Longreach Energy Holdings LLC

Monthly Report

May 2023

FIRM INFORMATION

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1.0 Market and Portfolio Commentary

1.1 Macro Industry Commentary

US Henry Hub gas prices fell modestly in May, the prompt decreased from $2.41/mmbtu at close on 28 April to $2.33/mmbtu at close on 31 May. Calendar 2023 also fell, beginning May at $2.827/mmbtu and closing at $2.67.

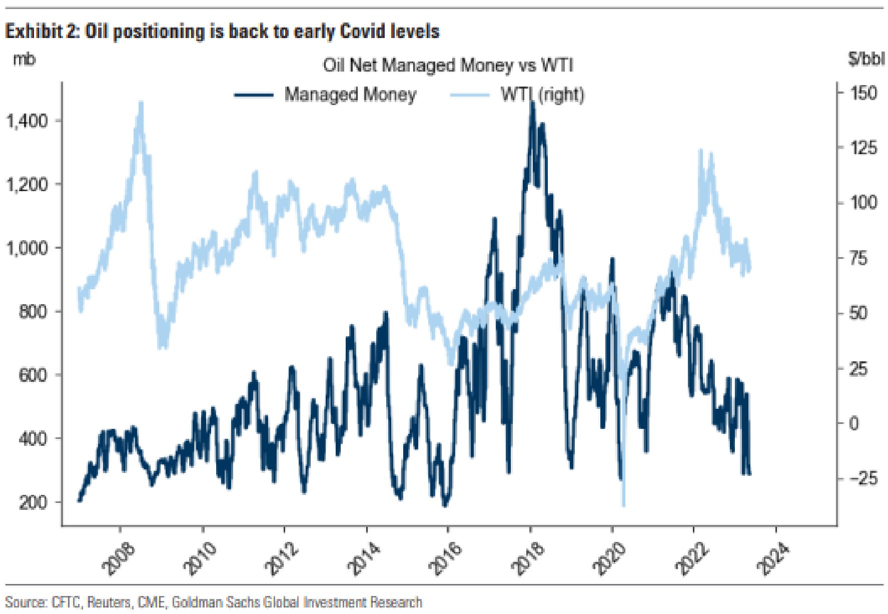
Oil prices fell. The prompt opened May at $76.78/bbl and closed the month at $69.46/bbl. Calendar 2023 started the month at $75.29/bbl and closed at $69.25/bbl.

Commodity prices, not just those for energy, have been weak recently primarily because of mounting concerns about the health of the financial sector, US debt ceiling risks, fears of an impending demand slowdown in the West and disappointing recovery in China in April. These factors have increased fears of an upcoming US or global recession.

Looking across different markets it appears that commodities and interest rates have priced in a recession while equities have only priced in the positive aspects of that outcome, via lower interest rates and lower commodity prices. The absence of a recession would likely lead to higher oil and commodity prices as well as higher interest rates, to which equities would likely react poorly.

For crude oil, net managed money positioning is now as short as it was during Covid (Figure 1) when inventories reached record levels, breaching capacity constraints which caused oil prices to quickly turn negative.

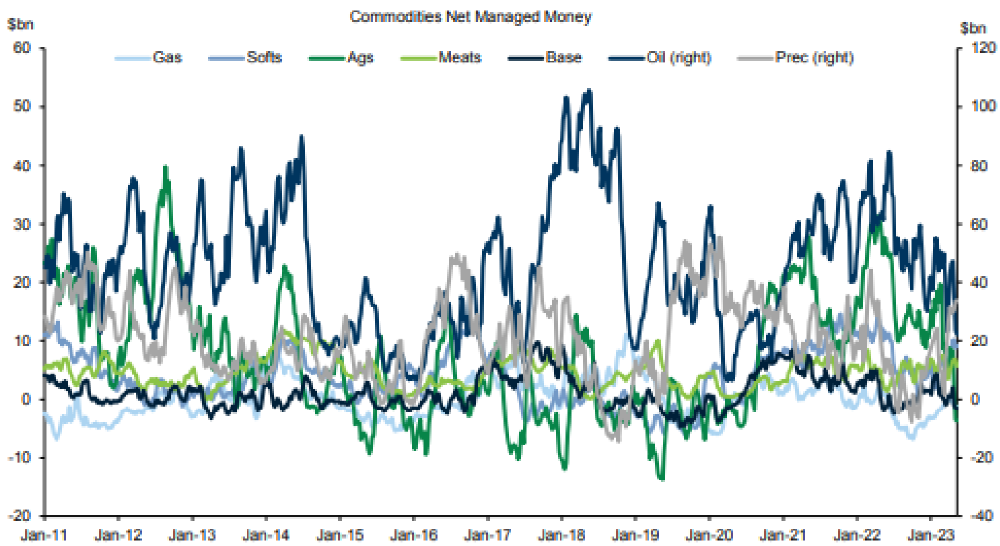
Figure 1: Managed Money Oil Positioning (Source: various, via GS)



Commodities AUM has slumped as investors have exited the oil trade (Figure 2).

Figure 2: Commodities Net Managed Money (Source: various, via GS)

Exhibit 3: Commodities AUM slumped as investors exited the oil trade

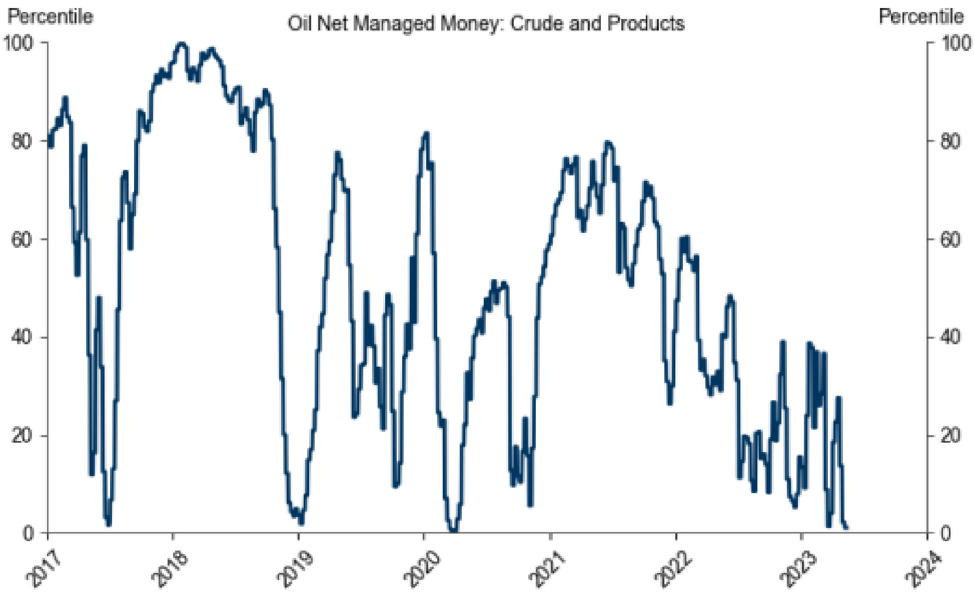


Source: CFTC, CME, Bloomberg, Goldman Sachs Global Investment Research

While net managed money in oil has in recent years been volatile, current investment in only the 3rd percentile implies material scope for recovery (Figure 3).

Figure 3: Net Managed Money in Crude and Products (Source: various, via GS)

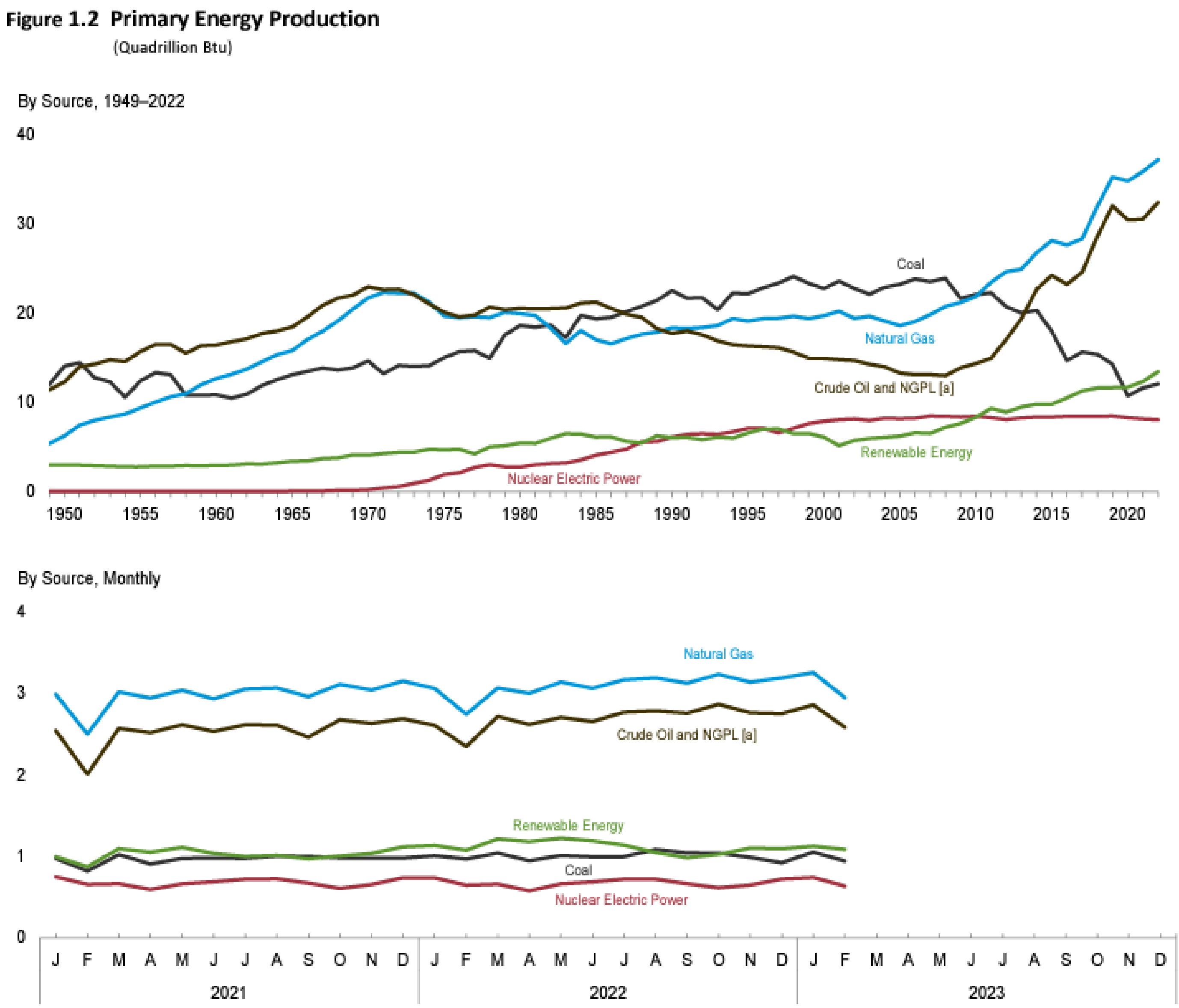
Exhibit 4: Net managed money is currently at its 3rd percentile as investors exit the oil space



Source: CFTC, Refinitiv Eikon

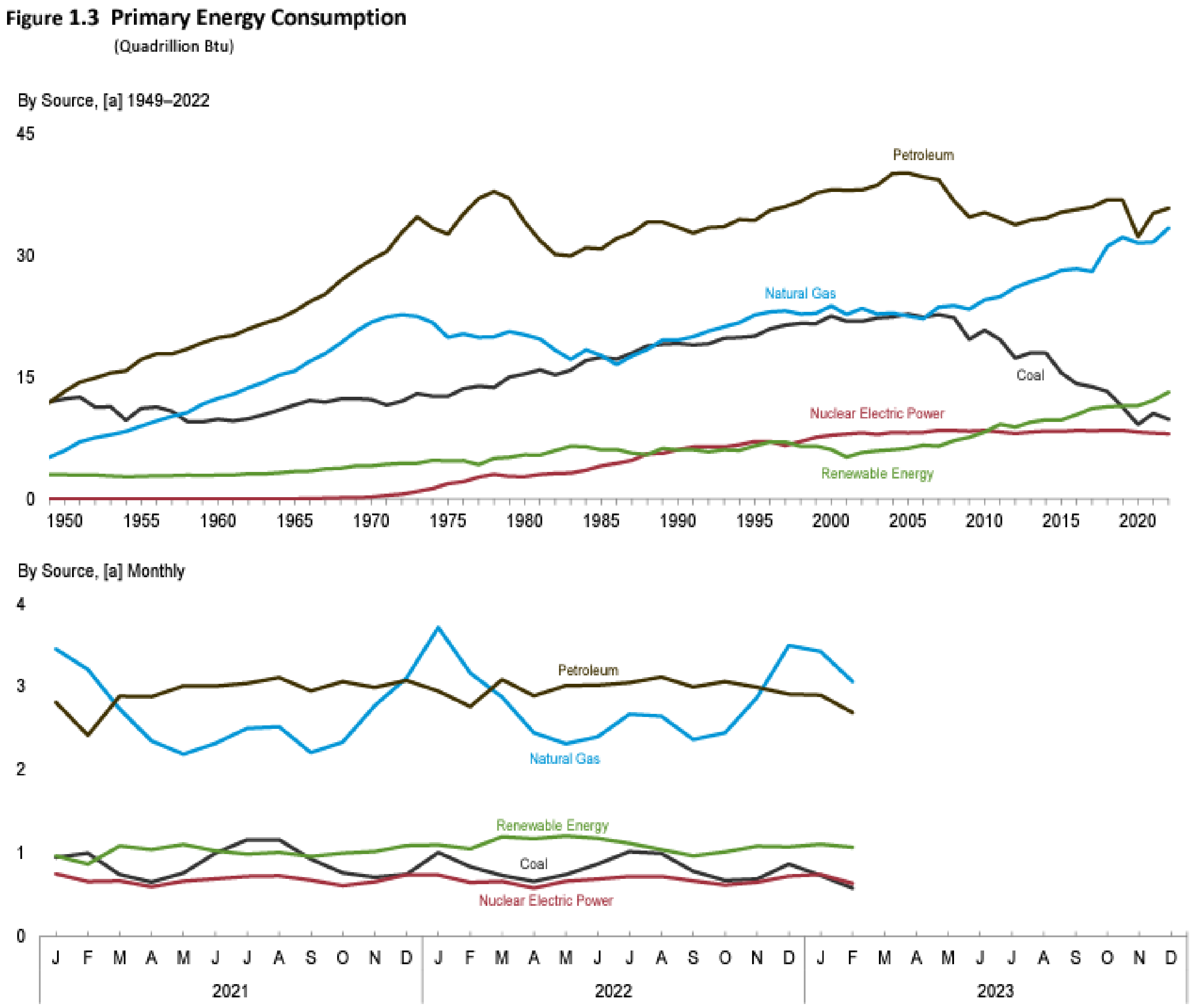
The latest monthly energy review from the US Energy Information Administration (EIA) highlights the recent growth of gas, oil and renewables production and decline of coal (Figure 4).

Figure 4: US Primary Energy Production (Source: EIA)



Consumption of primary energy highlights relatively flat petroleum use since 2000, increasing natural gas and renewables, and declining coal (Figure 5). Note the differences between production and consumption are primarily releases from storage.

Figure 5: US Primary Energy Consumption (Source: EIA)



Energy consumption by sector (Figure 6) shows an increasing need for electric power, consistent growth in transportation and relatively flat consumption in industrial, residential and commercial sectors, with these last three benefiting the most from increased energy efficiencies. The seasonality in sector demand, with drivers of summer and winter peaks, is shown Figure 7.

Figure 6: Energy Consumption by Sector 1949-2022 (Source: EIA)

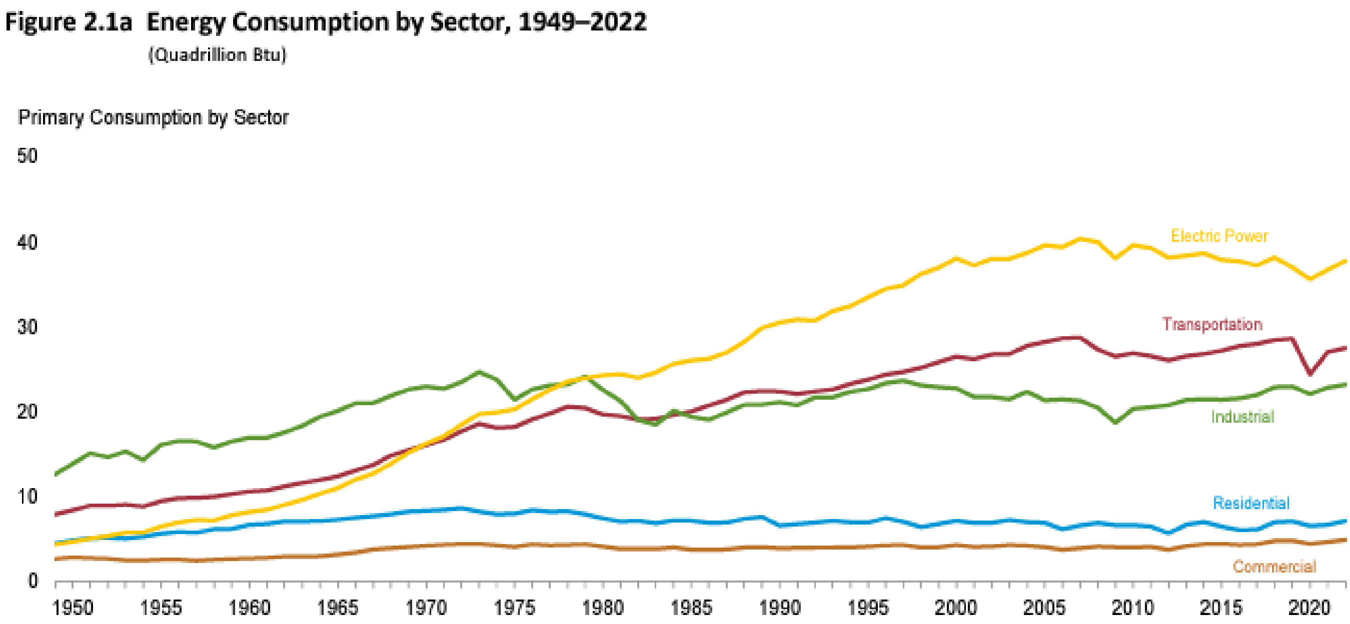
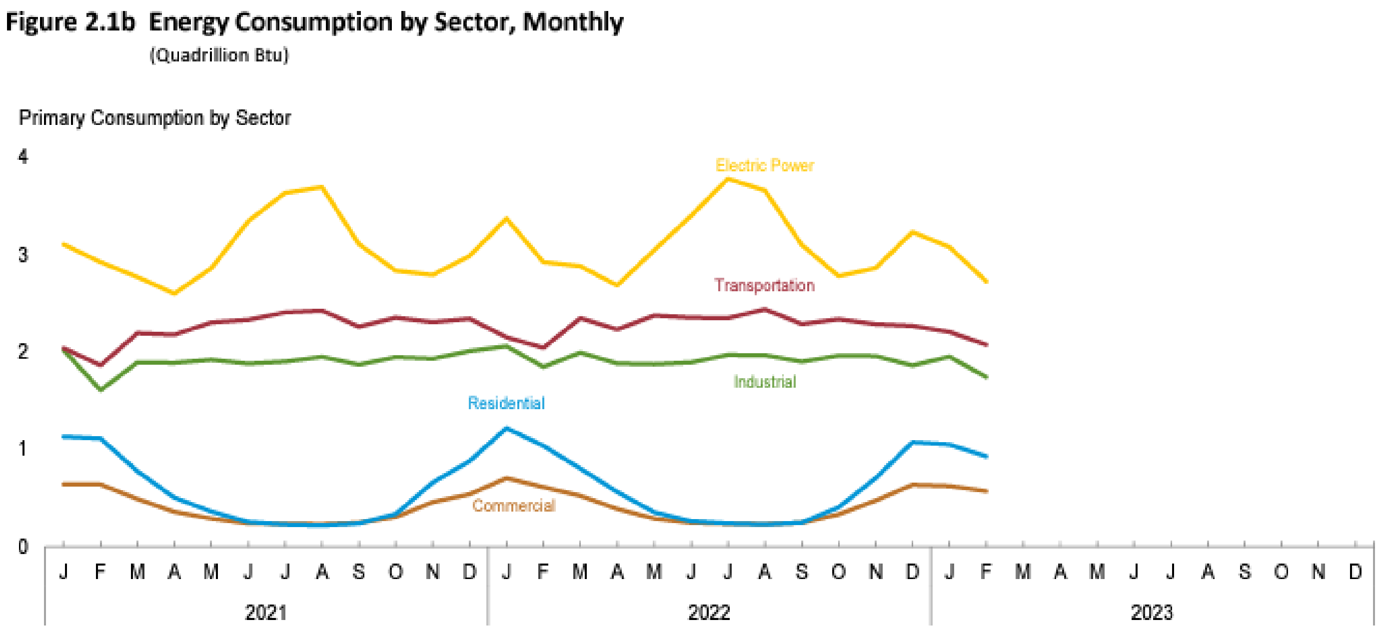
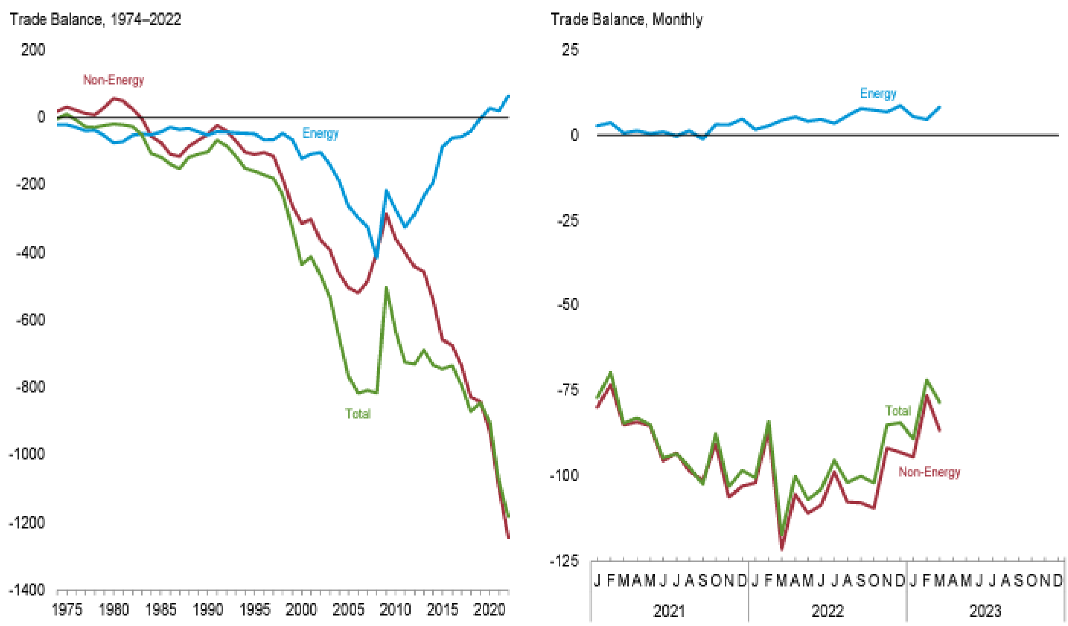


Figure 7: Energy Consumption by Sector, Monthly (Source: EIA)



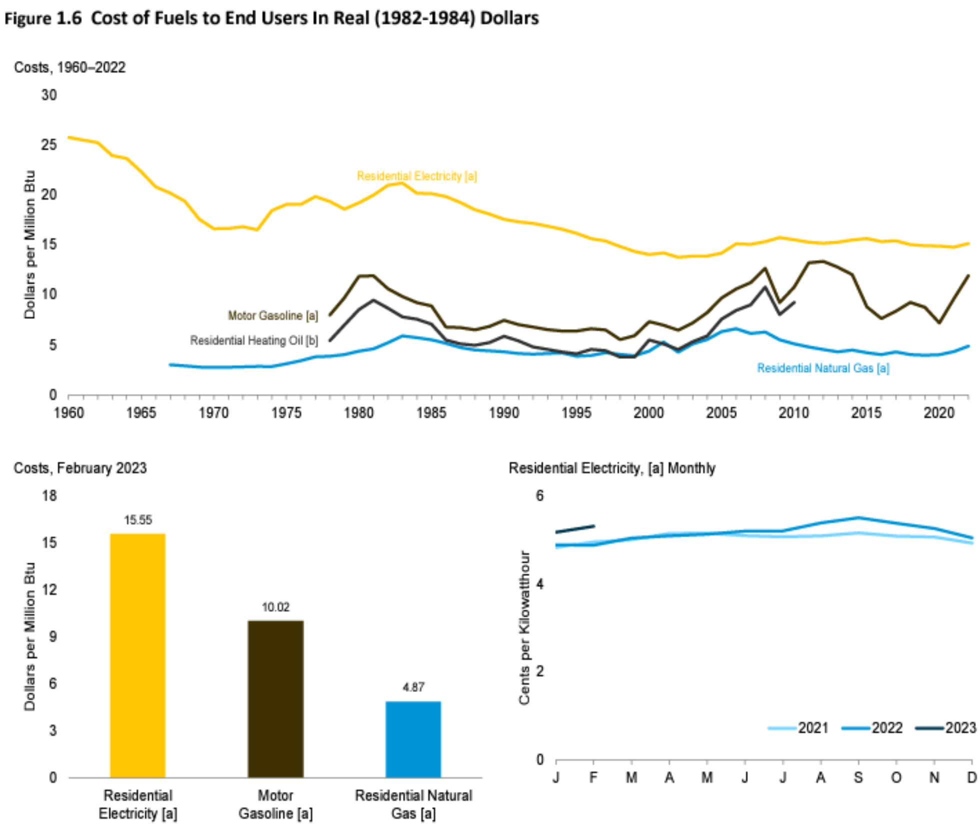
The US trade balance has turned sharply negative since the mid-90’s, however the aggregate deficit has been reduced by the turn-around in energy since around 2010, thanks to the rejuvenation of US domestic oil and gas production (Figure 8).

Figure 8: US Trade Balance, 1974-2022 (Source: EIA)



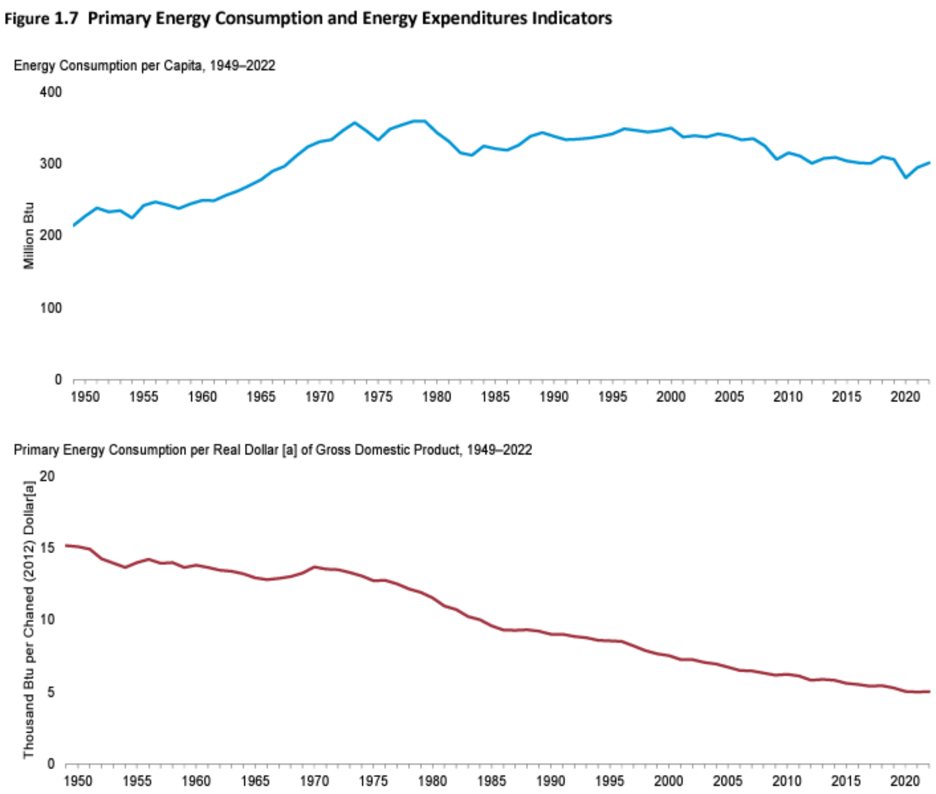
[a] Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
Web Page: http://www.eia.gov/totalenergy/data/monthly/#summary.
Source: Table 1.5.

Figure 9: Cost of Fuels to End Users in Real (1982-84) Dollars (Source: EIA)



Overall primary energy consumption per capita in the US has trended modestly lower since 1980 (Top, Figure 10) while consumption per real dollar of Gross Domestic Product has declined appreciably since 1950 (Bottom, Figure 10). This trend has greatly assisted the growth in US economic productivity.

Figure 10: Primary Energy Consumption and Energy Expenditure Indicators (Source: EIA)



The latest Baker Hughes rig count data follows. In May we finally saw the expected falls commence as US total land rigs declining by 59 from 733 to 674. Oil rigs fell by 33 from 588 to 555 while gas rigs fell by 24 from 161 to 137. Falls in miscellaneous and inland waters rigs made up the difference.

Baker Hughes rig count — Baker Hughes

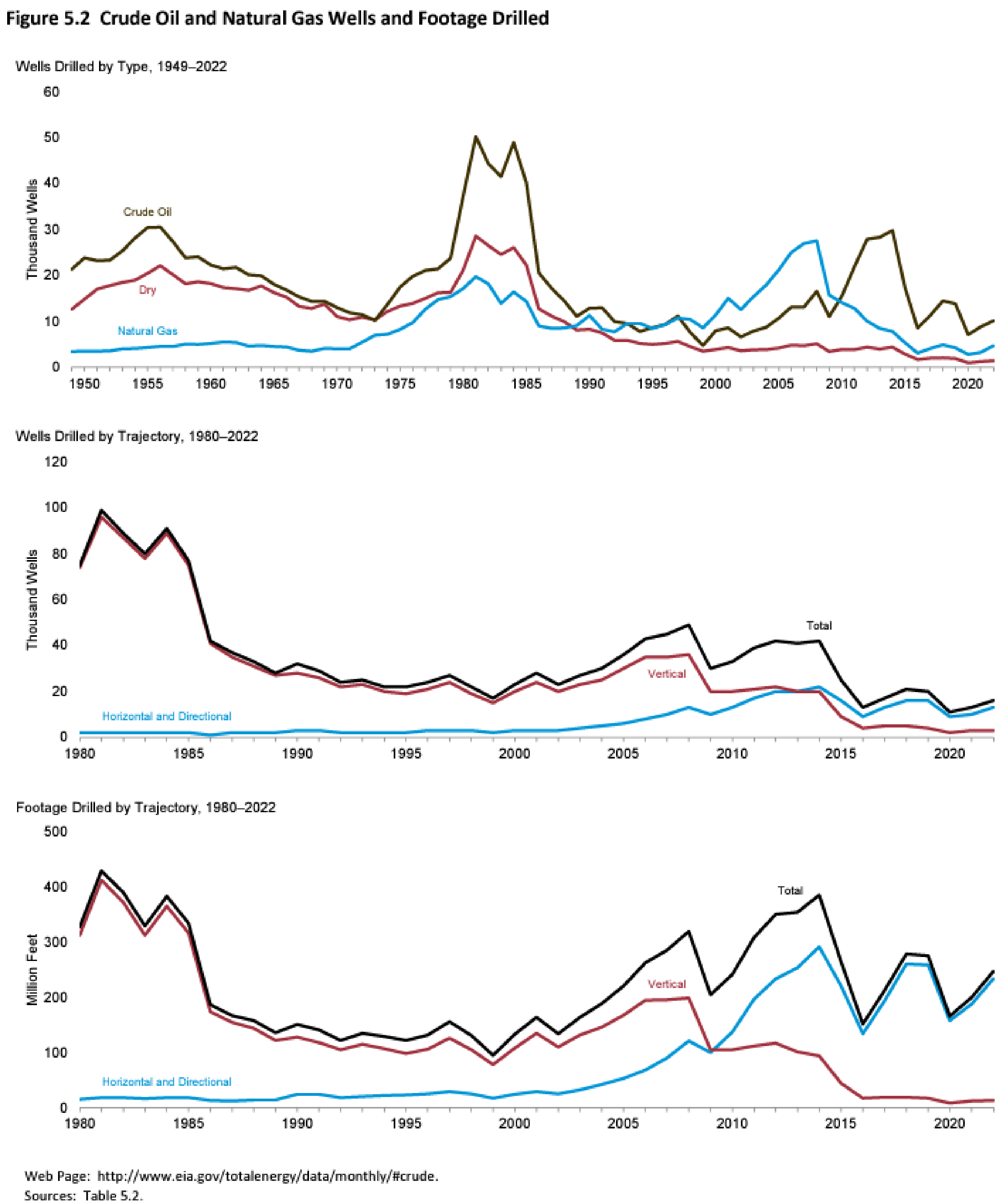
Rotary Rig Count

6/2/23

Location	Week	+/-	Week Ago	+/-	Year Ago
Land	674	-15	689	-36	710
Inland Waters	2	0	2	1	1
Offshore	20	0	20	4	16
United States Total	696	-15	711	-31	727
Gulf Of Mexico	20	0	20	5	15
Canada	97	10	87	-20	117
North America	793	-5	798	-51	844
U.S. Breakout Information	**This Week**	**+/-**	**Last Week**	**+/-**	**Year Ago**
Oil	555	-15	570	-19	574
Gas	137	0	137	-14	151
Miscellaneous	4	0	4	2	2
Directional	52	0	52	16	36
Horizontal	628	-14	642	-38	666
Vertical	16	-1	17	-9	25

The evolution of oil and gas drilling technology in the US over recent decades is demonstrated by Figure 11. The number of dry wells (i.e. wells that do not produce commercial quantities of oil or gas) has fallen from almost 30,000 per year in the early-1980's to nominal numbers today. The overall number of gas and oil wells drilled has declined too, with horizontal and directional wells now by far the focus as vertical well drilling has proven less attractive. Yet, while the number of horizontal oil and gas wells has fallen, the total footage drilled per well has climbed as drilling becomes more technologically advanced and wells have lengthened.

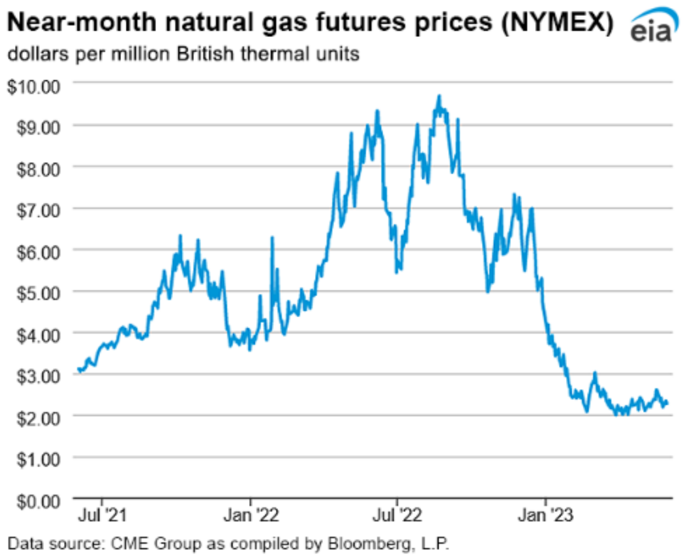
Figure 11: Oil and Gas Wells and Footage Drilled (Source: EIA)



Gas Market

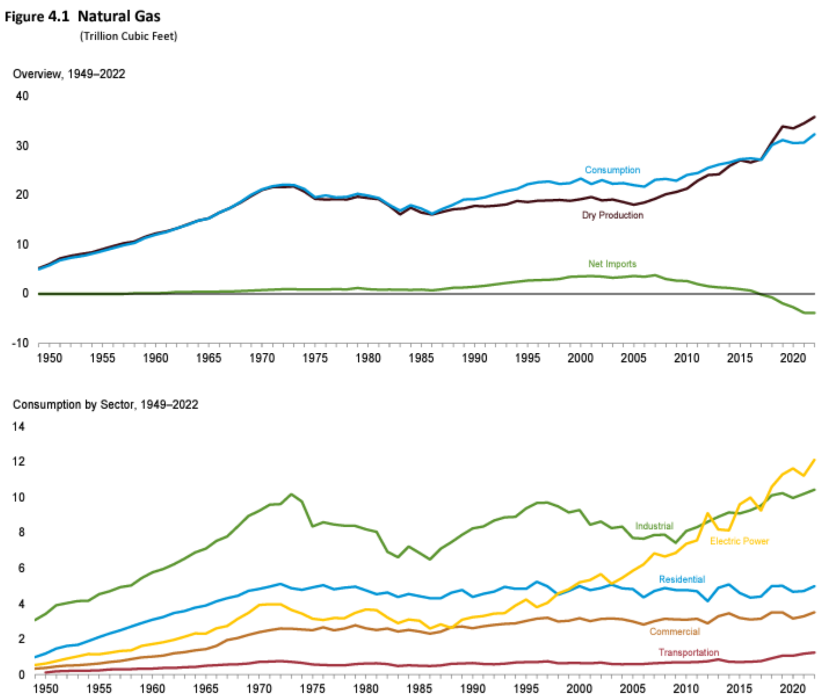
In May prompt Henry Hub gas futures continued to bounce around a little above the recent floor at ~$2/mmbtu (Figure 12). The decline in gas rigs has not yet been enough to deliver a reduction in US gas production however we believe, based on our own experience and discussions with other operators, that there are more rig cuts to come and that this will flow through to supply during the remained of 2023.

Figure 12: Near Month Henry Hub Futures (Source: EIA)



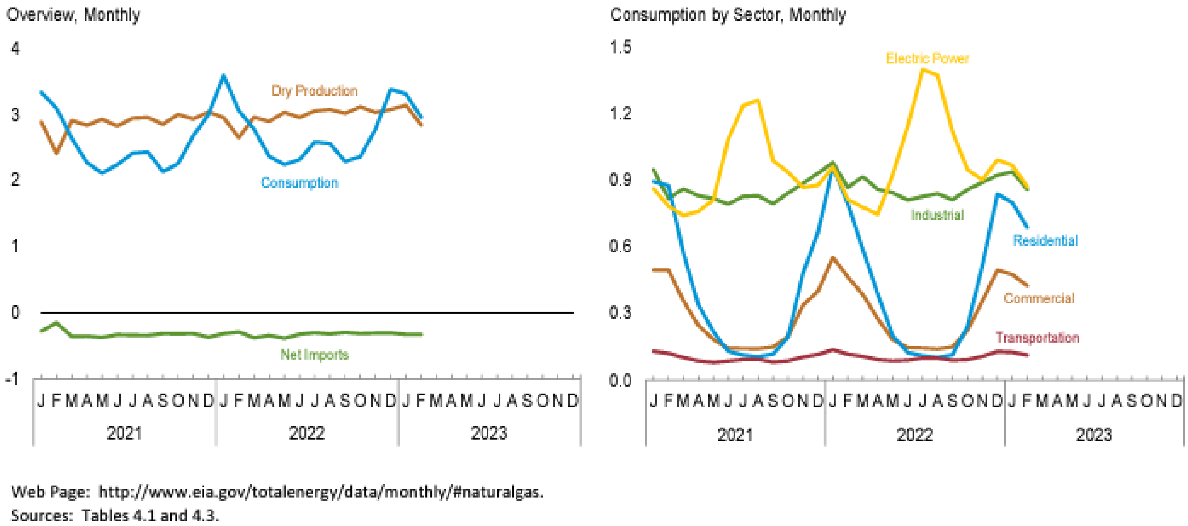
Historic production and consumption data (EIA 1949 to 2022) for US natural gas is shown in Figure 13. The flip from net imports to net exports in 2016 was a pivotal moment for both US and international gas markets. Consumption by sector shows the rapid growth in demand for gas to generate electric power as the main driver of increased overall demand although industrial demand growth has also been strong.

Figure 13: US Natural Gas Production and Consumption 1949-2022 (Source: EIA)



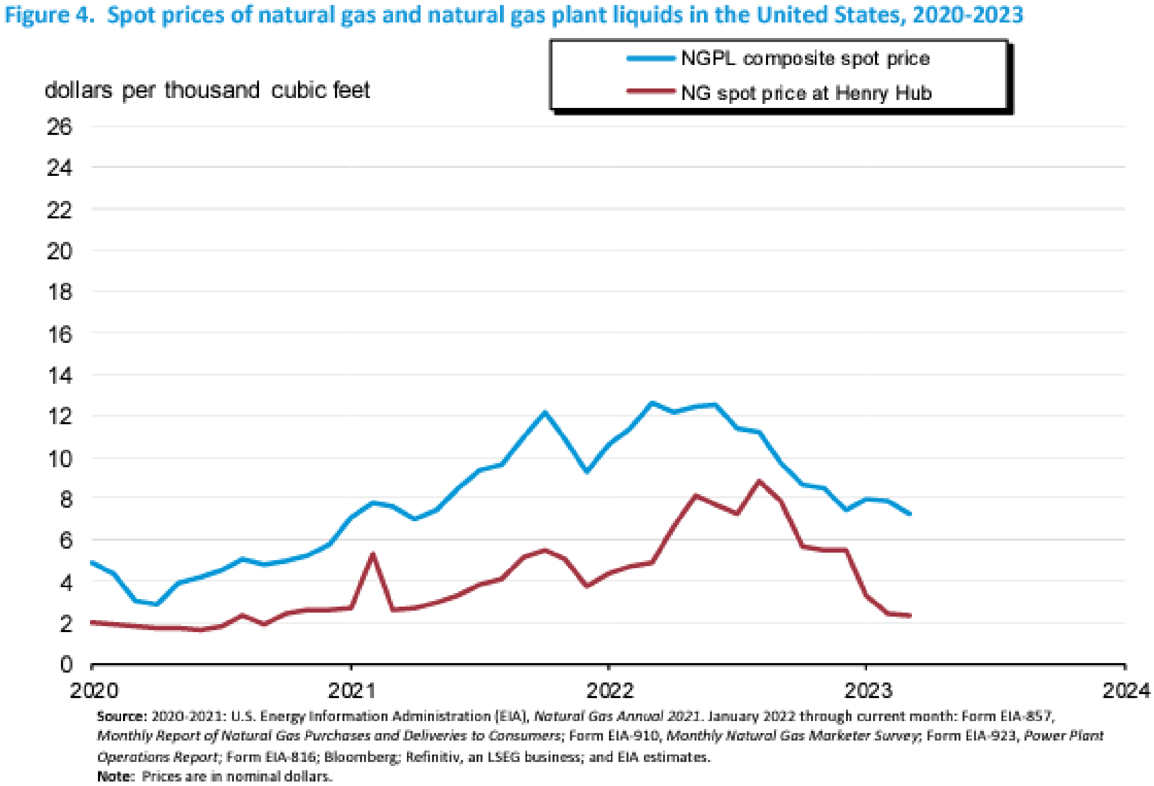
Monthly consumption data (Figure 14) highlights the summer peaks for electric power demand (electricity for cooling) and winter peaks for residential and commercial heating demand. Industrial and transportation demand does not vary materially with the seasons.

Figure 14: Monthly US Natural Gas Production and Consumption (Source: EIA)



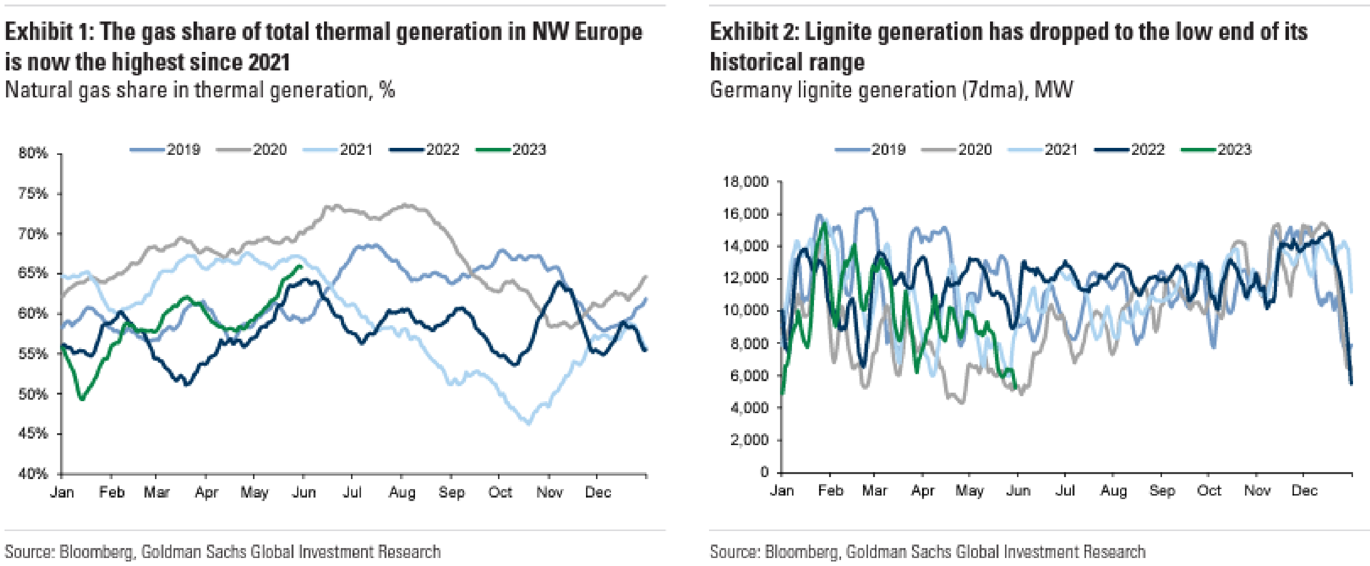
The prices of natural gas liquids (NGL's) have outperformed natural gas over recent months (Figure 15). The sale of NGLs is a material revenue source for Longreach Energy and this price resilience has somewhat protected monthly cash flow.

Figure 15: Spot Prices of Natural Gas and Natural Gas Liquids (Source: EIA)



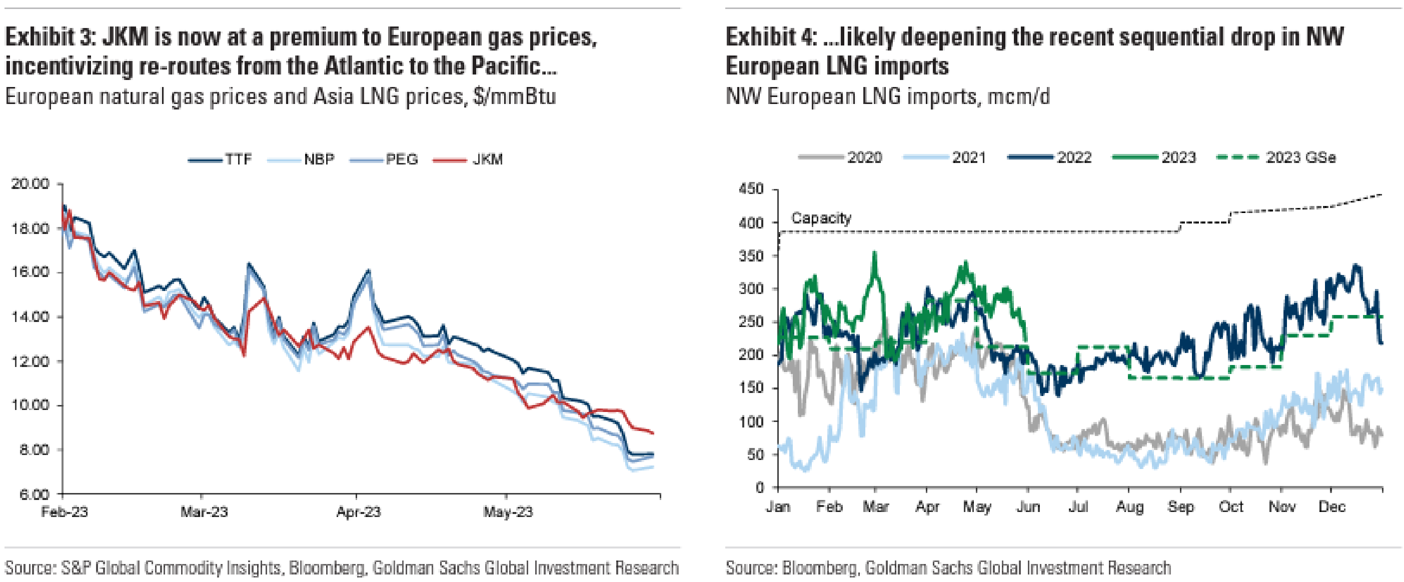
The fall in European gas prices has seen the use of gas for European thermal generation increase at the expense of coal (lignite, Figure 16). The gas share of total thermal generation in NW Europe is now the highest since 2021.

Figure 16: Gas and Coal (lignite) Thermal Generation in NW Europe (Source: Bloomberg, via GS)



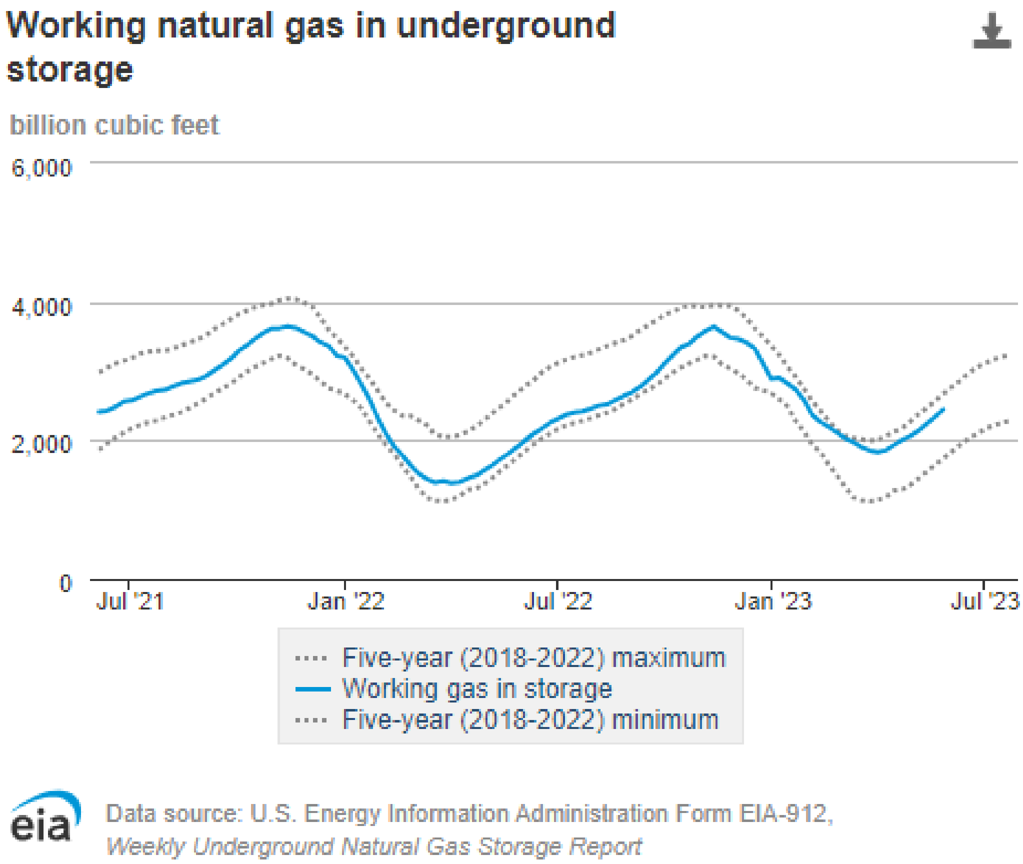
JKM (the Asian spot LNG price) is now trading at a premium to European gas, which will incentivise the direction of LNG cargoes from the Atlantic to the Pacific and deepen the recent drops in NW European LNG Imports (Figure 17).

Figure 17: European and Asian Natural Gas Prices and NW European LNG Imports (Source: various, via GS)



According to EIA estimates working gas in storage was 2,446 bcf as of Friday 26 May 2023 (Figure 18). Stocks were 557bcf higher than last year at this time and 349bcf above the five-year average.

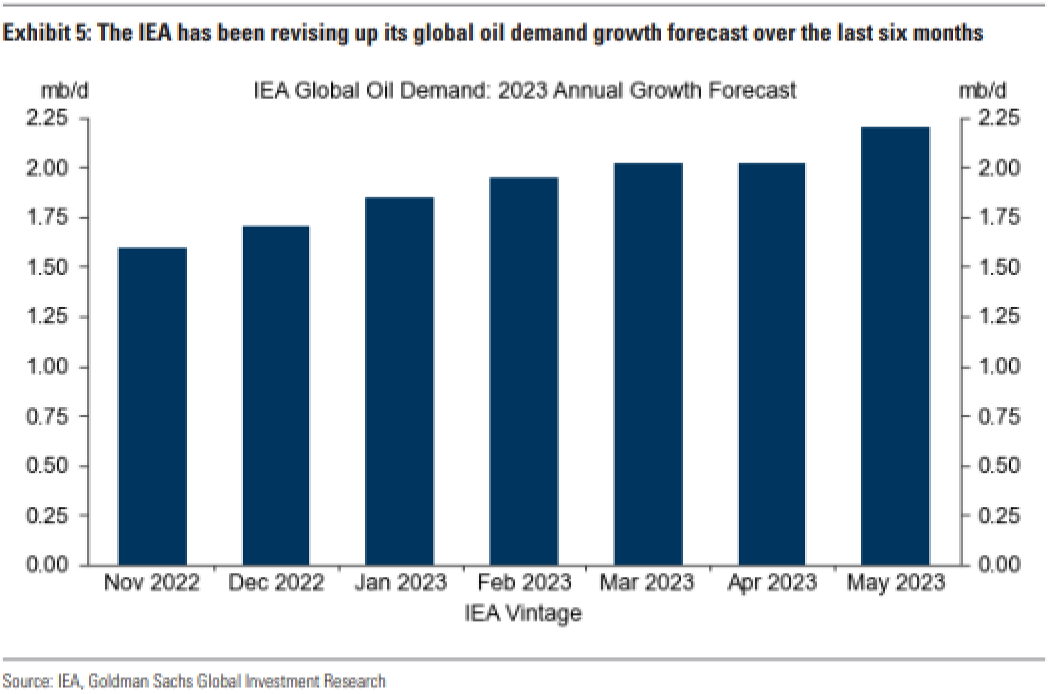
Figure 18: US Working Gas in Underground Storage (Source: EIA)



Oil Market

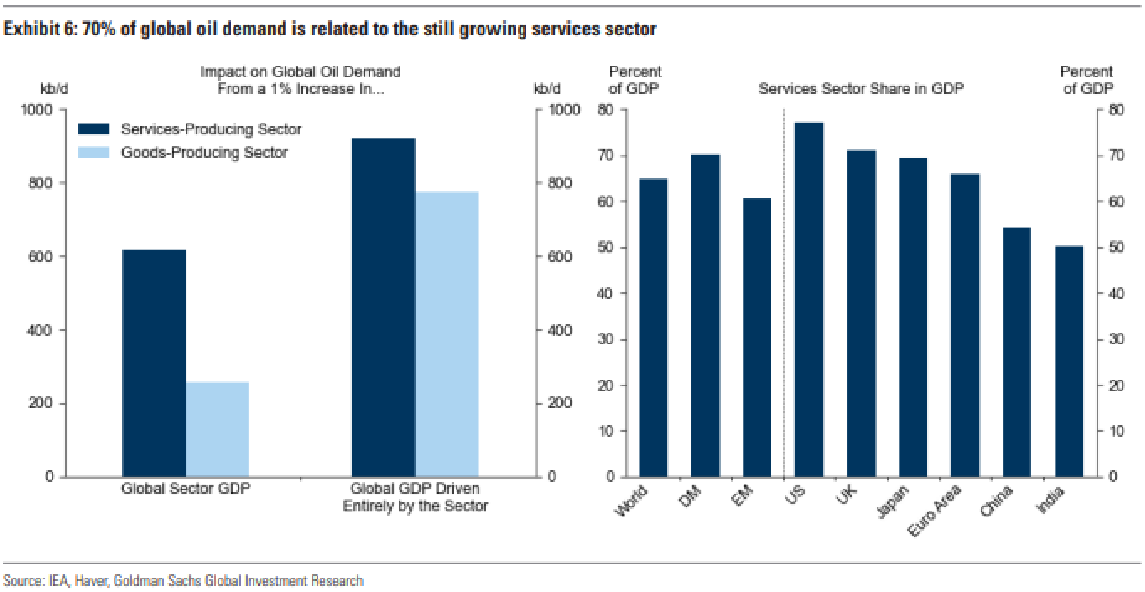
Recent falls in the oil price have been driven by concerns a global recession is looming in the second half of the year and that this will lead to reduced oil demand. The evidence however points to stronger, not weaker demand over the course of 2023. The International Energy Agency (IEA) and other forecasters have steadily increased oil demand forecasts this year, raising projections every month from Nov 2022 to May 2023 as strong Emerging Market demand continues to outpace weaker Developed Markets (Figure 19).

Figure 19: IEA 2023 Global Oil Demand Annual Growth Forecast (Source: IEA, via GS)



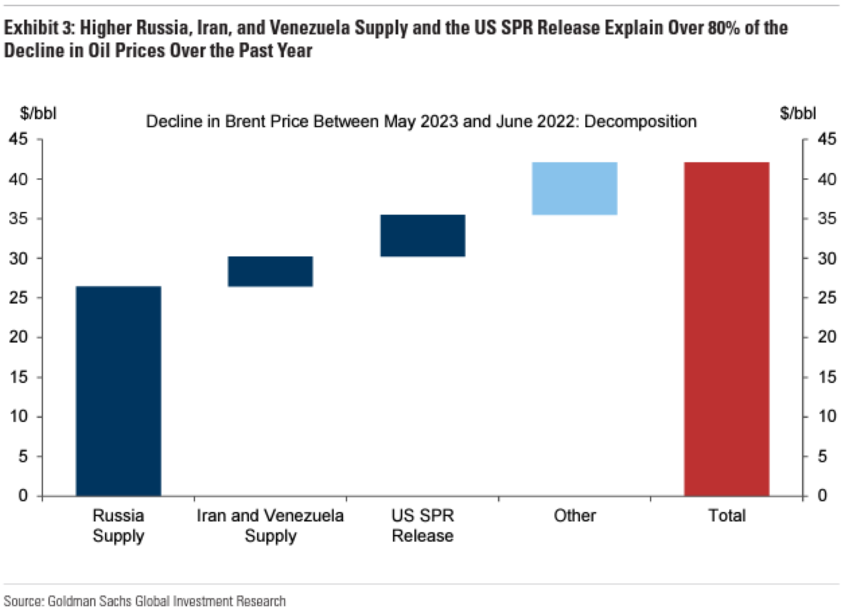
Goldman notes that ~7% of oil demand is tied to the services sector (LHS Figure 19) and that, notwithstanding manufacturing weakness, the services sector in both the West and China is looking resilient as a major contributor to GDP (RHS Figure 20).

Figure 20: Services Sector Impact on Oil Demand and Share of GDP (Source: various, via GS)



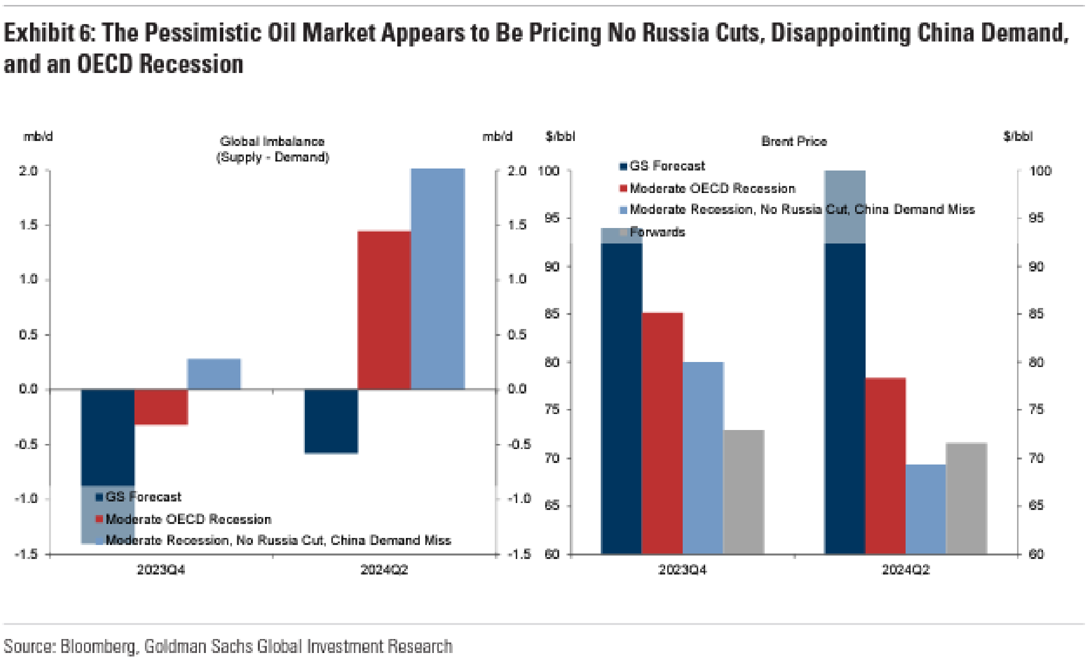
While demand has been broadly in line with expectations the decline in oil prices can be attributed to higher supply, most significantly from Russia which has surprised by a remarkable 2mmbbld since the middle of last year. Other significant contributors are supply from Iran and Venezuela and releases from the US Strategic Petroleum Reserve (Figure 21).

Figure 21: Decomposition of Brent Price Decline from June 2022 to May 2023 (Source: GS)



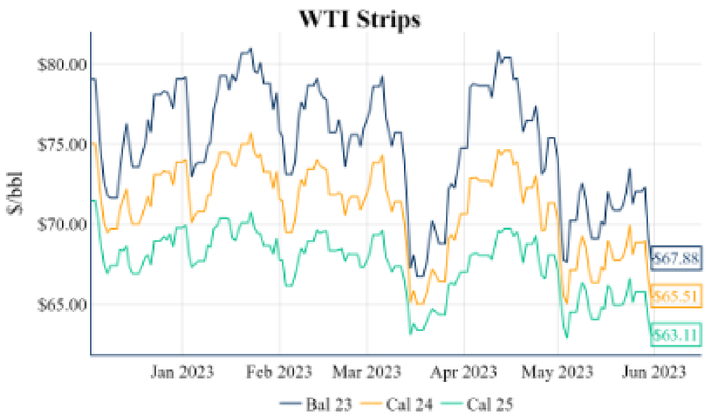
The pessimism in oil markets is pronounced, appearing to assume no decline in Russian production, disappointing China demand and an OECD recession (Figure 22).

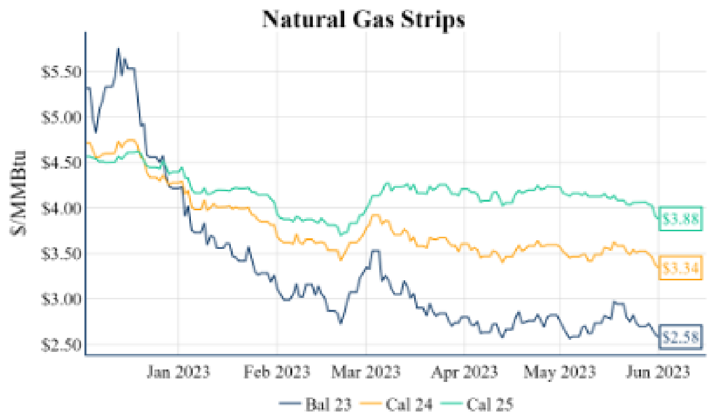
Figure 22: Global Supply less Demand and Brent Oil Price (Source: Bloomberg, GS)

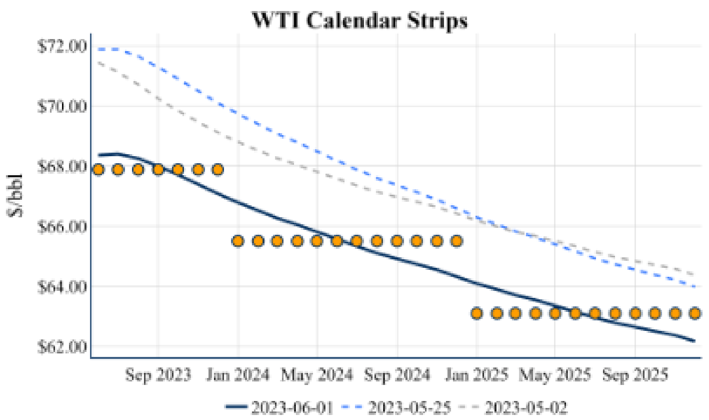


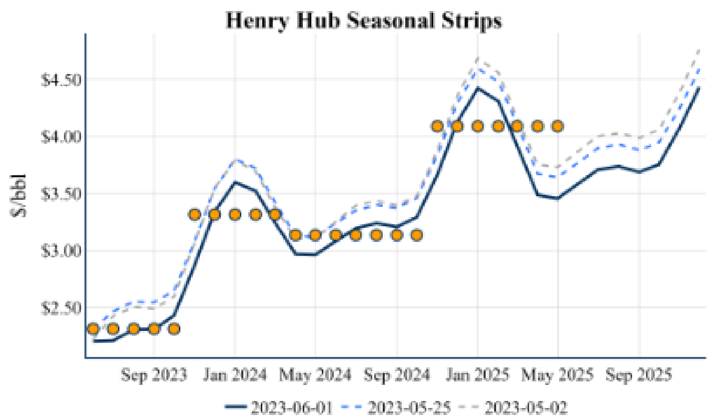
Production cuts announced by OPEC, dominated by Saudi Arabia, have not yet had any material impact on the market though will inevitably tighten balances.

Gas and Oil Prices 1 June 2023









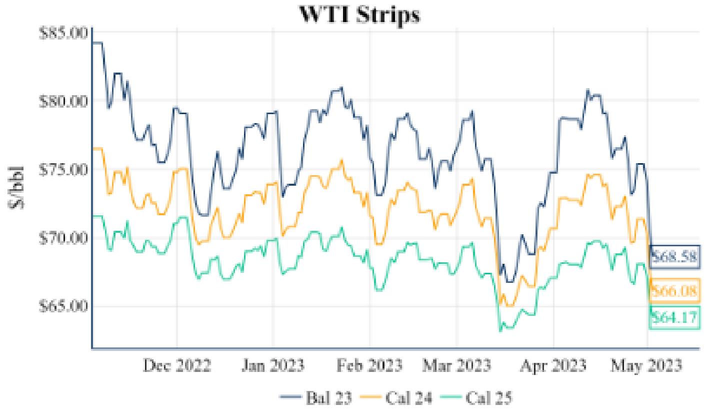
Swap Pricing	Bal 23	Cal 24	Cal 25	Cal 26
NYMEX WTI	$67.89	$65.51	$63.10	$61.17
ICE Brent	$72.04	$69.88	$68.03	$66.54
LLS	$70.09	$67.87	$65.62	$63.82
Mars	$66.48	$63.58	$60.70	$58.97
West TX Sour (WTS)	$67.38	$64.80	$62.10	$60.07

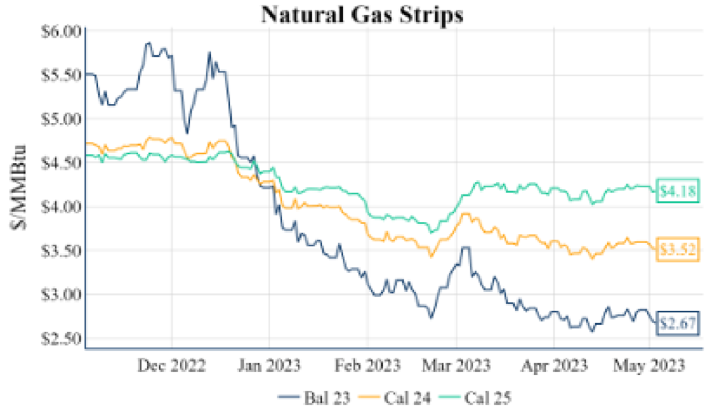
Swap Pricing	Month 1	Summer 23	Winter 23/24	Summer 24	Winter 24/25
Henry Hub Fixed	$2.216	$2.321	$3.321	$3.138	$4.086
Eastern Gas South	-$0.872	-$1.108	-$0.834	-$0.903	-$0.869
Waha	-$0.874	-$0.929	-$0.660	-$0.957	-$0.637
TETCO M3	-$0.740	-$1.074	$1.793	-$0.773	$1.348
Houston Ship Channel	-$0.156	-$0.244	-$0.123	-$0.308	-$0.067
Columbia Gulf Mainline	-$0.278	-$0.405	-$0.289	-$0.275	-$0.240
Panhandle East	-$0.341	-$0.450	$0.139	-$0.417	$0.092
NGPL MidCon	-$0.294	-$0.381	$0.076	-$0.368	$0.007
SoCal	$1.346	$1.533	$2.069	$0.698	$1.584
AECO	-$1.120	-$1.044	-$1.175	-$1.274	-$1.267
Chicago City-Gates	-$0.162	-$0.267	$0.398	-$0.231	$0.363

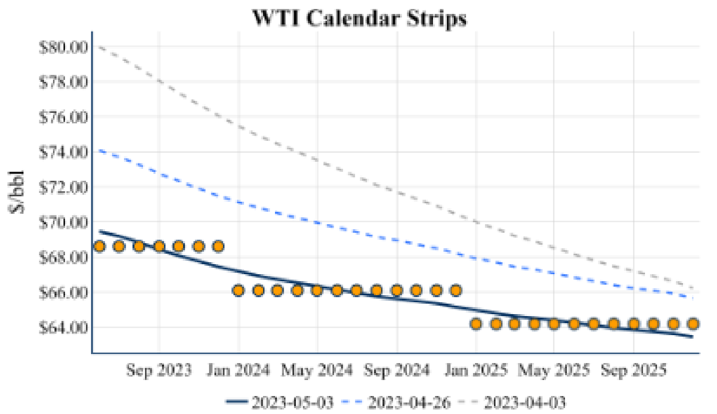
Longreach Energy Holdings LLC

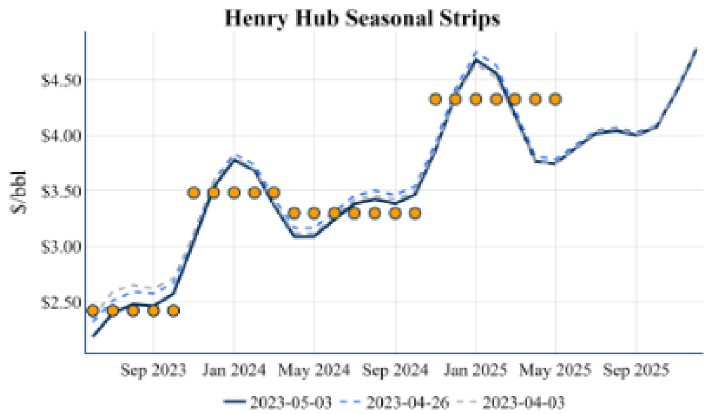
LONGREACH ENERGY

Gas and Oil Prices 3 May 2023









Swap Pricing	Bal 23	Cal 24	Cal 25	Cal 26
NYMEX WTI	$68.59	$66.10	$64.18	$62.58
ICE Brent	$72.37	$70.31	$68.84	$67.71
LLS	$70.59	$68.22	$66.77	$65.32
Mars	$66.89	$64.08	$61.80	$60.38
West TX Sour (WTS)	$67.91	$65.37	$63.29	$61.48

Swap Pricing	Month 1	Summer 23	Winter 23/24	Summer 24	Winter 24/25
Henry Hub Fixed	$2.190	$2.428	$3.489	$3.302	$4.326
Eastern Gas South	-$0.676	-$0.921	-$0.850	-$0.974	-$0.998
Waha	-$1.204	-$1.240	-$0.986	-$1.090	-$0.633
TETCO M3	-$0.511	-$0.666	$2.903	-$0.250	$2.529
Houston Ship Channel	-$0.221	-$0.251	-$0.077	-$0.342	-$0.128
Columbia Gulf Mainline	-$0.267	-$0.358	-$0.317	-$0.349	-$0.315
Panhandle East	-$0.334	-$0.421	$0.118	-$0.401	$0.143
NGPL MidCon	-$0.334	-$0.371	-$0.007	-$0.461	-$0.046
SoCal	$1.229	$2.086	$3.134	$1.450	$2.523
AECO	-$0.800	-$1.122	-$1.127	-$1.219	-$1.119
Chicago City-Gates	-$0.206	-$0.256	$0.419	-$0.255	$0.317

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