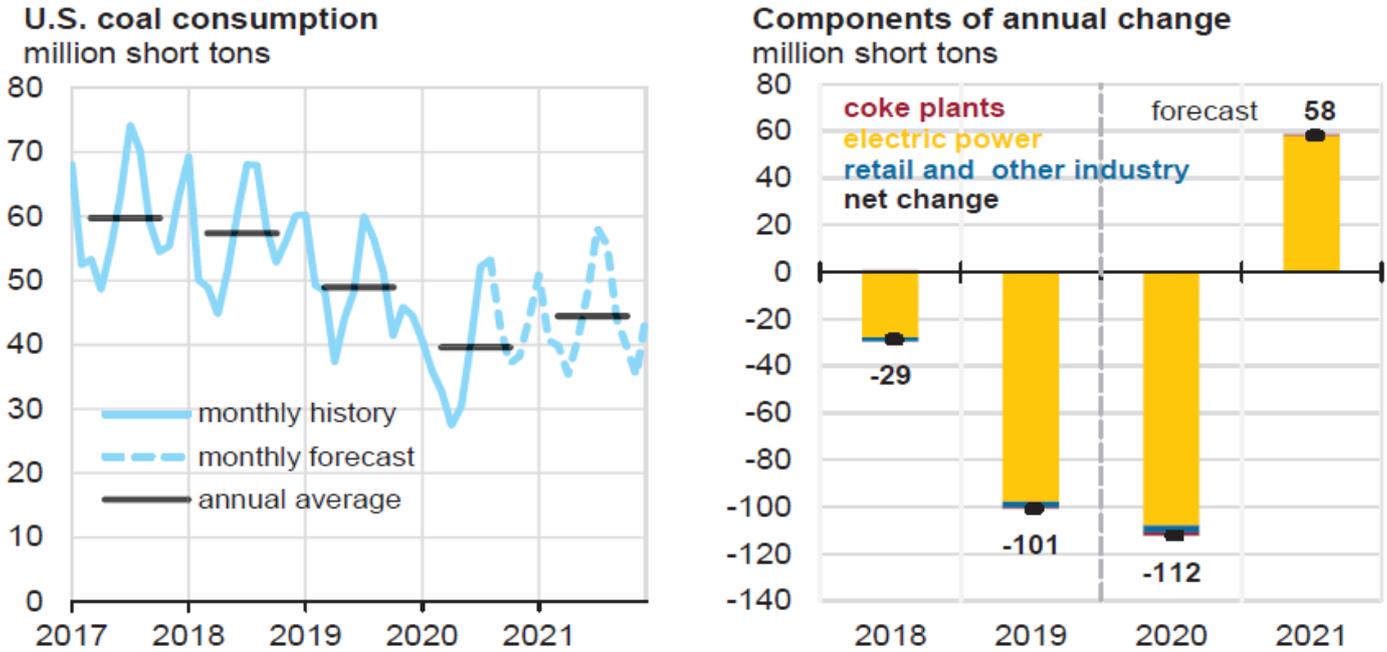
Natural gas consumption for electric power billion cubic feet per day



Source: S&P Global Platts

As has been noted in recent monthly reports, growth in natural gas power demand is primarily due to price induced switching from coal. The projected fall in natural gas consumption in 2021 is driven by an increase in demand for coal, as higher gas prices prompt electricity producers to return to coal.

Figure 10: US Coal Consumption (Source: EIA)

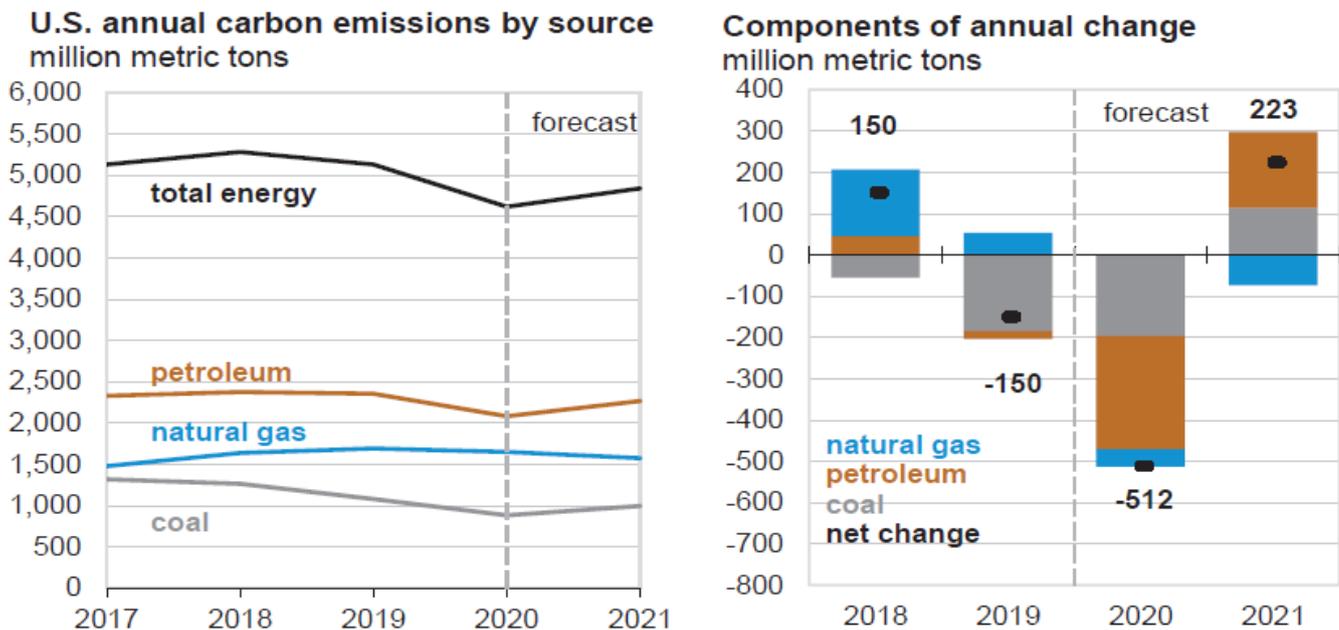


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2020



The decline in coal use, replaced by natural gas, has been a key driver in the reduction of US carbon emissions.

Figure 11: US Annual Carbon Emissions by Source (Source: EIA)



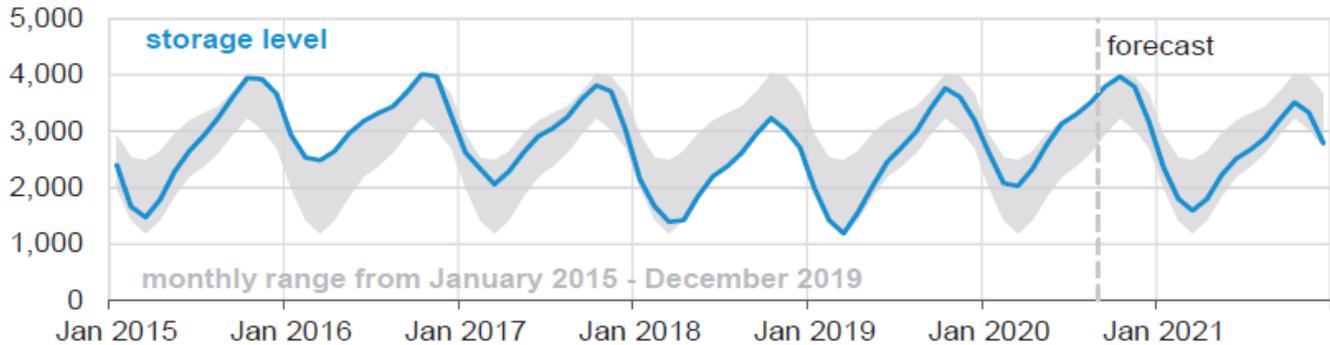
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2020



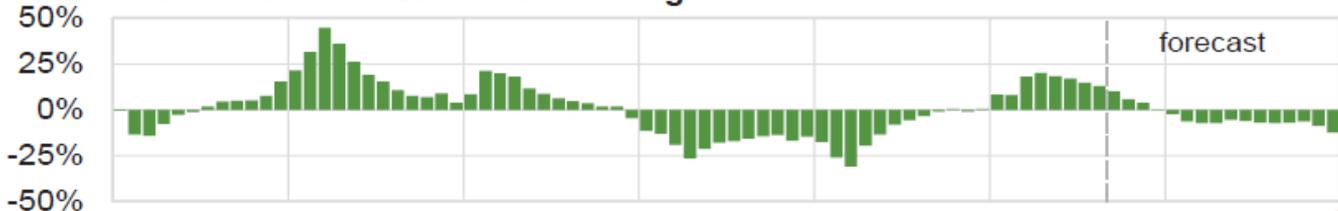
Gas in storage is at the top of 5-year range, though is well within maximum capacity limits and is forecast to be at lower end of 5-year average by the end of the upcoming winter heating season.

Figure 12: US Working Gas in Storage (Source: EIA)

U.S. working natural gas in storage billion cubic feet



Percent deviation from 2015 - 2019 average



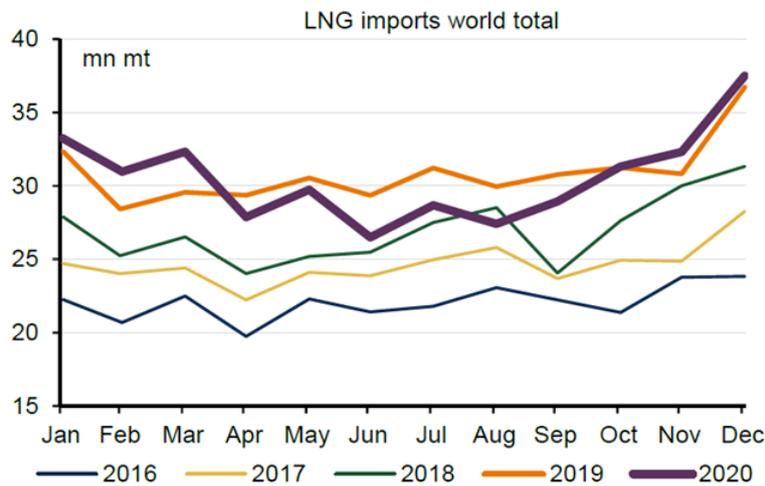
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2020



After reaching an all-time high volume of 8.7bcf/d in February, US LNG demand dropped to 3.3bcf/d in July and 4.0bcf/d in August. By the end of August demand had increased to 5bcf/d. International gas prices have increased at a faster rate than US prices. On 17 August, the Asian LNG spot hit a 6-month high of \$3.80/mmbtu, up \$0.60 (or 19%) in a week. From October the gas price arbitrage for LNG, between US and the rest of the world, is wide open and we expect that the world will call on the maximum volume of US export capacity this winter. Tightening in the global LNG balance in winter should push Dec20 JKM prices (the Asian LNG benchmark), currently trading at \$5.10/mmbtu, above \$6/mmbtu.

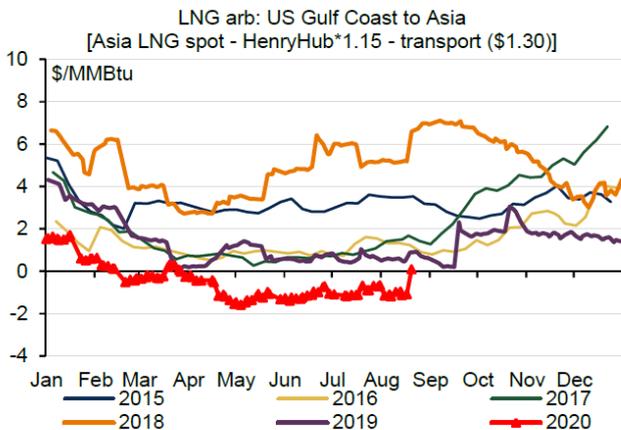
Figure 13: LNG Market Analysis (Source: BofA Global Research)

Chart 4: LNG demand should see the largest seasonal ramp up ever from 27 million ton in August to 37 million ton in December



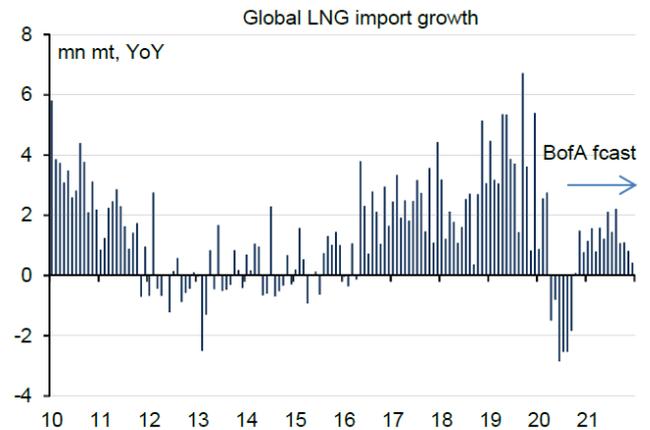
Source: Bloomberg, BofA Global Research

Chart 7: The depression in demand due to COVID-19 caused LNG export arbs to close...



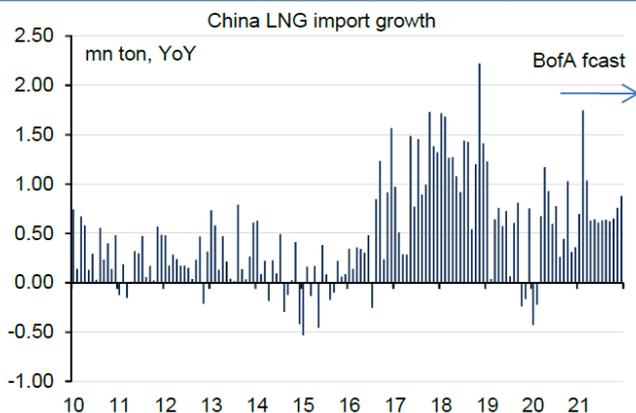
Source: Bloomberg, BofA Global Research

Chart 8: ...but we are about to witness the largest ever seasonal swing in LNG demand from summer to winter



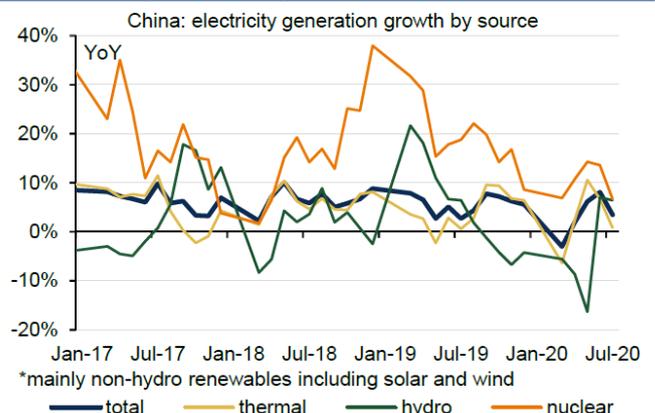
Source: Bloomberg, BofA Global Research estimate

Chart 9: Chinese import demand, which had contracted in Jan and Feb on the lockdown, rebounded relatively quickly in April through June...



Source: Bloomberg, BofA Global Research estimates

Chart 10: ...partly due to power generation, which has resumed its 5-10% annualized pre-COVID-19 growth rate



Source: CEIC

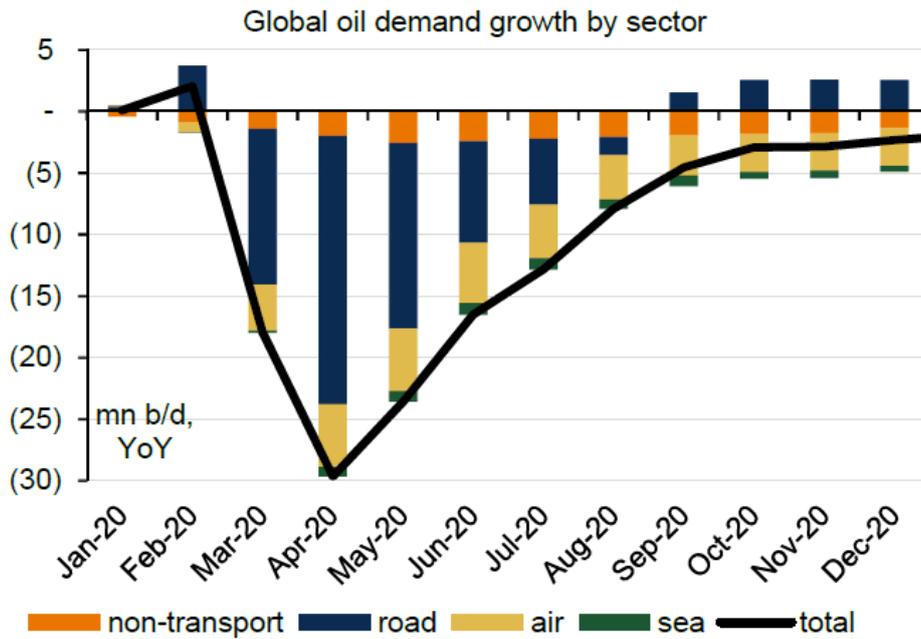
The aggregate balance between supply and demand for US natural gas suggests higher gas prices through to the end of 2021.

Oil Market

Global oil demand continues to recover after having fallen nearly 30mmbd year-on-year in April. Aviation activity remains extremely subdued.

Figure 14: Global Oil Demand Changes by Sector (Source: BofA Global Research)

Chart 1: The COVID-19 driven lockdowns pushed global oil demand down nearly 30mn b/d YoY in April...

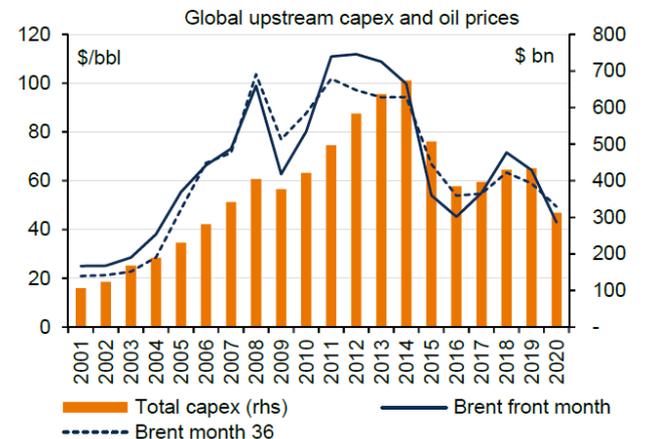


Source: BofA Global Research estimates

The collapse in demand has caused oil producers to slash upstream capex. Globally, capex is predicted to fall nearly 30% from more than \$430b in 2019 to \$310b in 2020. North American capex, which primarily flows into shale development, is set to fall by more than \$60b or nearly 40% from year-ago levels.

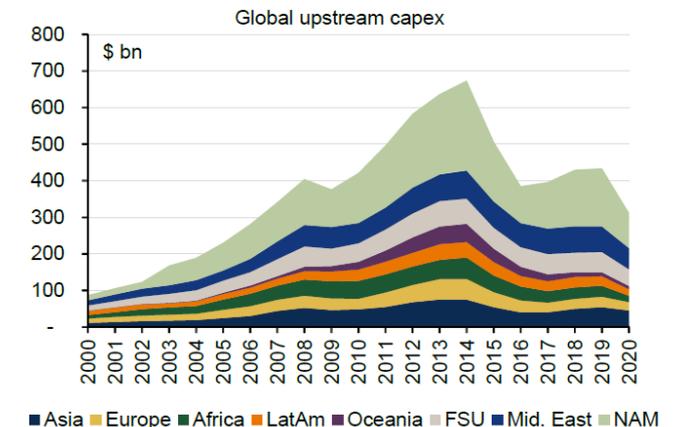
Figure 15: Upstream Oil Capex (Source: BofA Global Research)

Chart 3: Global upstream capex has tracked oil prices relatively well and is expected to decline by nearly 30% this year...



Source: Woodmackenzie

Chart 4: ...led by North America, where spending is expected to fall more than \$60bn YOY



Source: Woodmackenzie

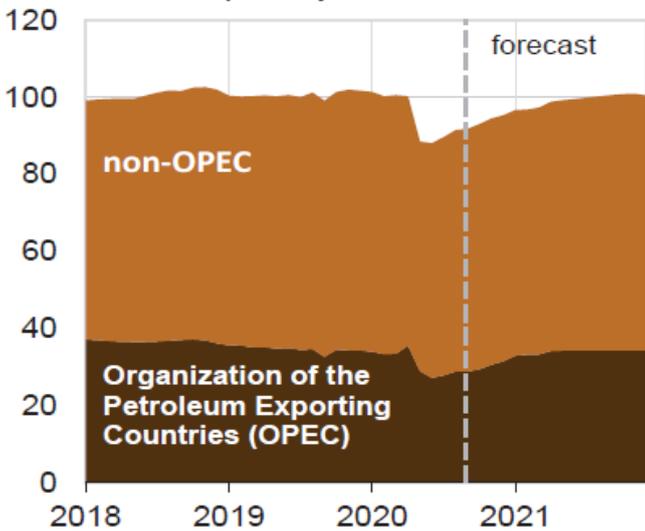
US rig count (Figure 2) and production (Figure 3) are the consequences of reduced capital expenditure.

The EIA STEO estimates that global liquid fuels production will average 91.8mmbbl/d in 2Q20, down 8.6mmbbl/d year-on-year. The decline reflects reductions in drilling activity by OPEC and partner countries (OPEC+) and production curtailments in the United States because of low prices. Supply is forecast to decline to 90.4mmbbl/d in 3Q20 before rising to an annual average of 99.4mmbbl/d in 2021.

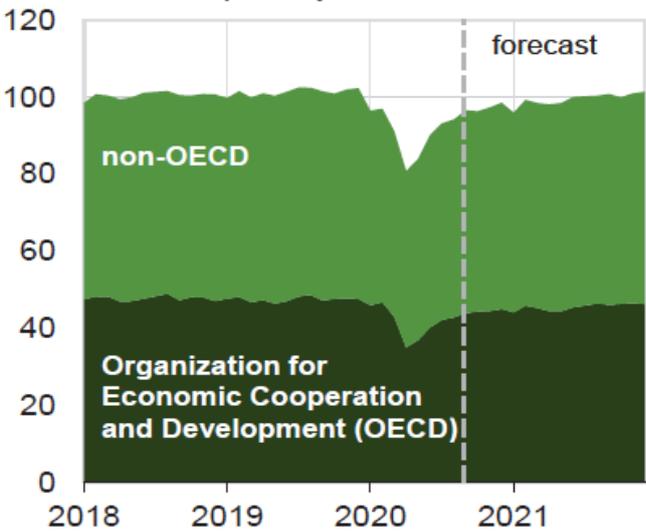
Demand for global petroleum and liquid fuels is estimated by the EIA to have averaged 93.4mmbbl/d in July. This is down 9.1mmbbl/d from July 2019 but up from an average of 85.0mmbbl/d in 2Q20. EIA forecasts that global petroleum and liquid fuels consumption will average 93.1mmbbl/d for all of 2020, down 8.1mmbbl/d from 2019, before increasing by 7mmbbl/d in 2021.

Figure 16: World Liquid Fuels Production and Consumption (source EIA)

World liquid fuels production million barrels per day



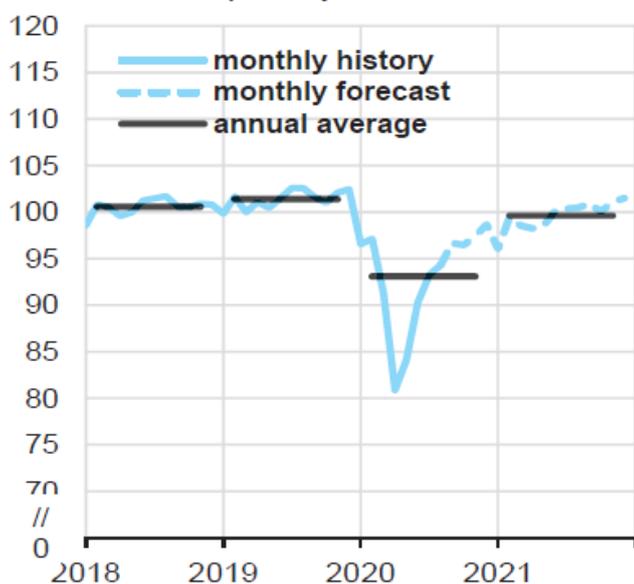
World liquid fuels consumption million barrels per day



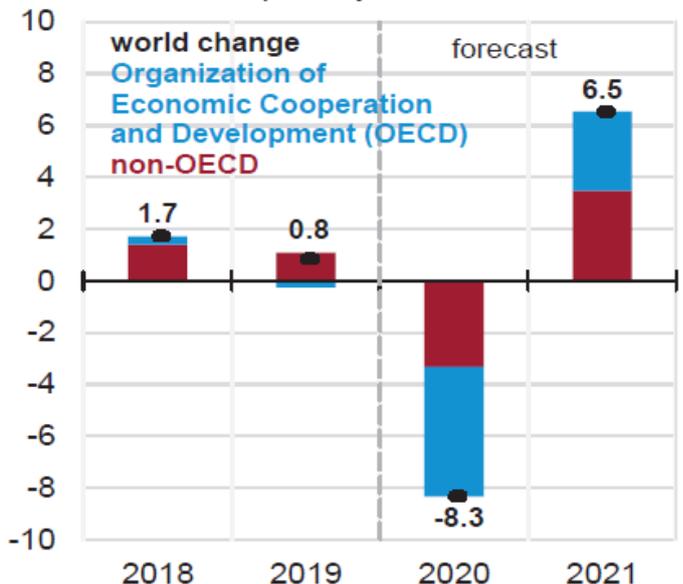
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2020



World liquid fuels consumption million barrels per day



Components of annual change million barrels per day

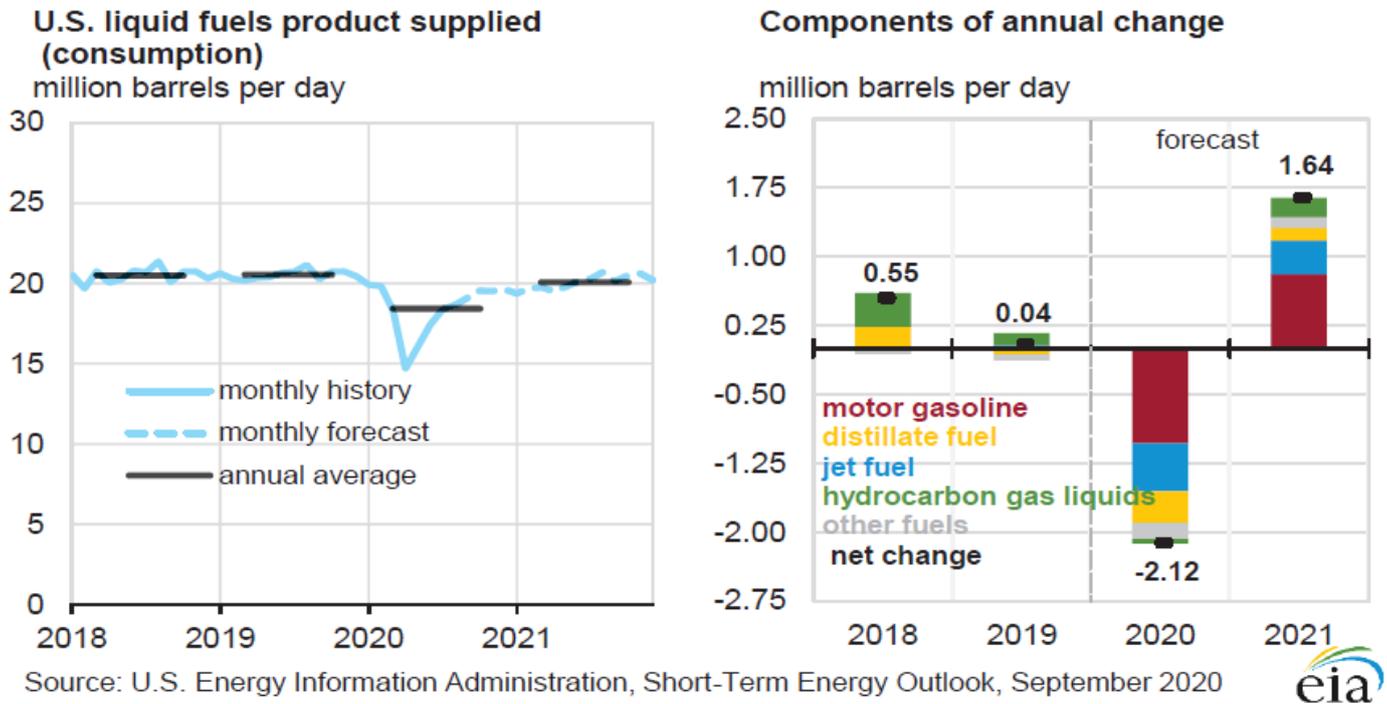


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2020



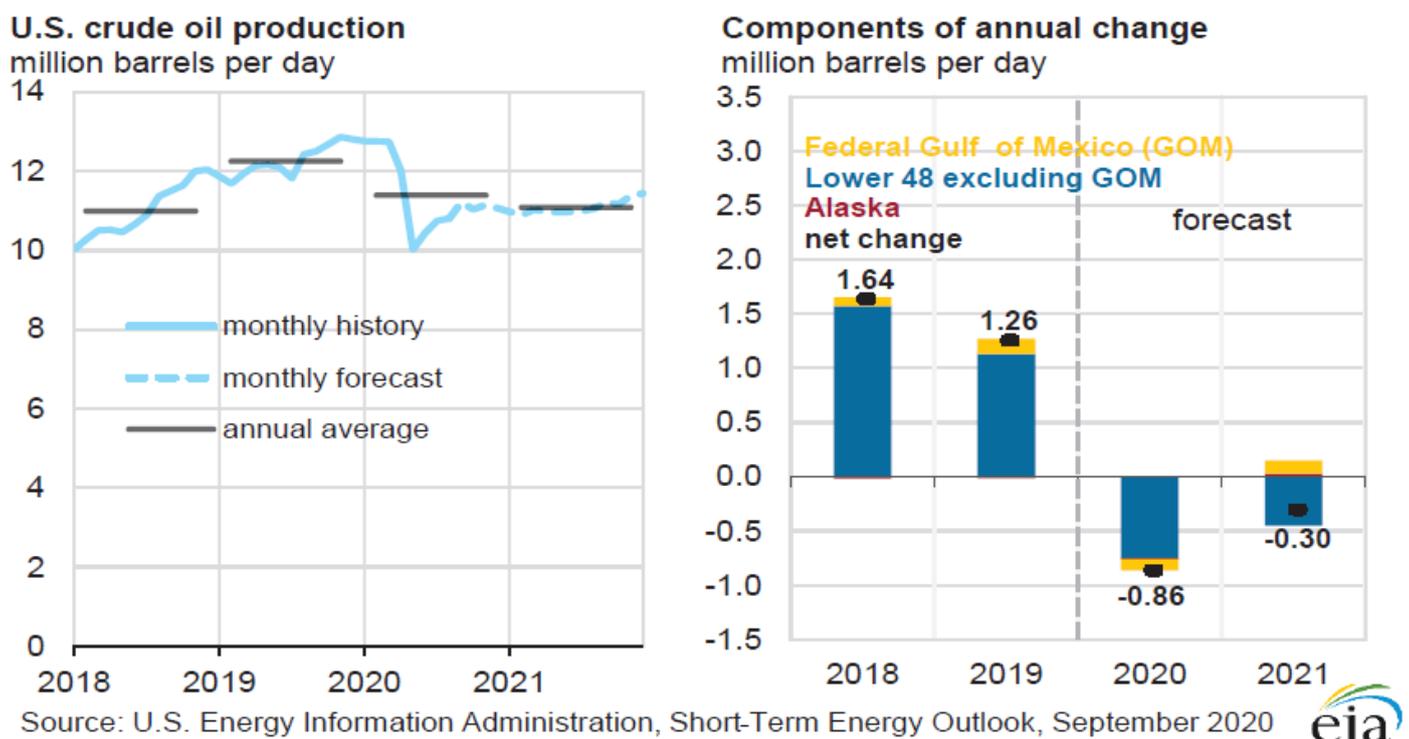
Travel restrictions and reduced economic activity related to Covid-19 mitigation efforts have induced a 4.1mmbbl/d reduction in US liquid fuels consumption in 2Q20 to 16.2mmbbl/d. The EIA forecasts that US liquid fuels consumption will generally rise through to the end of 2021.

Figure 17: US Liquid Fuels Consumption (source EIA)



The EIA expects US crude production to average 11.3mmbbl/d in 2020 and 11.1mmbbl/d in 2021, down from 12.2mmbbl/d in 2019. Recently released EIA data show that average monthly US oil production for May was 1.2mmbbl/d lower than the July STEO forecast, indicating more extensive production curtailments than previously estimated.

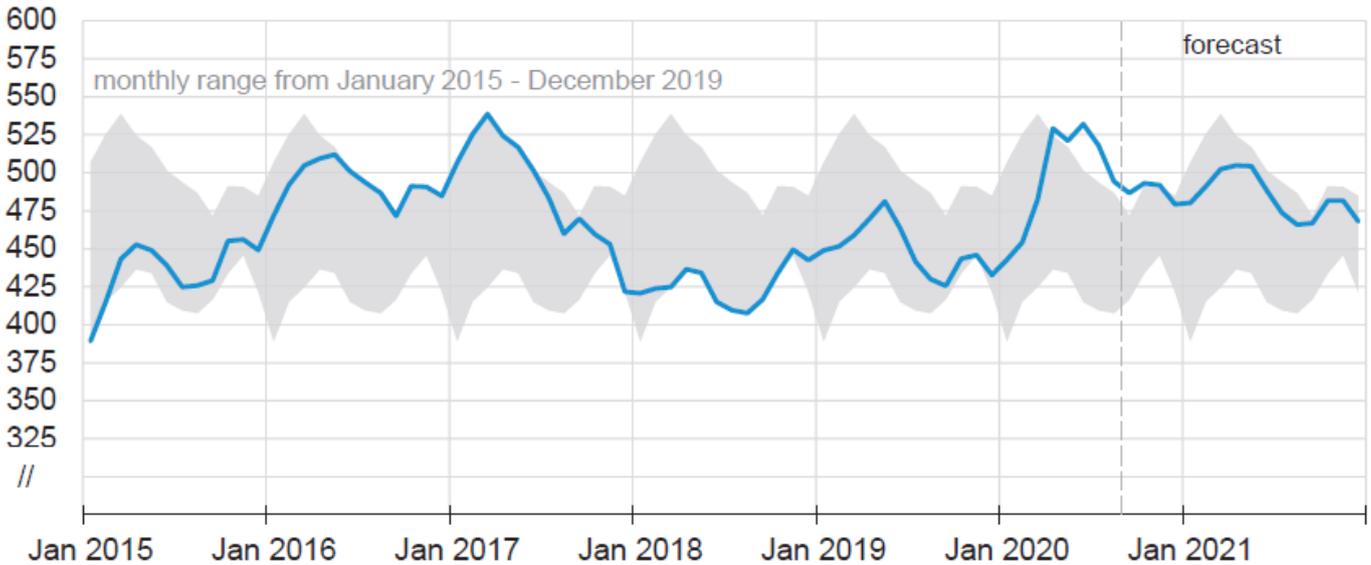
Figure 18: US Liquid Fuels Production (source EIA)



US crude inventories are currently above the 5-year maximum although well down from pandemic peak in May. Inventories are forecast to continue their decline through to the end of 2021.

Figure 19: US Commercial Crude Inventories (source EIA)

U.S. commercial crude oil inventories million barrels



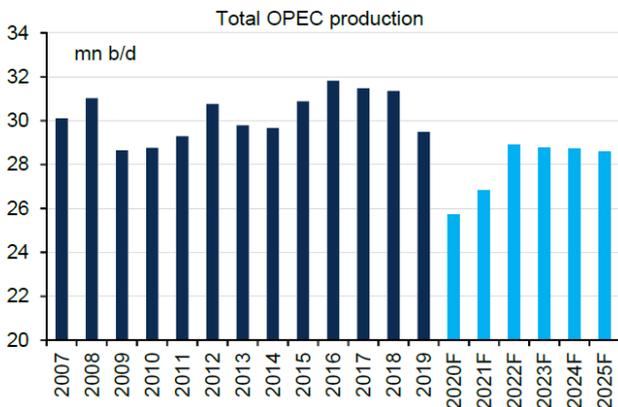
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, September 2020



OPEC+ producing countries have started to increase supply with 1.5mmbbl increase in July. Bank of America estimates that OPEC production will average 26mmbbl in 2020 and 29mmbbl in 2021. Global supply growth is expected to average 300mmbbl year-on-year from 2020 to 2025.

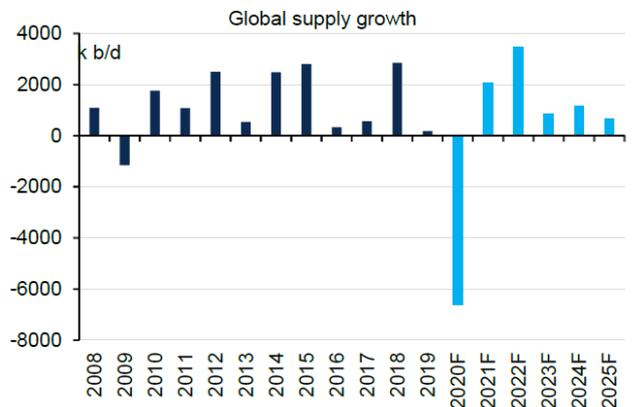
Figure 20: OPEC Crude Supply (source BoA)

Chart 27: OPEC output should rebound from around 26mn b/d on average in 2020 to roughly 29mn b/d in 2022



Source: BofA Global Research estimates

Chart 28: Global supply growth should average roughly 300k b/d YoY during 2020-25

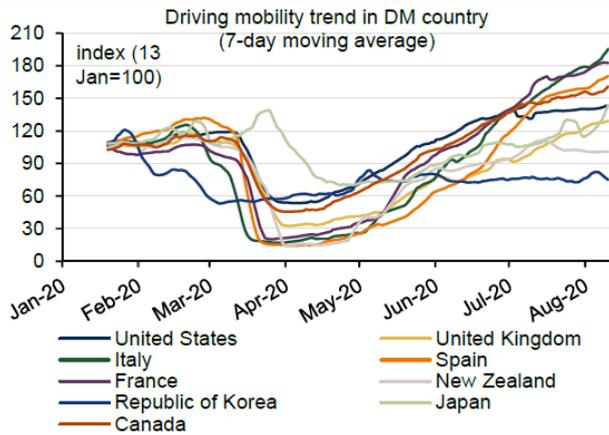


Source: BofA Global Research estimates

Reduced mobility, particularly reduced air-travel, has driven demand losses. Mobility is now firmly on the rise in most jurisdictions.

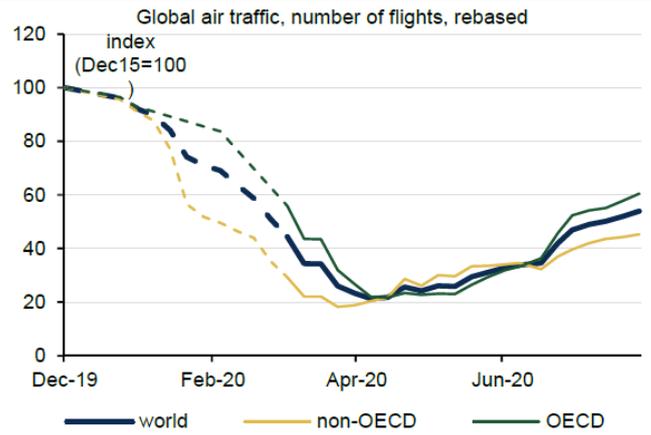
Figure 21: Driving Mobility and Air Travel (source BoA)

Chart 21: Much of the dislocation in petroleum product inventories is linked to subdued mobility...



Source: Apple Mobility Report

Chart 22: ...and in particular to the huge disruption to air travel created by the coronavirus

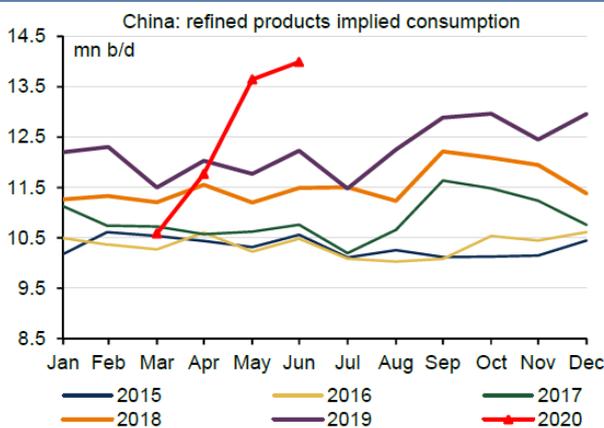


Source: Bloomberg, BofA Global Research

Oil demand in both China and India has rebounded. China demand is particularly strong.

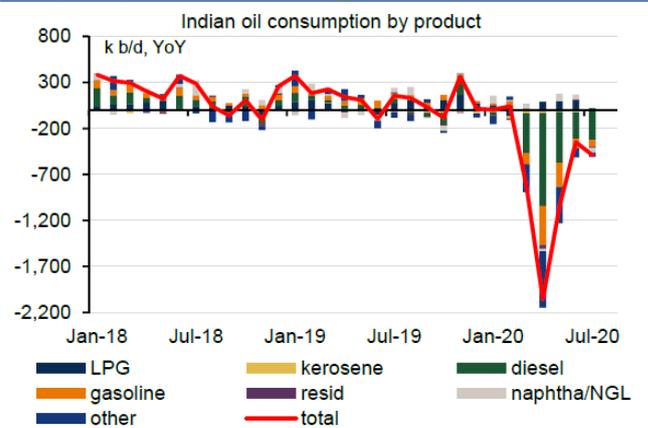
Figure 22: China and India Crude Demand (source BoA)

Chart 23: Having said that, there are bright pockets of oil demand, with Chinese implied demand roaring...



Source: CEIC, BofA Global Research

Chart 24: ...and Indian fuel consumption making a stellar comeback from the abyss on gasoline and other fuels



Source: PPAC, BofA Global Research

Car sales have also been increasing as consumers perceive private vehicles to be safer than public transport.

Figure 23: Car Sales and Transport Safety Perception (source BoA)

Chart 25: Car sales across all major markets have been coming back quickly, led by China...

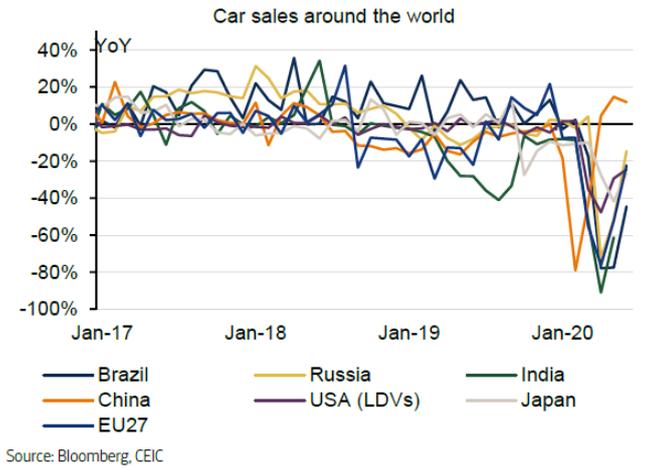
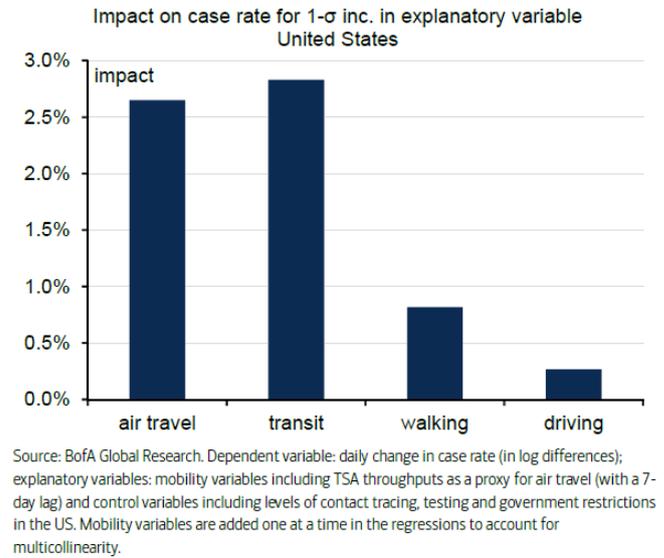


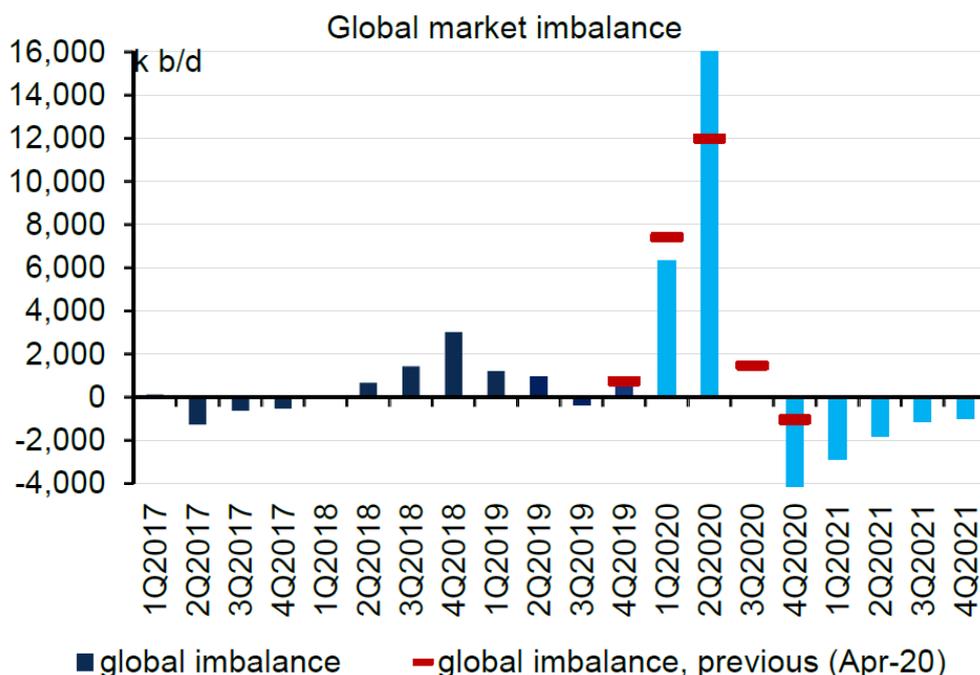
Chart 26: ...as consumers perceived private vehicles to be safer than public transport



The looming supply deficit should provide support to oil prices from early 2021.

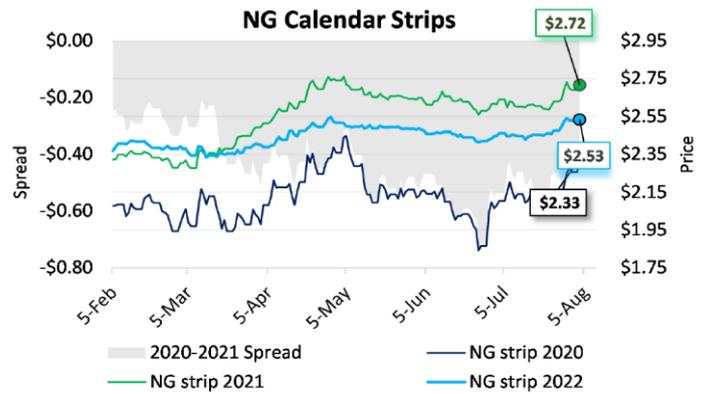
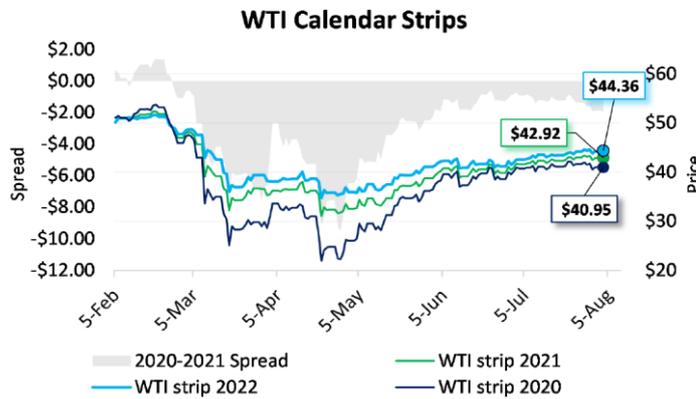
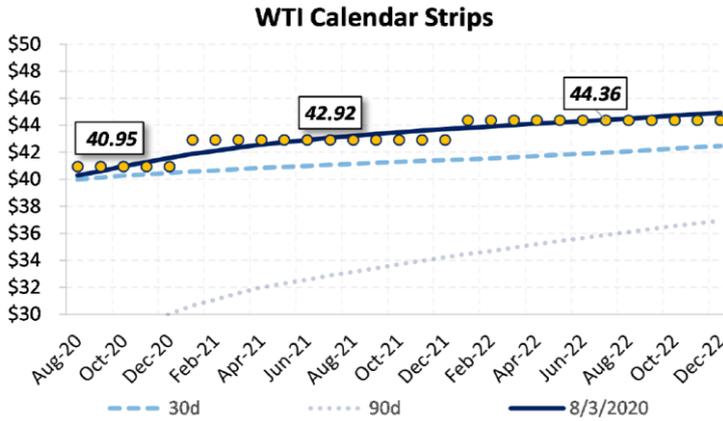
Figure 24: Global Market Imbalance (source BoA)

Chart 6: ...and we have been projecting a substantial deficit heading into 4Q20



Source: IEA, BofA Global Research estimates

Gas and Oil Prices 3 August 2020



Swap Pricing

	Bal 20	Cal 21	Cal 22	Cal 23
NYMEX WTI Crude	\$ 40.95	\$ 42.92	\$ 44.36	\$ 45.44
ICE Brent Crude	\$ 44.24	\$ 46.41	\$ 48.39	\$ 50.04
Light Louisiana Sweet	\$ 42.39	\$ 44.04	\$ 45.17	\$ 46.26
TM Midland Differential	\$ 0.09	\$ 0.38	\$ 0.50	
NYMEX Natural Gas	\$ 2.33	\$ 2.72	\$ 2.53	\$ 2.46

Source: Bloomberg LP

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

Natural Gas Basis

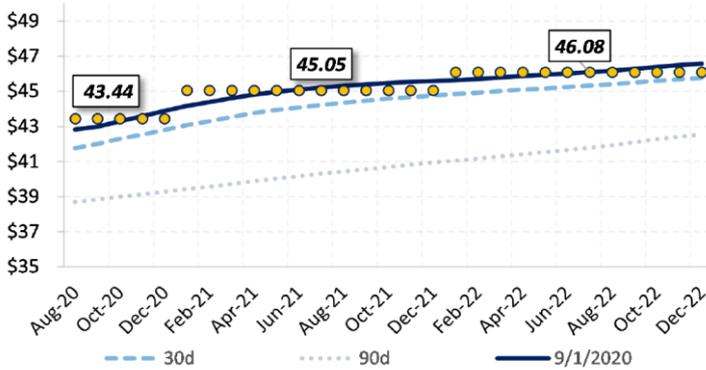
Location	Spot	Summer '20	Winter '20/'21	Summer '21
Henry Hub Fixed	\$1.75	\$1.88	\$2.76	\$2.60
NWRox	\$ (0.05)	\$ (0.29)	\$ (0.24)	\$ (0.40)
MichCon	\$ (0.16)	\$ (0.25)	\$ (0.17)	\$ (0.21)
NGPL-Midcon	\$ (0.23)	\$ (0.30)	\$ (0.29)	\$ (0.34)
TETCO M3	\$ (0.24)	\$ (0.47)	\$ 1.13	\$ (0.35)
Dominion S	\$ (0.57)	\$ (0.74)	\$ (0.45)	\$ (0.52)
TETCO M2	\$ (0.61)	\$ (0.76)	\$ (0.43)	\$ (0.52)
Waha	\$ (1.27)	\$ (0.50)	\$ (0.41)	\$ (0.44)

All prices as of close yesterday

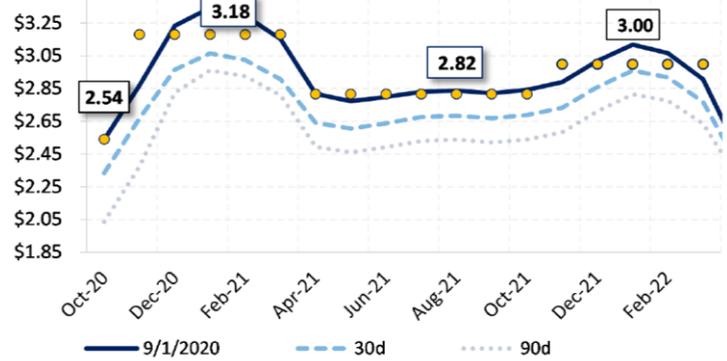


Gas and Oil Prices 1 September 2020

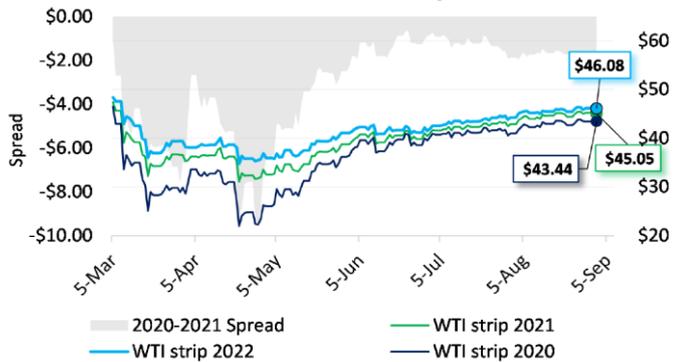
WTI Calendar Strips



NG Seasonal Strips



WTI Calendar Strips



NG Calendar Strips



Swap Pricing

	Bal 20	Cal 21	Cal 22	Cal 23
NYMEX WTI Crude	\$ 43.44	\$ 45.05	\$ 46.08	\$ 47.05
ICE Brent Crude	\$ 46.27	\$ 48.19	\$ 49.85	\$ 51.23
Light Louisiana Sweet	\$ 44.90	\$ 46.63	\$ 47.66	\$ 48.50
TM Midland Differential	\$ 0.07	\$ 0.35	\$ 0.45	
NYMEX Natural Gas	\$ 2.88	\$ 2.95	\$ 2.63	\$ 2.50

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	\$2.46	\$2.63	\$3.20	\$2.81
NWRox	\$ (0.03)	\$ (0.42)	\$ (0.22)	\$ (0.40)
MichCon	\$ (0.26)	\$ (0.44)	\$ (0.16)	\$ (0.22)
NGPL-Midcon	\$ (0.28)	\$ (0.40)	\$ (0.29)	\$ (0.33)
Waha	\$ (0.78)	\$ (0.90)	\$ (0.42)	\$ (0.37)
Dominion S	\$ (1.05)	\$ (1.45)	\$ (0.51)	\$ (0.58)
TETCO M3	\$ (1.10)	\$ (1.13)	\$ 0.95	\$ (0.48)
TETCO M2	\$ (1.41)	\$ (1.52)	\$ (0.51)	\$ (0.59)

All prices as of close yesterday