



# Longreach Energy Holdings LLC

## FIRM INFORMATION

### Investment Manager

Longreach Alternatives Ltd  
ABN 25 082 852 364  
AFSL 246747

### Sub-Advisor

Longreach Energy Holdings LLC  
Delaware registered #565928

## KEY INVESTMENT PERSONNEL

### Andrew Sinclair

Principal – Commercial Director

### Thomas Wagenhofer

Principal – Technical Director

## 1. Market and Macro Industry Commentary

### General Market Commentary

US Henry Hub gas prices fell in September, traditionally a month with comfortable weather and therefore low heating or cooling induced gas demand. The prompt contract fell from \$9.13/mmbtu at close of business on 31 August to \$6.77/mmbtu at close on 30 September. Calendar 2022 fell from \$8.25/mmbtu to \$6.96/mmbtu over the same period.

Oil prices continued to fall on Recession fears and a strong US dollar. The prompt opened September at \$89.55/bbl and closed the month at \$79.49/bbl. Calendar 2022 fell from \$88.09/bbl to \$78.99/bbl.

Throughout the third quarter of this year market liquidity has fallen, volatility has risen and investor confidence in the bullish general commodity outlook has evaporated. Commodity indices are now c. 25% below their June highs. This material repricing was driven by a weaker cyclical outlook due to US Federal Reserve rate increases, a contracting EU economy and rolling Chinese lockdowns.

Yet even as demand slows there has been little inventory relief as the structural low-supply story has only strengthened (RHS Figure 1). Crucially, there has been significant divergence between regional prices for commodities denominated in local currencies. Commodities in Japanese Yen are up 51% ytd, while in USD are only up 22% (LHS Figure 1).

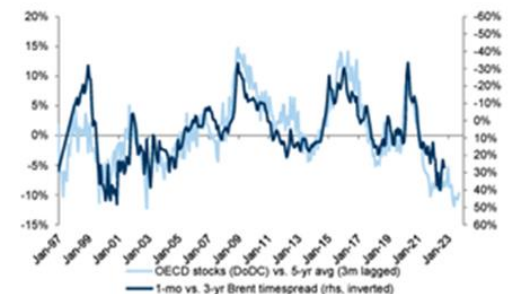
Figure 1: Local Currency Commodity Prices and OECD Inventories (Source: various, via GS)

**Exhibit 1: Commodities in JPY have outperformed the dollar denominated S&P500 GSCI TR index**  
Jan 2022 = 1



Source: Bloomberg, Goldman Sachs Global Investment Research

**Exhibit 2: Despite all the fundamental headwinds this year, inventories remain at record lows in OECD...**  
OECD commercial stocks in days of OECD demand coverage vs. 5-yr avg (lhs) vs. 1-mo to 3-yr Brent timespreads (%), rhs, inverted). Balances shown pre- and post- price changes required to normalise stocks by end-23.



Source: IEA, ICE, Goldman Sachs Global Investment Research

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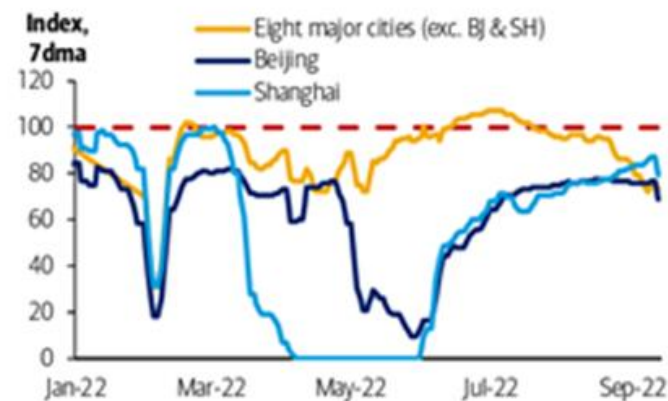


In China, zero-Covid policies continue to severely depress internal mobility (LHS Figure 2) and the property sector, a major component of economic activity, remains very depressed (RHS Figure 2). Government policies will be influential drivers of Chinese energy demand over coming months.

Figure 2: Chinese Mobility and Property Transactions (Source: various, via BofA)

## Exhibit 20: Daily subway rides: Beijing, Shanghai & 8 major cities

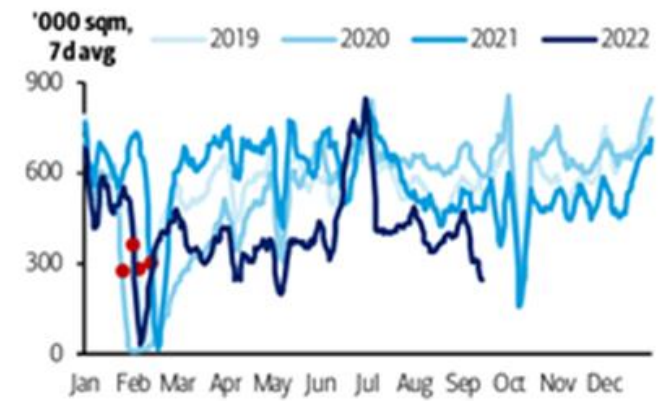
Daily subway rides across China's eight major cities is at the lowest point since May



Source: Wind, Note: 100 represents benchmark (subway volume in Dec 2019); data as of Sep 12  
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## Exhibit 21: Property transaction in 30 major cities

Chinese investment in real estate remains very depressed, but some help could be on the way



Source: Wind, Note: Red dots indicate Lunar New Year (LNY) in each year; data as of Sep 13  
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Looking at global energy supply, price signals in gas and oil are starting to work as evidenced by investment in global oil and gas increasing by \$70bn in 2022 over 2021. However, total capex remains significantly lower than the 15-year average (LHS Figure 3). This is illustrated by updated comparison of global non-OPEC rig count and prices – investment is now a lot less sensitive to prices than it was in the decade from 2010 to 2020 (RHS Figure 3).

Figure 3: Global Upstream Capex and Non-OPEC Rig Count vs Prices (Source: WoodMac, Bloomberg via BofA)

## Exhibit 26: Global upstream capex

Looking at global oil and gas capex, we note that investment has picked up by \$70bn this year...

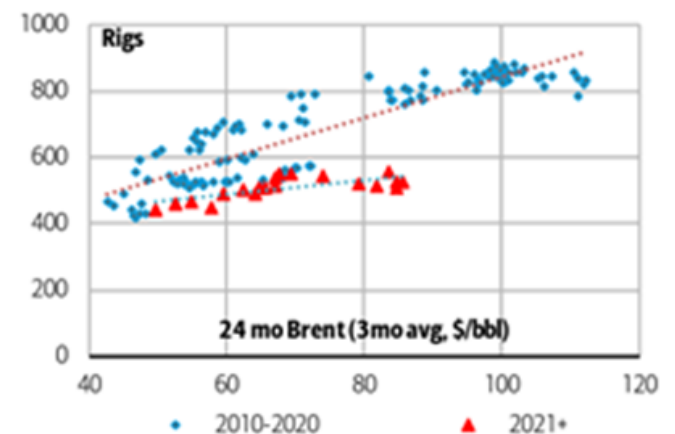


Source: Woodmac

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## Exhibit 27: Non-OPEC rig count and oil prices

...although the global non-OPEC is now a lot less sensitive to prices than it used to be



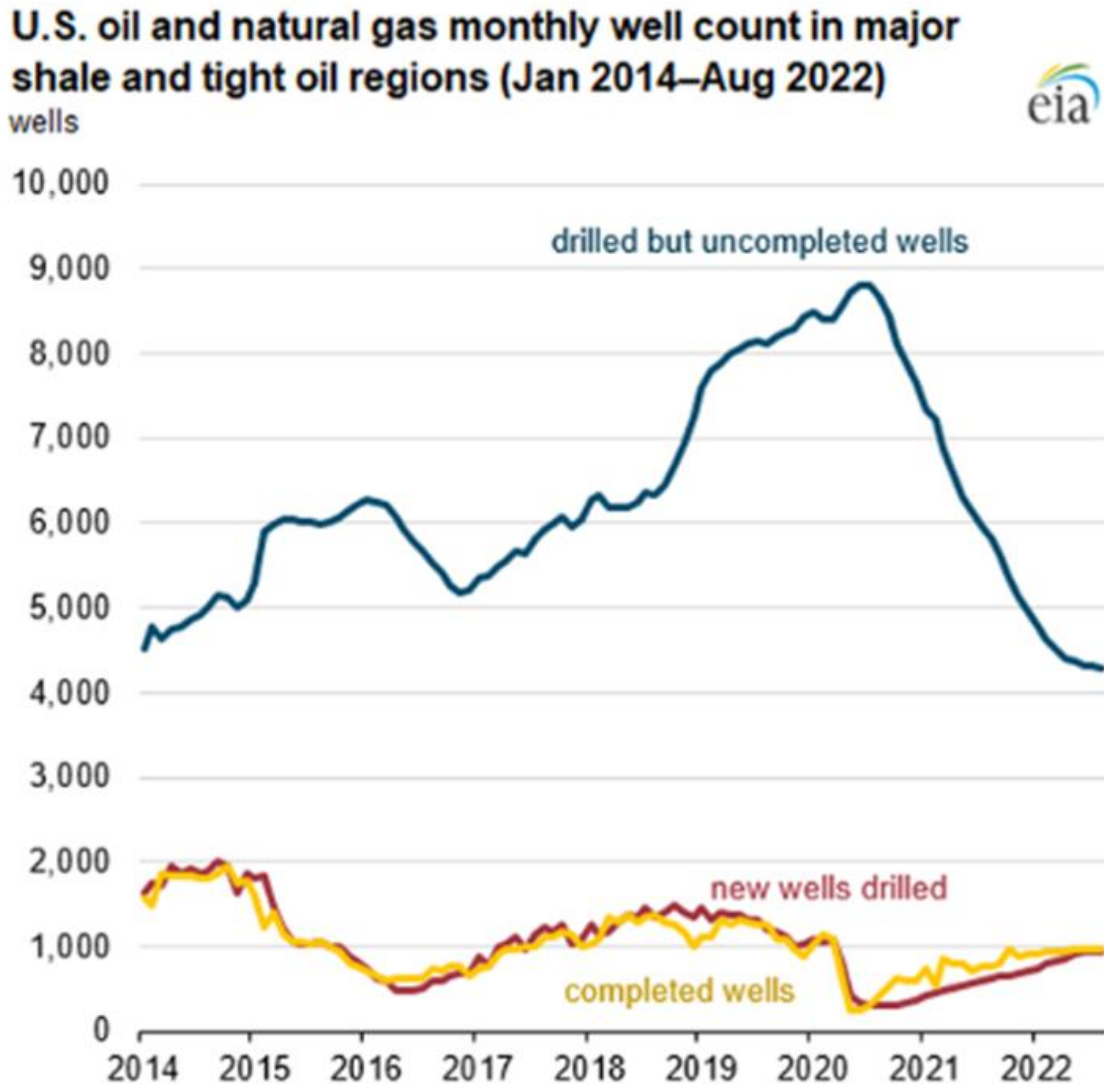
Source: Bloomberg, BofA Global Research

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In the US, the drilled but uncompleted (DUC) well count has declined from a peak of over 8,800 in June 2020 to 4,283 in August 2022 (Figure 4). The peak was a reaction to reduced petroleum product demand, resulting from the outbreak of Covid-19, as oil and natural gas producers halted new well completions to wait for recovery in prices.

As prices have increased, limited access to new investment capital has given oil and natural gas producers cause to focus spending mostly on existing operations. We expect that drilling and completion activity will now start to balance out with DUC inventory remaining at or about current levels over the new few quarters.

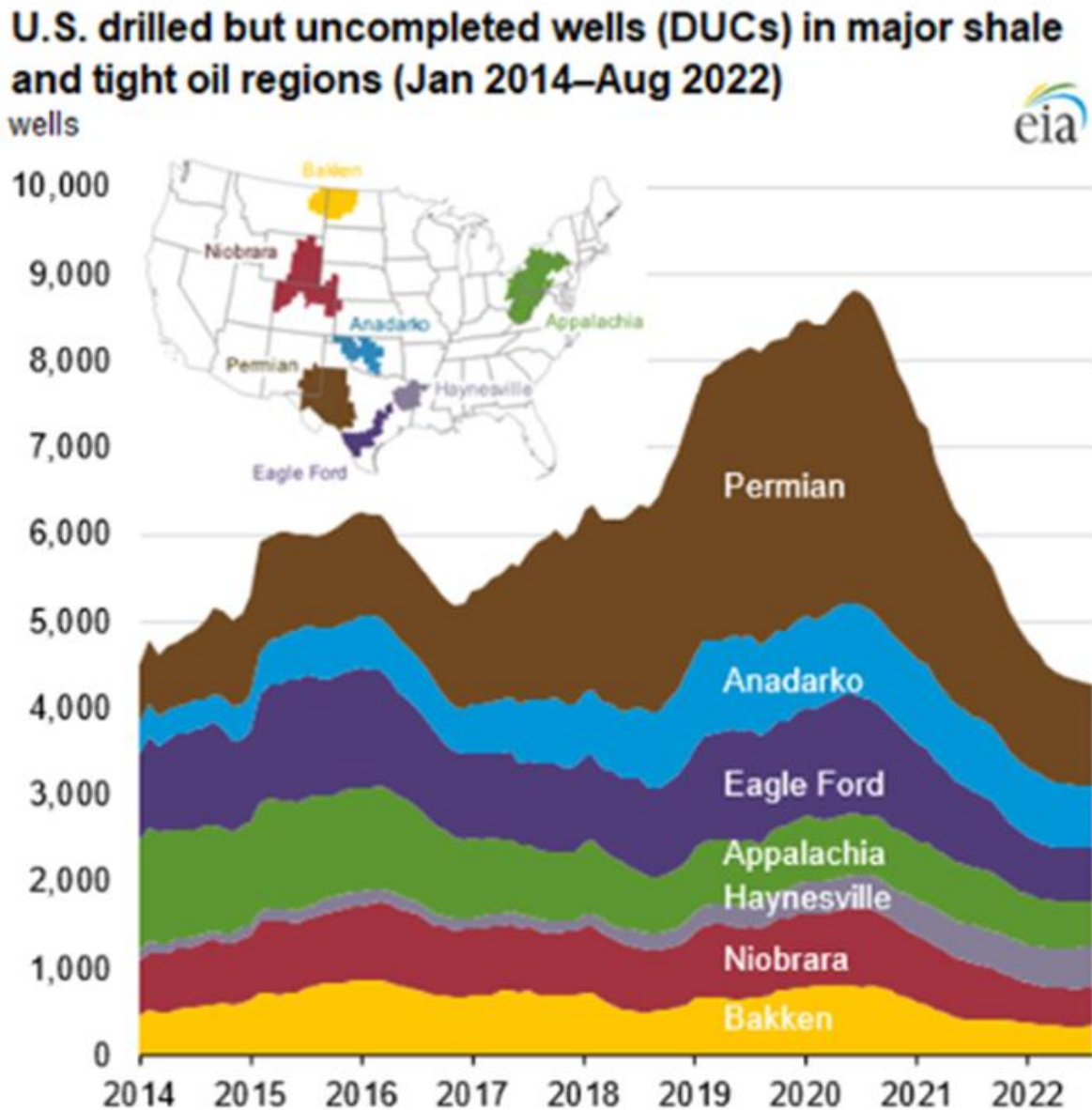
Figure 4: US Rig Count (Source: EIA)



Data source: U.S. Energy Information Administration, *Drilling Productivity Report* (DPR), September 2022

Regionally, the decline in DUCs has been highest in the Permian. Only the Haynesville, dry gas production in East Texas and North Louisiana, has recorded a modest rise of approximately 100 DUCs since the second quarter of 2020 as drilling has kept pace with completions (Figure 5).


Figure 5: US DUC Inventory by Producing Basin (Source: EIA)



Data source: U.S. Energy Information Administration, *Drilling Productivity Report* (DPR), September 2022

The latest Baker Hughes rig count data follows. In September US total rigs rose by 2 from 760 to 762. Oil rigs rose by 6 from 596 to 602 while gas rigs fell by 4 from 162 to 158.

Baker Hughes rig count

Baker Hughes 

Rotary Rig Count

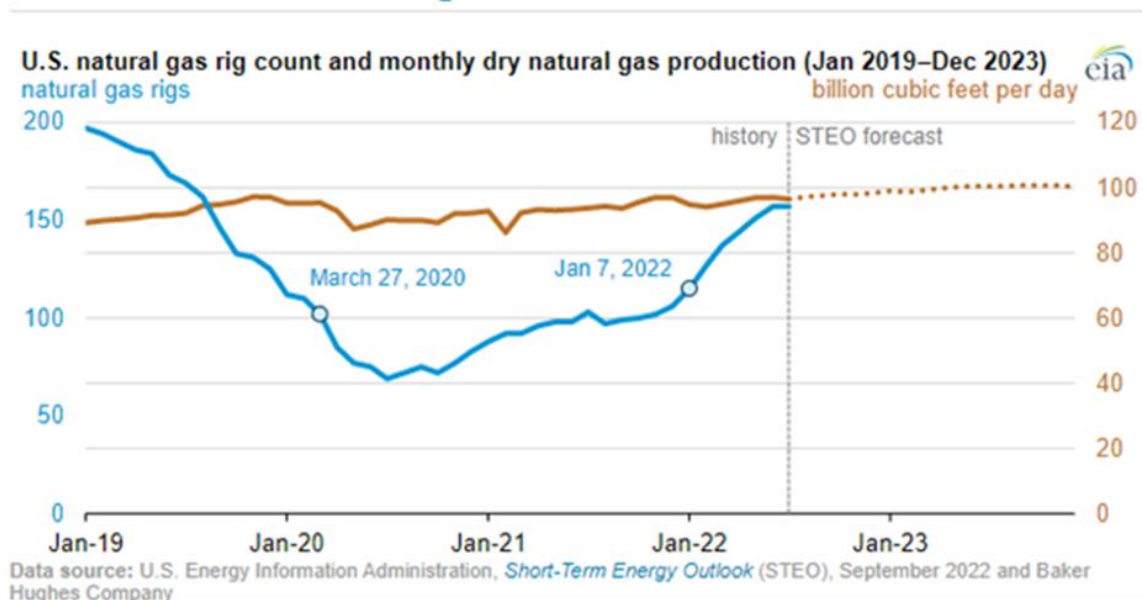
10/7/22

Location	Week	+/-	Week Ago	+/-	Year Ago
Land	746	1	745	226	520
Inland Waters	3	-1	4	1	2
Offshore	13	-3	16	2	11
United States Total	762	-3	765	229	533
Gulf Of Mexico	12	-3	15	2	10
Canada	215	2	213	48	167
North America	977	-1	978	277	700
U.S. Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	602	-2	604	169	433
Gas	158	-1	159	59	99
Miscellaneous	2	0	2	1	1
Directional	41	-5	46	19	22
Horizontal	698	2	696	215	483
Vertical	23	0	23	-5	28

The recovery in natural gas rig-count has seen the number of operating gas rigs exceed the level immediately preceding the pandemic (Figure 6). The low of 68 rigs on 24 July 2020 was the fewest in Baker Hughes's historical data back to 1987. At the onset of the pandemic, 31 January 2020 – when the US Department of Health and Human Services first declared a public health emergency related to Covid-19 – Baker Hughes reported that 112 natural gas rigs were operating in the United States.

Figure 6: US Natural Gas Rig Count and Monthly Dry Gas Production (Source: Baker Hughes, EIA)

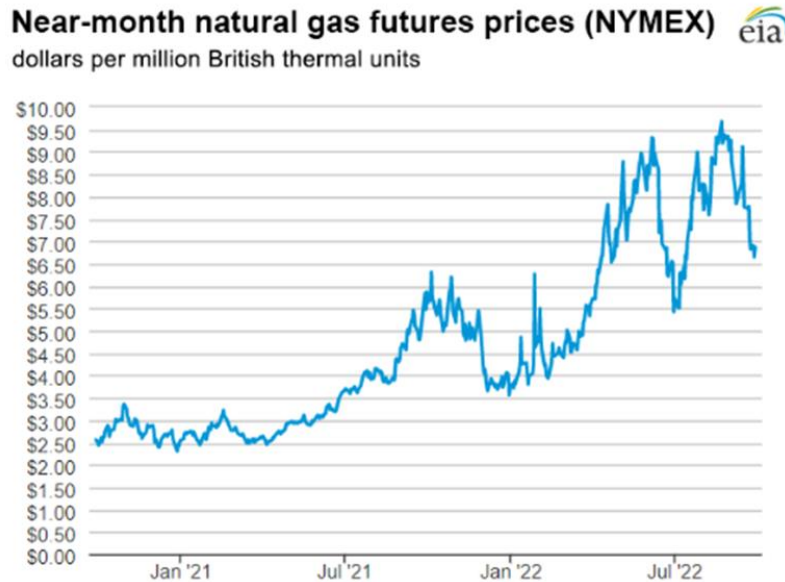
## More natural gas rigs are now operating in the United States than before the pandemic



## Gas Market

Prompt Henry Hub gas futures fell in September, historically a month of lower gas demand, driven by comfortable temperatures and strong production (Figure 7).

Figure 7: Near Month Henry Hub Futures (Source: EIA)

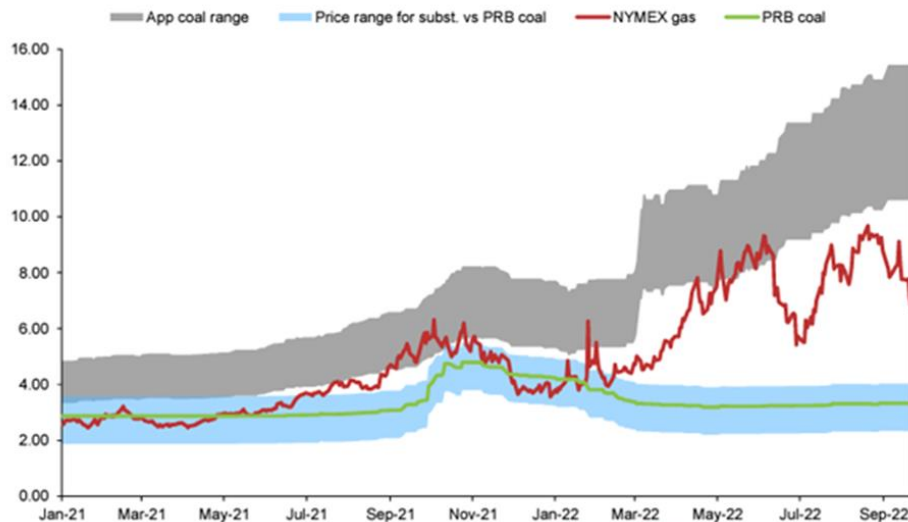


Data source: CME Group as compiled by Bloomberg, L.P.

US natural gas prices have exhibited exceptionally high volatility this northern summer driven not only by market events, such as LNG outages and shifts in weather and production, but also by the inability of supply and demand to balance in response to the resulting price moves. The ability of power stations to switch fuel between coal and gas has historically been the most important price balancing mechanism. Rockies' Powder River Basin (PRB) coal is the cheapest available in the US and gas prices above \$4/mmbtu are sufficient to make electricity generated from PRB coal cheaper than using gas. PRB coal is supply limited, the balance of US supply is provided by more expensive Appalachia coal, which requires gas prices of \$15/mmbtu to incentivise substitution (Figure 8).

Figure 8: US Gas Prices and Ranges to Encourage Coal Substitution (Source: Platts, CME via GS)

**Exhibit 1: Beyond \$4/mmBtu, which incentivizes max PRB coal burn, gas would need to rally well into the Appalachia coal range near \$15 to test incremental substitution vs coal**  
US gas prices and GS-estimated gas price ranges that would trigger substitution vs coal; \$/mmBtu



Source: Platts, CME, Goldman Sachs Global Investment Research



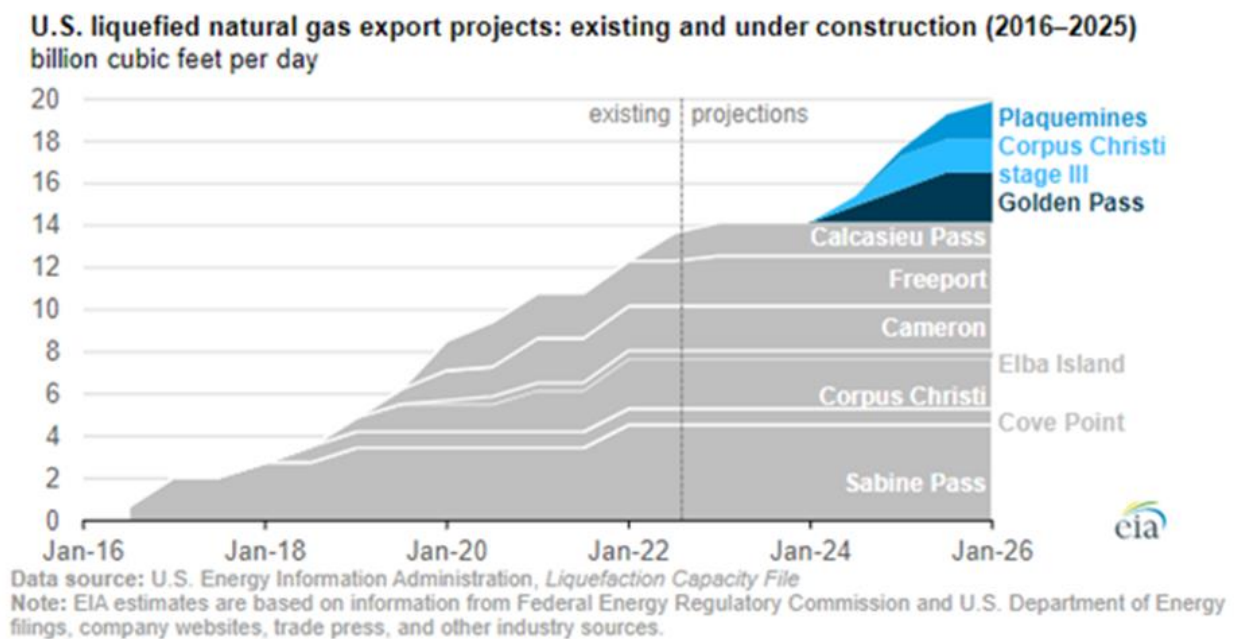
On the supply side, production response to prices has been slow given not only producer discipline, but also logistical bottlenecks – notably limited transport out of Appalachia, the largest gas producing basin, which have significantly moderated near-term elasticity of supply. Goldman Sachs believes that this has driven gas prices to embed a premium to the \$4 level that maximises substitution into PRB.

This premium is the market price of the probability that a cold winter will increase heating demand enough to drive Henry Hub prices up to the \$15/mmbtu level at which Appalachian coal can substitute for gas. Goldman estimates that it would take less than a one-standard-deviation colder-than-average winter to eliminate recent storage gains and drive gas prices higher so as to test gas-to-appalachia-coal substitution.

Over coming years LNG exports will be a key factor in US gas supply and demand. LNG export capacity is currently 14 bcf/d. Three new export facilities have recently commenced construction, these are expected to increase US LNG export capacity by a combined 5.7 bcf/d by 2025 (Figure 9). We could see some weakness in natural gas prices through 2023 and 2024 as the market prepares production capacity to cope with this additional LNG demand.

Figure 9: Capacity of US LNG Export Facilities (Source: EIA)

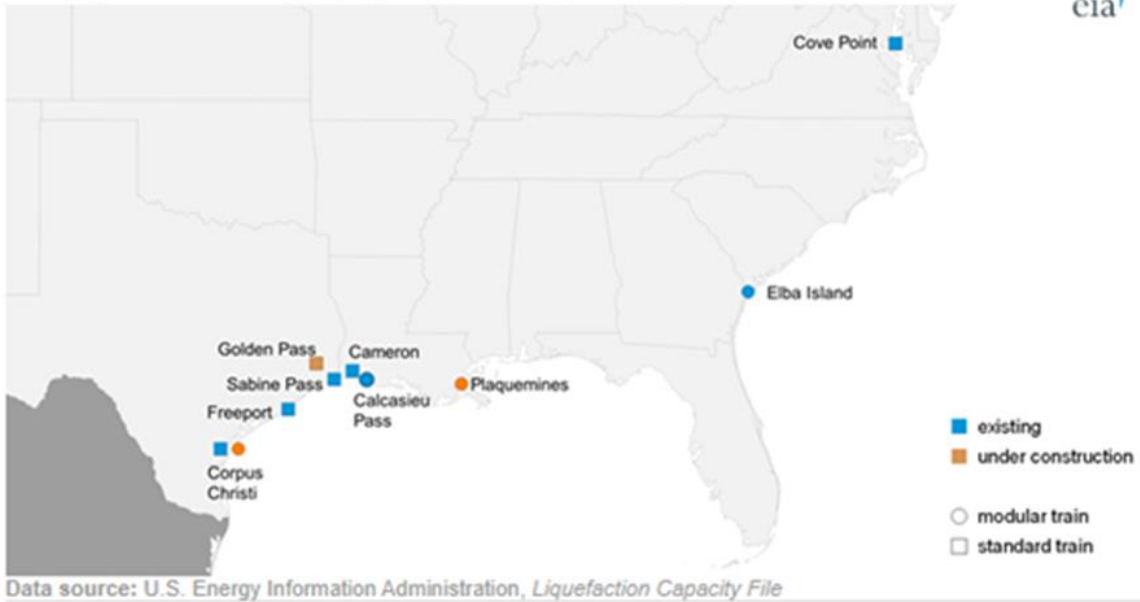
## U.S. LNG export capacity to grow as three additional projects begin construction



The Gulf Coast remains the focus of the LNG export industry (Figure 10). This is a driver of Longreach's focus on southern US gas production, hence we want to be close to the market.

Figure 10: Location of US LNG Export Facilities (Source: EIA)

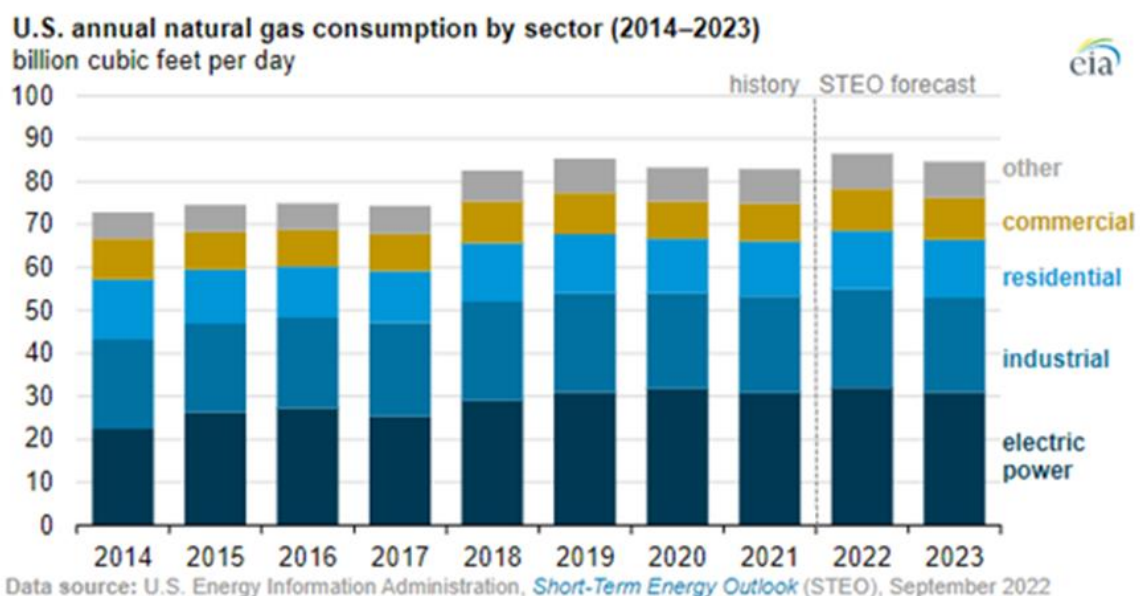
## U.S. liquefied natural gas projects (as of August 2022)



The EIA expects natural gas consumption in the US to increase by 3.6 bcf/d during 2022 to average 86.6 bcf/d for the year, the highest on record (Figure 11). Natural gas consumption is forecast to increase in all end-use sectors this year. The highest growth rate will be in the electric power sector, expected to grow by 4% in 2022 to 32.1 bcf/d, 1% above the then record growth set in 2021. The EIA notes that natural gas was crucial in meeting electricity demand peaks during record-high temperatures in summer 2022.

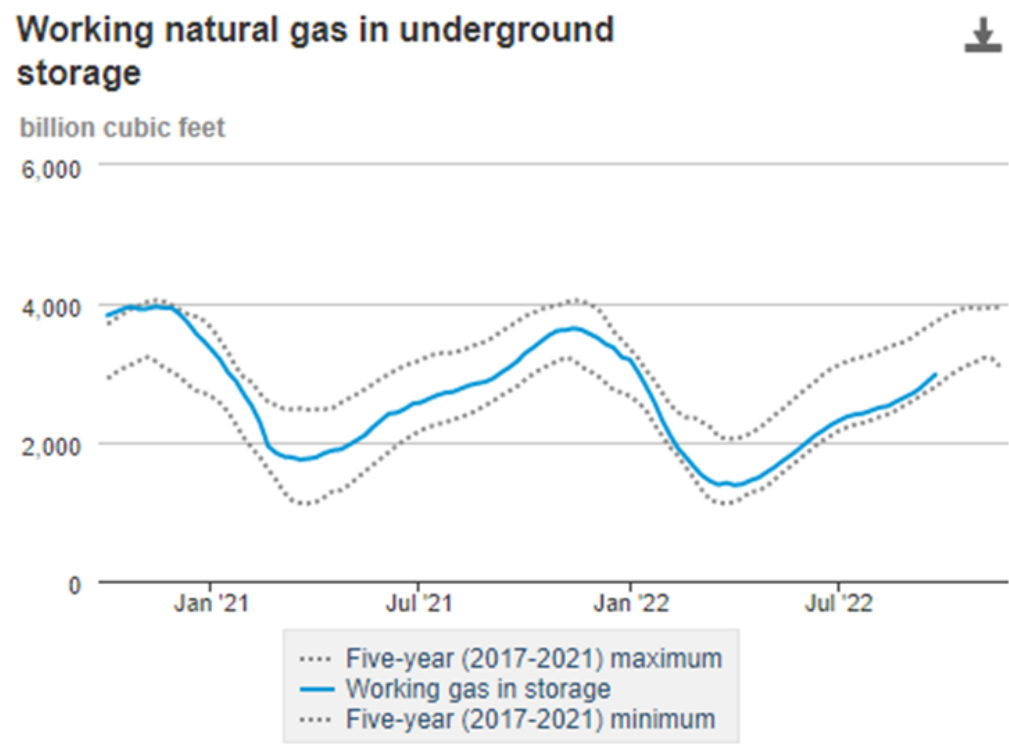
Figure 11: US Natural Gas Consumption by Sector (Source: EIA)

## EIA forecasts record U.S. natural gas consumption in 2022



Working gas in storage as of 28 September totalled 2,977 bcf, this is 306 bcf (9%) lower than the five-year average and 180 bcf (6%) lower than last year at this time (Figure 12).

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



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

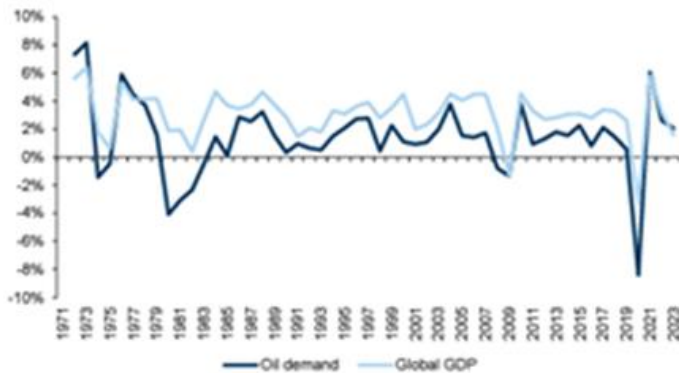
## Oil Market

Increased recessionary fears, a generally weaker macroeconomic outlook and strength in the US dollar put downward pressure on oil during September. These near-term factors have not changed the structural bullish supply set-up for oil caused by lack of investment, low spare production capacity and low inventories (RHS Figure 13).

Goldman Sachs' updated supply and demand balance forecasts suggest that current global oil prices reflect negative real global GDP growth outside China and range-bound Chinese oil demand for the coming year, more than 1.5% below consensus expectations (LHS Figure 13).

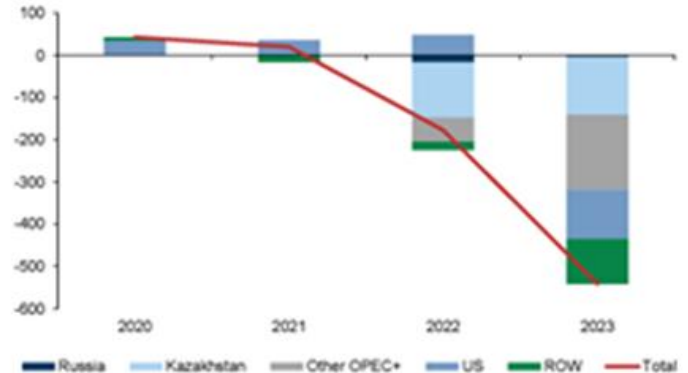
Figure 13: Real GDP Growth for World and Global Oil Demand (Source: GS)

**Exhibit 19: We base-case a real GDP assumption consistent with the average post-war recession excluding the GFC**  
YoY RGDP growth for World and global oil demand



Source: Haver, Kpler, Goldman Sachs Global Investment Research

**Exhibit 20: We once again revise lower forward supply expectations, led by OPEC+**  
GS oil supply revisions vs 2-Aug-22 balance (pre-price changes, kb/d)

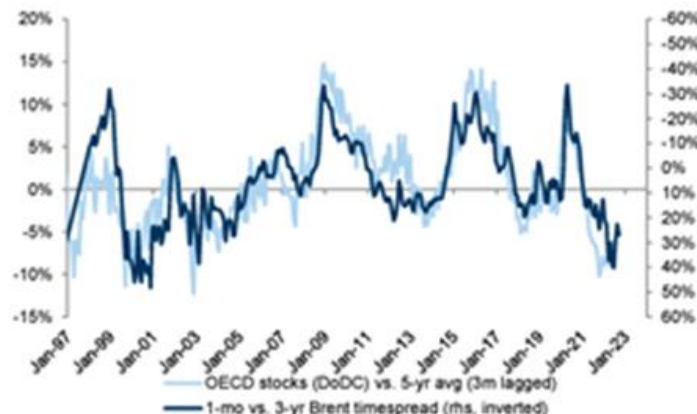


Source: Goldman Sachs Global Investment Research

Despite the adverse fundamentals this year, oil inventories remain at record lows in the OECD (LHS Figure 14).

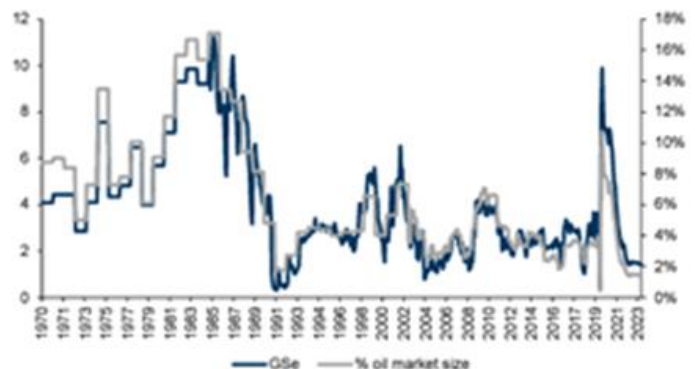
Figure 14: OECD Commercial Oil Stocks and Global Spare Oil Production Capacity (Source: various, via GS)

**Exhibit 5: Despite all the fundamental headwinds this year, inventories remain at record lows in OECD**  
OECD commercial stocks in days of OECD demand coverage vs. 5-yr avg (lhs) vs. 1-mo to 3-yr Brent timespreads (% , rhs, inverted). Balances shown pre- and post- price changes required to normalise stocks by end-23.



Source: IEA, ICE, Goldman Sachs Global Investment Research

**Exhibit 6: Spare capacity has rarely sustained such low levels**  
Global spare oil production capacity in mb/d (lhs) and % (rhs)



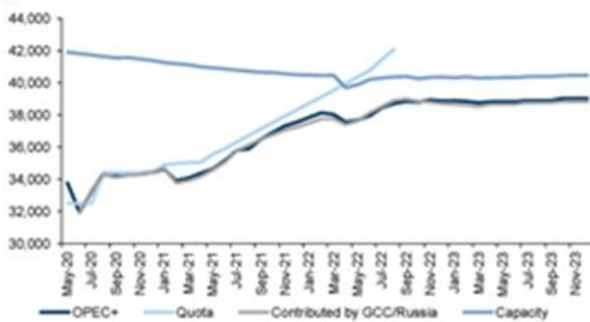
Source: IEA, EIA, Platts, Goldman Sachs Global Investment Research



Assuming reduced Russian supply and the inability of many OPEC countries (including Nigeria, Iran and Venezuela) to produce their current quota, aggregate OPEC+ production has likely peaked with remaining theoretical spare daily capacity unlikely to be produced (LHS Figure 15). Redirection of Russian crude production from the West to rest of the world is becoming more difficult (RHS Figure 15). This restricts Russia's ability to meet any future supply shortfall.

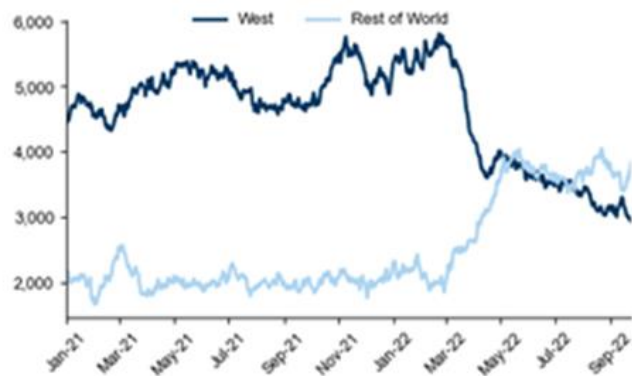
Figure 15: OPEC+ Production, Capacity and Quotas and Russian Seaborn Oil Exports (Source: various, via GS)

**Exhibit 10: OPEC+ production has likely peaked with remaining spare capacity unlikely to be utilised**  
OPEC+ production, capacity, quotas (kb/d). Assume zero Russia spare capacity beyond current production expectations.



Source: IEA, EIA, Platts, Goldman Sachs Global Investment Research

**Exhibit 11: Redirection will get incrementally more difficult**  
Russia seaborne crude and product exports to West and the rest (kb/d)



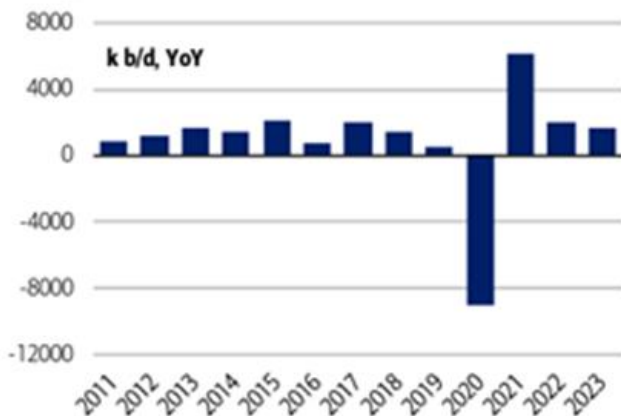
Source: Kpler, Goldman Sachs Global Investment Research

Bank of America expects world oil consumption to grow by 1.7mmbld next year (LHS Figure 16) on the back of a modest 2.5% expansion of world GDP (RHS Figure 16).

Figure 16: Global Oil Demand Growth and GDP (Source: BofA)

**Exhibit 4: Global oil demand growth**

Global oil demand growth this year has slowed down from a breakneck recovery pace of 2021...

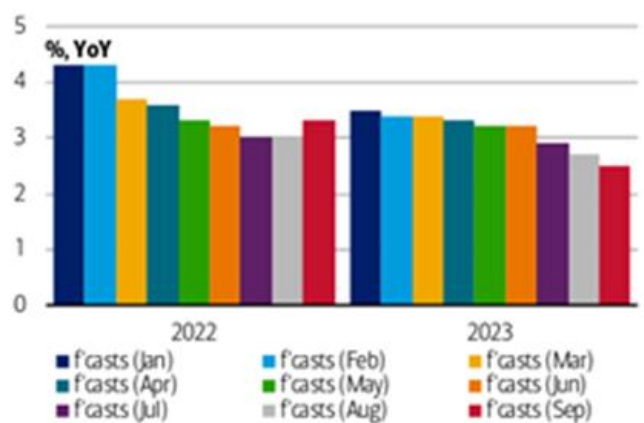


Source: IEA, BofA Global Research estimates

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**Exhibit 5: Global GDP forecasts**

...in line with weaker expectations of economic growth across the US, Europe and Asia



Source: BofA Global Research estimates

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Draws from the US Strategic Petroleum Reserve (SPR) will need to be replaced, adding another source of future demand (LHS Figure 17). OPEC's October quota cut (which will be discussed in the October report) was foreshadowed in September. This is the first time OPEC+ has ever cut production with Brent crude oil prices above \$90/bbl (RHS Figure 17).

Figure 17: US SPR Inventory Level and OPEC Quota/Target Changes and Brent Prices (Source: Bloomberg, OPEC, via BofA)

## Exhibit 12: US SPR inventory level

The SPR has been drawing at a fast pace this year, and the US government recently discussed refilling it at \$80/bbl WTI



Source: Bloomberg

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## Exhibit 13: OPEC quota/target changes and Brent crude oil prices

OPEC+ has never cut production with Brent crude oil prices above \$90/bbl



Source: OPEC, Bloomberg, Various news agencies, BofA Global Research estimates

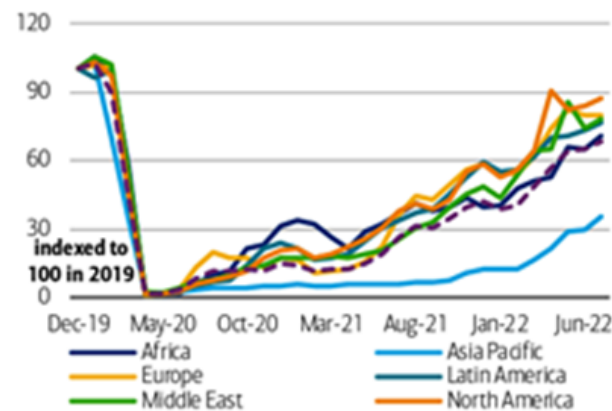
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Asian demand for international air travel has been increasing in recent months (LHS Figure 18). BofA expects Asian oil demand to drive global growth (RHS Figure 18).

Figure 18: International Air Passenger Growth and Oil Demand Growth (Source: various, via BofA)

## Exhibit 18: International RPK: Actual passenger traffic growth

Asian demand for international air travel has been picking up strongly in recent months

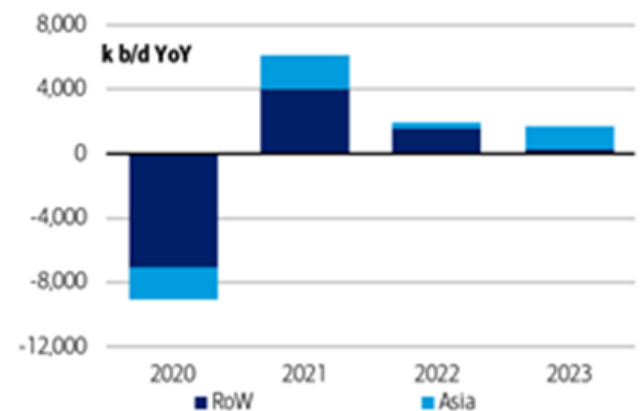


Source: IATA, BofA Global Research

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## Exhibit 19: Global oil demand growth

Heading into 2023, we project Asian oil demand to drive global growth

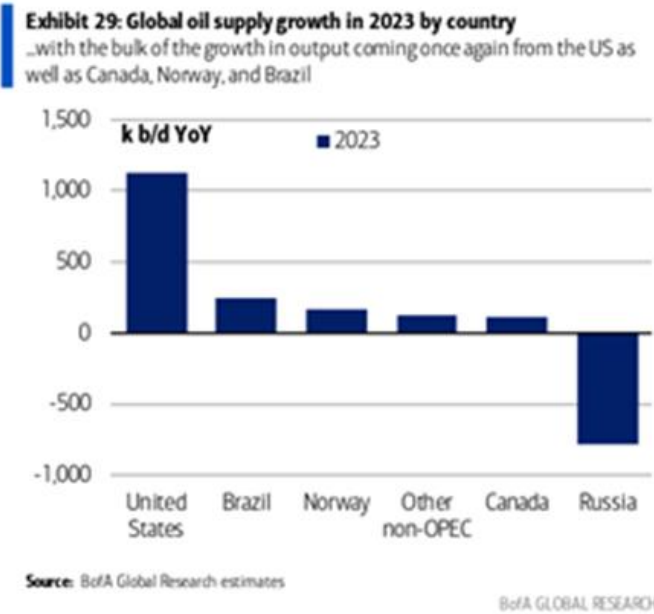
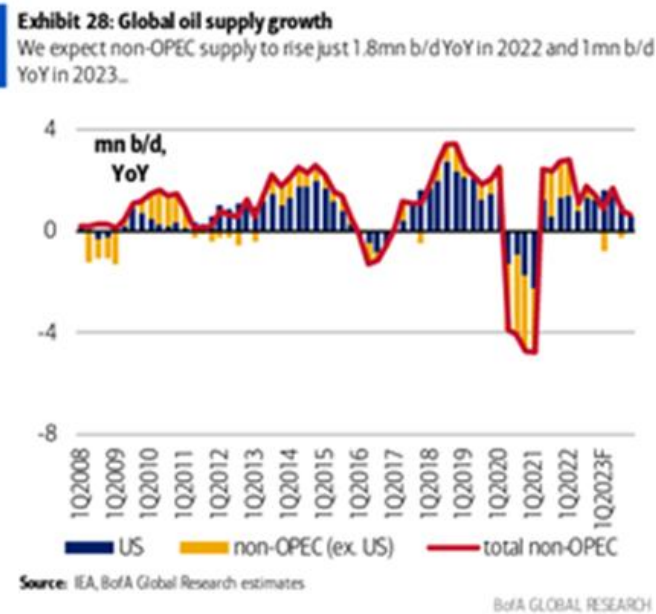


Source: BofA Global Research estimates

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Non-OPEC supply is expected to rise just 1.8mmbld in 2022 and 1.0mmbld in 2023 (LHS Figure 19). The US is responsible for most of the growth with the fall in production attributable to Russia (RHS Figure 19).

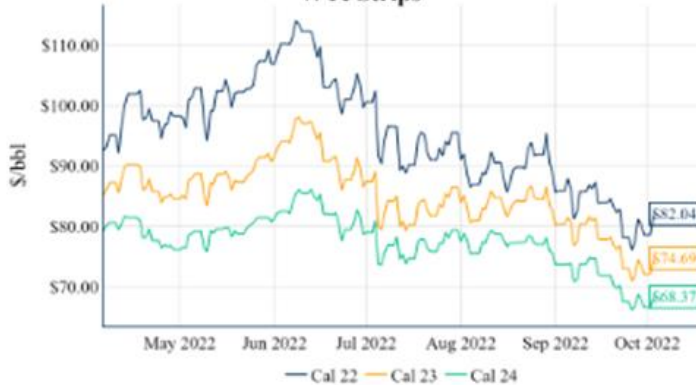
Figure 19: Non-OPEC Supply Growth (Source: IEA, BofA)



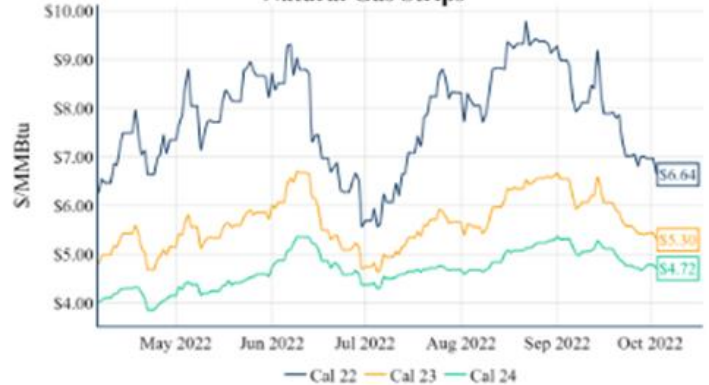


## Gas and Oil Prices 3 October 2022

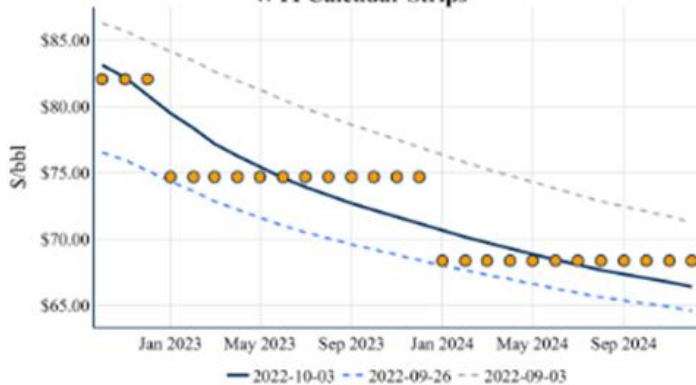
WTI Strips



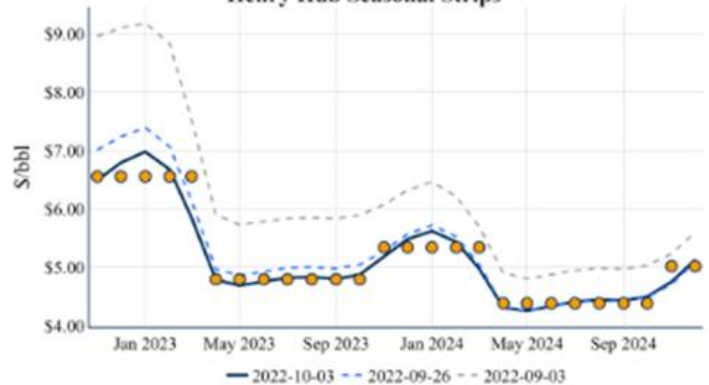
Natural Gas Strips



WTI Calendar Strips



Henry Hub Seasonal Strips

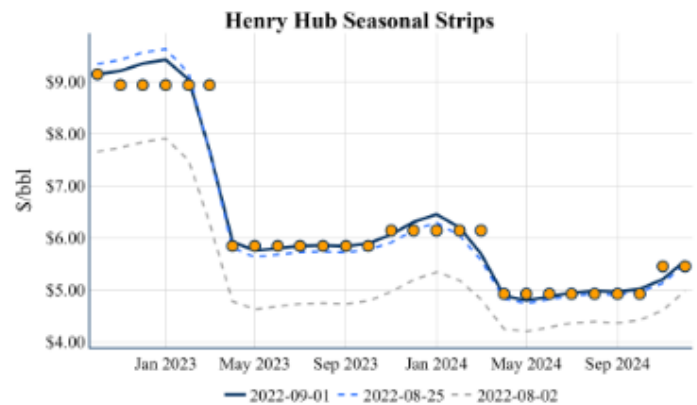
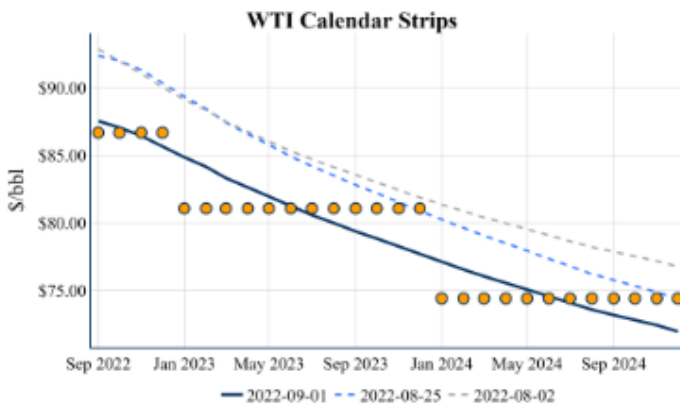
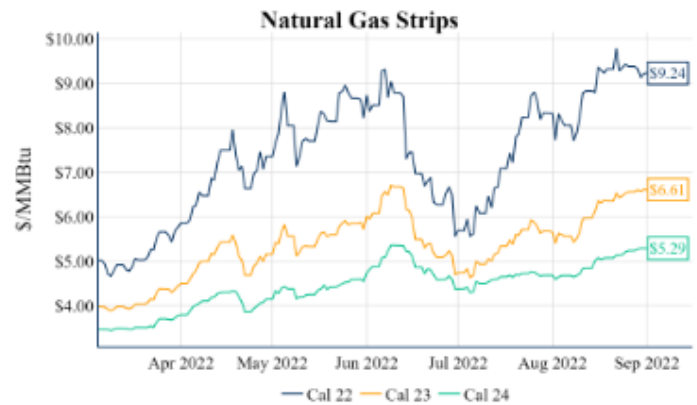


Swap Pricing	Bal 22	Cal 23	Cal 24	Cal 25
NYMEX WTI	\$82.05	\$74.70	\$68.38	\$64.57
ICE Brent	\$86.96	\$79.30	\$73.54	\$70.34
LLS	\$84.35	\$76.90	\$70.57	\$66.77
Mars	\$79.81	\$72.89	\$66.91	\$63.09
Western Canadian Crude (WCC)	\$60.38	\$56.55	\$50.63	\$49.48
West TX Sour (WTS)	\$81.79	\$74.56	\$68.13	\$64.32

Swap Pricing	Month 1	Summer 22	Winter 22/23	Summer 23	Winter 23/24
Henry Hub Fixed	\$6.500	\$6.878	\$6.562	\$4.798	\$5.339
Eastern Gas South	-\$1.190	-\$2.326	-\$0.872	-\$1.251	-\$0.686
Waha	-\$2.737	-\$2.915	-\$1.903	-\$2.439	-\$0.767
TETCO M3	-\$0.793	-\$2.276	\$3.711	-\$0.942	\$2.806
Houston Ship Channel	-\$0.311	-\$1.498	-\$0.194	-\$0.270	-\$0.154
Columbia Gulf Mainline	-\$0.792	-\$1.296	-\$0.429	-\$0.397	-\$0.242
Panhandle East	-\$1.002	-\$1.675	-\$0.207	-\$0.684	-\$0.047
NGPL MidCon	-\$0.875	-\$1.379	-\$0.189	-\$0.577	-\$0.077
SoCal	-\$0.196	-\$0.541	\$0.773	\$0.054	\$0.760
AECO	-\$2.513	-\$3.555	-\$2.398	-\$1.649	-\$1.510
Chicago City-Gates	-\$0.541	-\$1.206	\$0.266	-\$0.266	\$0.271



## Gas and Oil Prices 1 September 2022



Swap Pricing	Bal 22	Cal 23	Cal 24	Cal 25
NYMEX WTI	\$86.67	\$81.06	\$74.41	\$69.51
ICE Brent	\$91.89	\$85.70	\$79.58	\$75.16
LLS	\$89.52	\$83.23	\$76.58	\$71.62
Mars	\$84.92	\$79.36	\$72.87	\$67.97
Western Canadian Crude (WCC)	\$66.90	\$63.73	\$56.67	\$54.41
West TX Sour (WTS)	\$87.10	\$81.22	\$74.47	\$69.58

Swap Pricing	Month 1	Summer 22	Winter 22/23	Summer 23	Winter 23/24
Henry Hub Fixed	\$9.149	\$9.149	\$8.941	\$5.846	\$6.138
Eastern Gas South	-\$1.495	-\$1.495	-\$0.814	-\$1.221	-\$0.686
Waha	-\$2.234	-\$2.234	-\$1.770	-\$2.192	-\$1.013
TETCO M3	-\$1.384	-\$1.384	\$4.933	-\$1.054	\$2.721
Houston Ship Channel	-\$0.807	-\$0.807	-\$0.106	-\$0.229	\$0.012
Columbia Gulf Mainline	-\$1.072	-\$1.072	-\$0.423	-\$0.419	-\$0.265
Panhandle East	-\$1.143	-\$1.143	-\$0.114	-\$0.656	\$0.027
NGPL MidCon	-\$0.880	-\$0.880	-\$0.113	-\$0.538	\$0.015
SoCal	-\$0.404	-\$0.404	\$0.876	\$0.166	\$0.830
AECO	-\$4.150	-\$4.150	-\$2.936	-\$1.759	-\$1.390
Chicago City-Gates	-\$0.628	-\$0.628	\$0.341	-\$0.244	\$0.344



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