Guinness Global Energy

Investment Commentary – February 2024

RISK

This is a marketing communication. Please refer to the prospectuses, KIDs and KIIDs for the Funds, which contain detailed information on their characteristics and objectives, before making any final investment decisions.

The Funds are equity funds. Investors should be willing and able to assume the risks of equity investing. The value of an investment and the income from it can fall as well as rise as a result of market and currency movement, and you may not get back the amount originally invested. Further details on the risk factors are included in the Funds' documentation, available on our website.

Past performance does not predict future returns.

ABOUT THE STRATEGY

Launch	31.12.1998
Index	MSCI World Energy
Sector	IA Commodity/Natural Resources
Managers	Will Riley Jonathan Waghorn Tim Guinness
EU Domiciled	Guinness Global Energy Fund
UK Domiciled	WS Guinness Global Energy Fund

INVESTMENT POLICY

The Guinness Global Energy Funds invest in listed equities of companies engaged in the exploration, production and distribution of oil, gas and other energy sources. We believe that over the next twenty years the combined effects of population growth, developing world industrialisation and diminishing fossil fuel supplies will force energy prices higher and generate growing profits for energy companies. The Funds are actively managed and use the MSCI World Energy Index as a comparator benchmark only.

CONTENTS

COMMENTARY

OIL

Brent/WTI rise on Iran sanction concerns

Brent and WTI spot oil prices were up $5/bl and $4/bl over January as concerns grew around escalating tensions in the Middle East. Attacks by Iranian-backed Houthi militia resulted in the death of three US servicemen, prompting concerns that stricter enforcement of Iranian sanctions could remove barrels from international markets. Five-year forward prices were up by $2-3/bl, with Brent closing January at $70/bl and WTI at $64/bl.

NATURAL GAS

Asian/European prices lower on mild winter

Asian and European gas prices (using UK national balancing point) ended January around $1/mcf and $2/mcf lower, both falling to $9.5/mcf, whilst the US spot price (Henry Hub) fell from $2.5/mcf to $2.1/mcf. The Northern hemisphere is in the middle of its heating season and, outside of the recent cold snap in the US, mild winters have led to relatively soft demand, while inventories and supply remain high.

EQUITIES

Energy underperforms the broad market in January

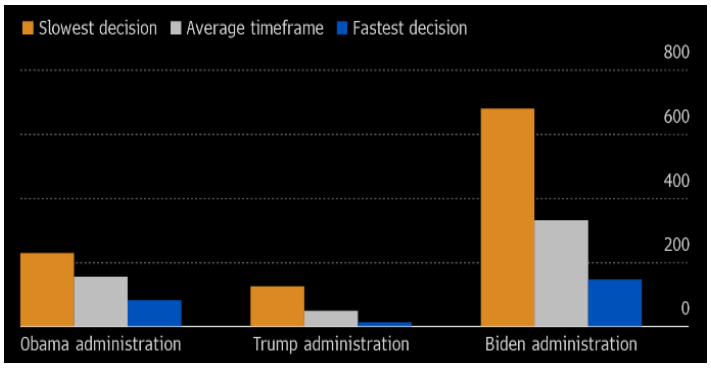
The MSCI World Energy Index (net return) fell by 1.0% in January, underperforming the MSCI World Index (net return) which rose by 1.2% over the month (all in USD).

CHART OF THE MONTH

US LNG exports held back by Biden

Not only did the Biden administration announce a pause on approvals for new US liquefied natural gas (LNG) projects in January, it has also been significantly slower to approve LNG projects than the prior Trump and Obama administrations, constraining LNG export growth to international markets.

Duration of LNG approval decisions (days)

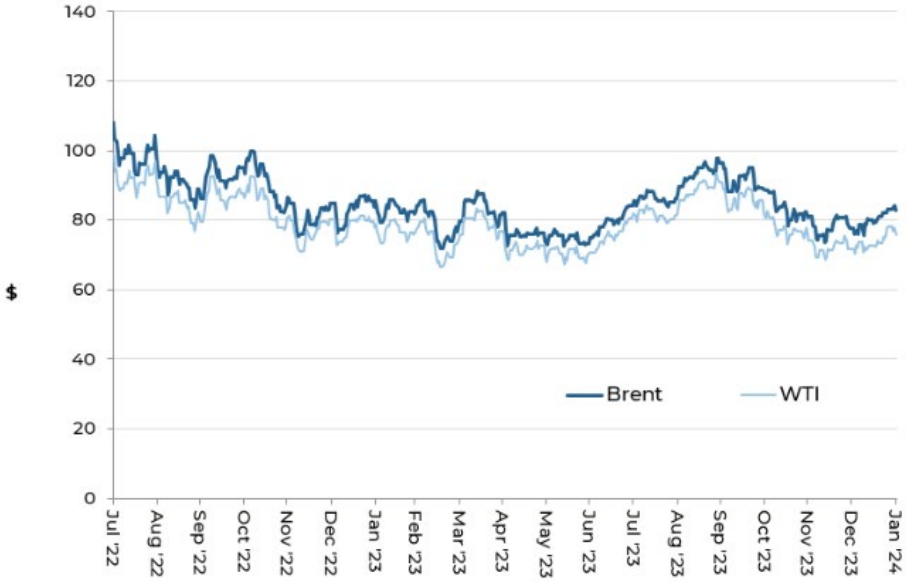


Source: Bloomberg, DOE, FERC, LNG Alies, January 2024

JANUARY IN REVIEW

i) Oil market

Oil price (WTI and Brent $/barrel): August 2022 to January 2024



Source: Bloomberg; Guinness Global Investors

The West Texas Intermediate (WTI) oil price began January at $72/bl then rose over the month before closing at $76/bl. WTI has averaged $74/bl so far this year, having averaged $78/bl in 2023 and $95/bl in 2022. Brent oil traded in a similar shape, opening at $78/bl and rose over the month before closing at $83/bl. Brent has averaged $80/bl so far in 2024, having averaged $83/bl in 2023 and $100/bl in 2022. The gap between the WTI and Brent benchmark oil prices widened over the month, ending January at $6.9/bl. The Brent-WTI spread has averaged $6.3/bl so far in 2024 after averaging $5.0/bl in 2023.

Factors which strengthened WTI and Brent oil prices in January:

- **Saudi Arabia maintaining voluntary production cut, backed by Russia**

In early September, Saudi and Russia announced that they would continue the voluntary production cuts (entered into in July), to the end of the year. In November, we saw those cuts maintained, despite higher oil prices. Lower Saudi and Russian production during the third and fourth quarters, at a time when oil demand growth has been robust, has kept the market undersupplied. Saudi continued to limit its production in January and announced that it was dropping its plans to boost production capacity by 1.0m b/day to 13m b/day by 2027.

- **Middle East conflict / Iranian sanction concerns**

In response to Israel's invasion of the Gaza strip in October, Iranian-backed Houthi rebels launched drone and missile attacks on Israel. In November and December, the Houthis attacked dozens of commercial ships with drones and missiles, leading to the rerouting of container ships to avoid the Suez Canal. Trade disruption prompted the UK and US to carry out strikes against the Houthis in January, and the Houthis' recent retaliation resulted in the death of three US servicemen in a drone attack in Jordan. This will put President Biden under intensifying pressure to confront Iran directly, potentially leading to tighter enforcement of sanctions.

Factors which weakened WTI and Brent oil prices in January:

- **Weak Chinese macro**

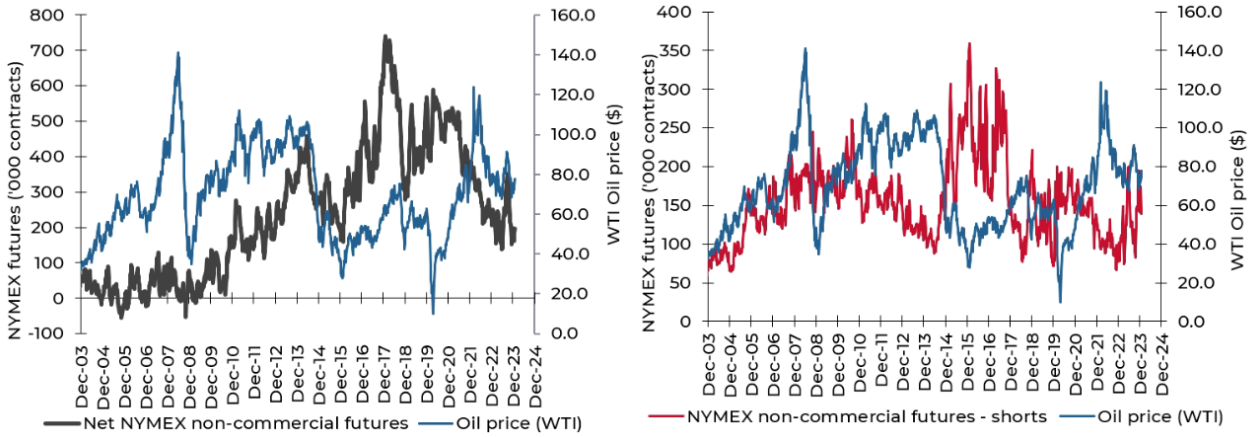
China's manufacturing activity logged a weak start to 2024, contracting for the ninth time in the past 10 months and dulling expectations of a rebound in the country's crude demand. Figures were slightly higher than December but nevertheless

continue to show a slowing economy weighed down by a long-running property downturn. In the month, China's property giant Evergrande Group was ordered to liquidate, reinforcing a bleak outlook on China's real estate sector and in turn its oil demand outlook.

Speculative and investment flows

The New York Mercantile Exchange (NYMEX) net non-commercial crude oil futures open position was 197,000 contracts long at the end of January versus 199,000 contracts long at the end of December. The net position peaked in February 2018 at 739,000 contracts long. Typically, there is a positive correlation between the movement in net position and movement in the oil price. The gross short position decreased to 139,000 contracts at the end of January versus 142,000 at the end of the previous month.

NYMEX Non-commercial net and short futures contracts: WTI January 2004 – January 2024

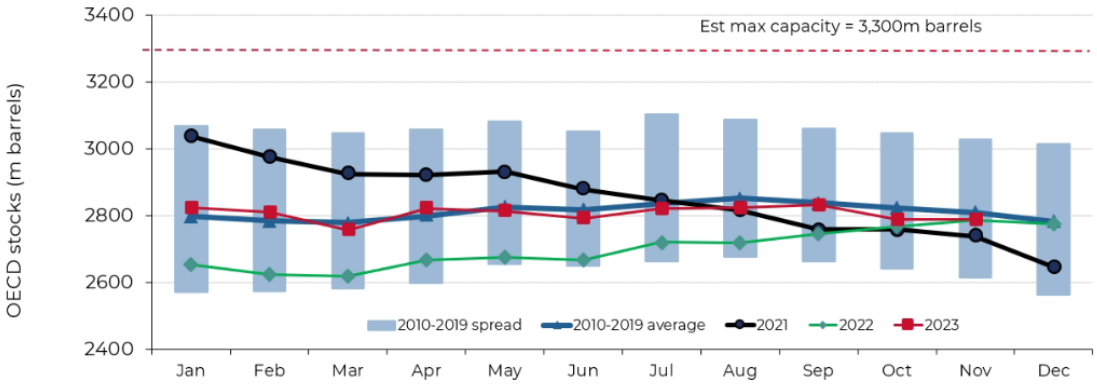


Source: Bloomberg LP/NYMEX/ICE (2024)

OECD stocks

OECD total product and crude inventories at the end of November (latest data point) were estimated by the International Energy Agency (IEA) to be 2,790m barrels, up 1m barrels versus the level reported for the previous month. The rise in November compares to a 10-year average decrease of 9m barrels, implying that the OECD market was about 0.3m b/day oversupplied. The significant oversupply situation in 2020 pushed OECD inventory levels close to maximum capacity in August 2020 (c3.3bn barrels), with subsequent tightening taking inventories below normal levels. Despite remaining flat for the first half of 2022, inventories began to build again from June onwards, leading to levels currently sitting close to the 10-year average.

OECD total product and crude inventories, monthly, 2010 to 2023



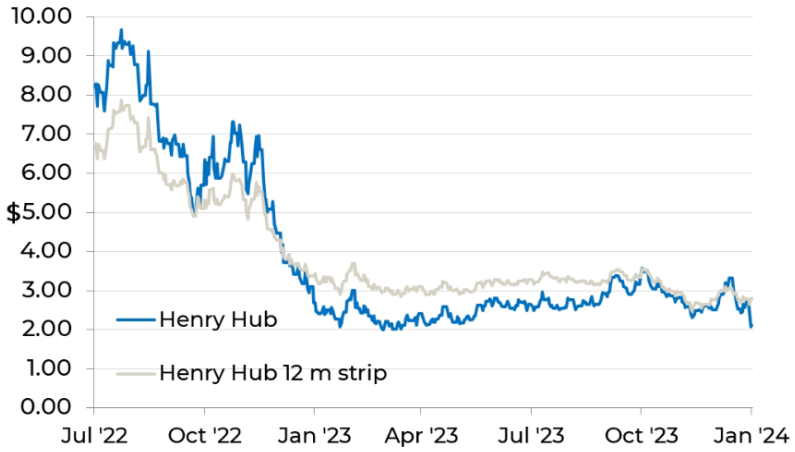
Source: IEA Oil Market Reports (January 2024 and older)

ii) Natural gas market

The US natural gas price (Henry Hub front month) opened January at $2.51/mcf (1,000 cubic feet) and traded higher to a peak of $3.31/mcf in the middle of the month, before falling to close at $2.10/mcf. The spot gas price has averaged $2.77/mcf so far in 2024, having averaged $2.67/mcf in 2023 and $6.52/mcf in 2022.

The 12-month gas strip price (a simple average of settlement prices for the next 12 months' futures prices) traded in a similar pattern, opening at $2.76/mcf, trading higher to a peak of $3.09/mcf on the 9th November, before falling to close at $2.79/mcf. The strip price has averaged $2.88/mcf so far in 2024, having averaged $3.19 in 2023 and $5.90 in 2022.

Henry Hub gas spot price and 12m strip ($/Mcf): July 2022 to January 2024



Source: Bloomberg LP

Factors which strengthened the US gas price in January included:

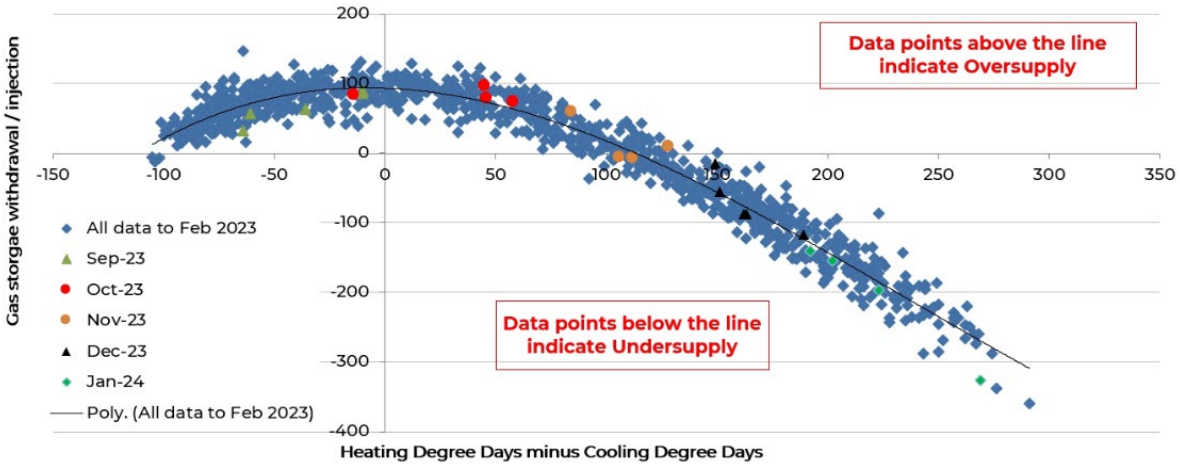
- **Falling rig count**

The number of rigs drilling for natural gas in the US has fallen from 160 rigs in the middle of 2022 to 117 rigs at the end of January 2024. This has increased confidence in the market that the US will not suffer too much oversupply, despite production rising this year in some of the key basins (Marcellus; Permian).

- **Market undersupplied (ex-weather effects)**

The withdrawal season started in the US gas market during January. Adjusting for the impact of weather, the inventory draws implied that the US gas market was, on average, around 1.5 Bcf/day undersupplied.

Weather-adjusted US natural gas inventory injections and withdrawals



Source: Bloomberg LP; Guinness Global Investors, to 31 January 2024

Factors which weakened the US gas price in January included:

- **Rising onshore production**

Despite the fall in the gas drilling rig count since 2022, US production rose by just over 3.0 Bcf/day in 2023 to 100.9 Bcf/day and is expected to grow to 101.7 Bcf/day in 2024. Production growth in recent quarters has slowed, but the overall rise in supply has outpaced demand growth over this period.

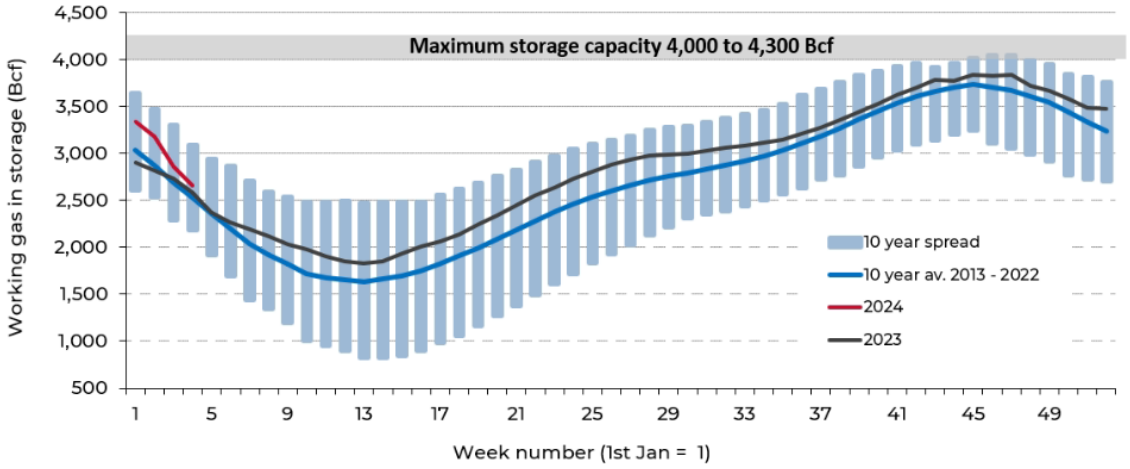
- **Lower LNG exports**

A mild winter in Europe, combined with inventories running at 74% of capacity, 15% above normal levels, suggests lower international demand for US LNG exports over the coming months. At the same time, outages at the US's second-largest LNG exporter Freeport saw natural gas exports fall in January from record December levels. Weaker exports are set to continue into February with Freeport expecting one of three liquefaction trains to experience a month-long outage due to technical issues.

Natural gas in inventories in the US

US natural gas inventories have been running higher than seasonal norms, driven by a warmer than expected winter and early spring that has brought lower-than-expected heating demand. Inventories levels moved towards the 5-year average, ending January at around 2.7 Tcf (c.0.1 Tcf above the 10 year average).

Deviation from 10yr US gas storage norm



Source: Bloomberg; EIA (January 2024)

MANAGERS' COMMENTS

At the start of January we published an outlook piece for the year ahead. Here, we take the opportunity to provide updated comment on a number of the points made (reproduced in italics), in light of recent developments:

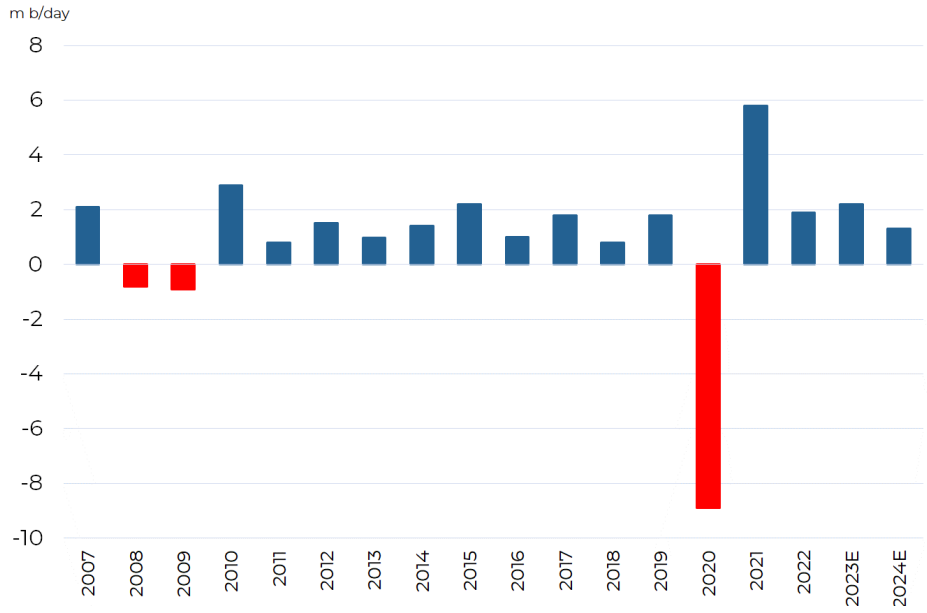
- ***The path for oil demand*** *will be less affected by COVID than last year, as COVID-related distortions fade. The IEA estimate demand growth of 1.1m b/day (to 102.8m b/day) with the non-OECD up by 1.3m b/day and the OECD down by 0.2m b/day. China is expected to deliver the largest oil demand growth of 0.8m b/day, with India in distant second. Even with electric vehicles approaching 20% sales penetration this year, we continue to see global oil demand growing until around 2030, reaching a peak of somewhere between 105-110m b/day.*

In their January report, the IEA upgraded their estimate for global oil demand growth in 2023 from 1.1m b/day to 1.3m b/day. The main drivers of the upgrade were higher than previously expected consumption in the US and the Middle East. Petrochemical feedstocks, including ethane and naphtha, are key parts of the demand growth mix.

At the start of February, the Energy Information Administration (EIA) published the formal monthly US oil demand for November 2023. Total US demand was reported as 20.7m b/day, higher than initial estimates and 0.5m b/day higher than November 2022.

Overall, we expect global oil demand to be further boosted by world GDP forecasts, which are trending higher. At the end of January, for example, the IMF revised global GDP growth in 2024 to 3.1%, up from 2.9%, as forecasted in October 2023.

Global oil demand: year-on-year change (m b/day)



Source: IEA estimates; Guinness Global Investors

- ***OPEC continues to signal a high degree of flexibility*** *in 2024 to adjust their production, thereby attempting to put a 'soft' floor under oil prices should the supply/demand balance falter. We believe the oil price desired by OPEC is at around $80/bl, though they will accept a higher outcome if it does not destabilise the global economy.*

Preliminary data for January shows OPEC production (ex Angola, which left the group on 1st January 2024) falling by around 0.5m b/day versus the previous month. The majority of the supply cut was signalled by the group at their most recent meeting in early December, though it was amplified by 0.1m b/day of decline in Libya owing to political disruption.

Saudi are closely watching tensions in the Middle East, including the recent US/UK bombing of Houthi rebels in southern Yemen. Around 8-9m b/day of crude oil and oil product normally flows through the Red Sea and Bab al-Mandab Strait, but risks being diverted around Africa due to Houthi attacks on shipping in the area. With US/Iranian tensions rising, there is also the concern around the accessibility of the Strait of Hormuz, a 21 mile wide stretch of water that connects Iran to the UAE and Oman. Typically, the Strait of Hormuz sees around 20% of world oil supply pass through it each day, with any closure bringing significant disruption to the world oil balance.

- We expect slower **growth from US shale production**, with average production by around 0.4m b/day versus 2023. Improving capital efficiency continues to be promoted over growth by shale oil producers. Non-OPEC (ex US shale) supply will move moderately higher in 2024, led by Brazil, Guyana and Canada.

Latest data from the EIA for oil production indicates that US production (onshore and offshore) rose to an all-time high of 13.1m b/day, up by 0.9m b/day year-on-year. This was in line with expectations.

Brazil, Canada and Guyana are also producing at record levels and together with the US are expected to contribute over 90% of non-OPEC+ supply growth in 2024.

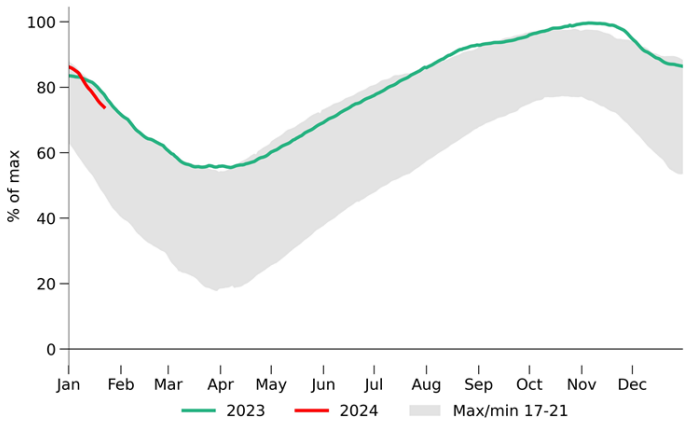
Overall, we expect capital discipline to be maintained this year among US onshore producers, with a continued emphasis on dividends, buybacks and debt paydowns. We continue to see average US onshore production rising by around 0.4m b/day, well below the growth rate for 2023.

- ***For natural gas, an international price range of $10-14/mcf*** *should be sufficient to incentivise new US and Qatari LNG supply sources to come online from 2025. It would also allow Europe to displace permanently almost all its Russian gas imports. An international gas price in the $10-14/mcf is well down on the highs seen in 2022, but would leave the market at a c.50% higher price point than that seen in the few years prior to COVID and the Russian invasion of Ukraine.*

Warmer weather in Europe overall this winter has lowered heating demand for natural gas and kept inventory levels well above the seasonal norm. European gas inventories currently stand around 15% above normal levels, putting the region in a comfortable place to get through the rest of winter with adequate gas in storage.

Qatari and Russian LNG shipments are currently avoiding the Bab al-Mandab Strait, though longer sailing distances are not proving to be significant problem thanks to high levels of gas in inventory.

European gas inventories (% of capacity)



Source: DNB, February 2024

- ***Despite the strength of the energy sector in 2022, energy equity valuations remain attractive.*** *The MSCI World Energy Index now trades on a price to book ratio of 1.7x, versus the S&P500 at 4.5x. The relative P/B of energy vs the S&P500 remains more than two standard deviations below the long-term relationship. Most oil and gas companies continue to promote capital discipline over organic growth, manifested in lower levels of debt and a return of free cash to shareholders. Assuming a $80/bl Brent oil price, we forecast an average free cashflow yield for our portfolio in 2024 of around 11%. Energy equities offer good upside if our oil price, profitability*

and free cashflow scenarios play out. We believe energy equities currently discount an oil price of around $65/bl. Adopting $80/bl Brent as a long-term oil price (consistent with the bottom end of OPEC's desired range), we see 30-35% upside across the energy complex.

The energy sector (MSCI World Energy Index) was down by 1.0% in USD in January, underperforming the MSCI World and S&P500 which were up by 1.2% and 1.6%. The performance over the month leaves the energy sector on a price to book ratio of 1.7x, versus the S&P500 at 4.6x.

Initial fourth quarter earnings results are reinforcing the concept that free cashflow remains a priority for oil & gas companies, supporting strong cashflow yields. Shell, for example, announced last week that it was raising its dividend by 4% whilst maintaining a high level of share buybacks. By our estimates, Shell offers cash returns in 2024 of over 11%. With large positions in the Permian and Guyana, US majors Chevron and Exxon have a greater emphasis than European peers on production growth, though capital spending is not expected to be much different to 2023, leaving space for ample free cash.

PERFORMANCE

The main index of oil and gas equities, the MSCI World Energy Index (net return), decreased by 1.0% in January, while the MSCI World Index (net return) rose by 1.2% in USD.

Within the portfolio, January's strongest performers included PetroChina, Valero, GALP, Suncor and Repsol while the weakest performers included Diversified Energy, Baker Hughes, Equinor, Devon and Schlumberger.

Past performance does not predict future returns.

Guinness Global Energy Fund
Performance (in USD) as at 31.01.2024

Cumulative returns	YTD	1 year	3 years ann.	5 years ann.	Launch of strategy* ann. (31.12.98)		
Guinness Global Energy Fund	-1.4%	-2.4%	23.2%	4.3%	8.1%		
MSCI World Energy NR Index	-1.0%	-1.5%	26.4%	7.5%	6.2%		
Calendar year returns	**2023**	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**
Guinness Global Energy Fund	2.6%	32.4%	44.5%	-34.7%	9.8%	-19.7%	-1.3%
MSCI World Energy NR Index	2.5%	46.0%	40.1%	-31.5%	11.4%	-15.8%	5.0%
	2016	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**
Guinness Global Energy Fund	27.9%	-27.6%	-19.1%	24.4%	3.0%	-13.7%	15.3%
MSCI World Energy NR Index	26.6%	-22.8%	-11.6%	18.1%	1.9%	0.2%	11.9%
	2009	**2008***	**2007***	**2006***	**2005***	**2004***	**2003***
Guinness Global Energy Fund	61.8%	-48.2%	37.9%	10.0%	62.3%	41.0%	32.3%
MSCI World Energy NR Index	26.2%	-38.1%	29.8%	17.9%	28.7%	28.1%	25.9%
	2002*	**2001***	**2000***	**1999***			
Guinness Global Energy Fund	6.7%	-4.1%	39.6%	22.5%			
MSCI World Energy NR Index	-6.4%	-7.2%	6.0%	22.0%			

Source: FE fundinfo, Guinness Global Investors and Bloomberg, bid to bid, gross income reinvested, in US dollars

Calculation by Guinness Global Investors, *Simulated past performance prior to 31.3.08, launch date of Guinness Global Energy Fund. The Guinness Global Energy investment team has been running global energy funds in accordance with the same methodology continuously since December 1998. These returns are calculated using a composite of the Investec GSF Global Energy Fund class A to 29.2.08 (managed by the Guinness team until this date); the Guinness Atkinson Global Energy Fund (sister US mutual fund) from 1.3.08 to 31.3.08 (launch date of this Fund), the Guinness Global Energy Fund class A (1.49% OCF) from launch to 02.09.08, and class Y (0.99% OCF) thereafter. Returns for share classes with a different OCF will vary accordingly.

Investors should note that fees and expenses are charged to the capital of the Fund. This reduces the return on your investment by an amount equivalent to the Ongoing Charges Figure (OCF). The fund performance shown has been reduced by the current OCF of 0.99% per annum. Returns for share classes with different OCFs will vary accordingly. Performance returns do not reflect any initial charge; any such charge will also reduce the return.

Past performance does not predict future returns.

WS Guinness Global Energy Fund
Performance (in GBP) as at 31.01.2024

Cumulative returns	YTD	1 year	3 years ann.	5 years ann.		
WS Guinness Global Energy Fund	-1.3%	-5.7%	26.3%	4.9%		
MSCI World Energy NR Index	-0.9%	-4.8%	29.6%	8.2%		

Calendar year returns		2023	2022	2021	2020	2019
WS Guinness Global Energy Fund		-3.2%	49.9%	45.7%	-35.7%	12.6%
MSCI World Energy NR Index		-3.3%	64.4%	41.4%	-33.6%	7.2%
	2018	2017	2016	2015	2013	2012
WS Guinness Global Energy Fund	-6.3%	-7.2%	65.2%	-29.6%	-26.6%	-4.7%
MSCI World Energy NR Index	-10.6%	-4.1%	51.0%	-18.3%	-6.1%	15.9%

Source: FE fundinfo, bid to bid, gross income reinvested, in GBP

Investors should note that fees and expenses are charged to the capital of the Fund. This reduces the return on your investment by an amount equivalent to the Ongoing Charges Figure (OCF). The fund performance shown has been reduced by the current OCF of 0.96% per annum. Returns for share classes with different OCFs will vary accordingly. Performance returns do not reflect any initial charge; any such charge will also reduce the return. Fund launched 21.04.2011.

PORTFOLIO

Buys/Sells

In January there were no buys or sells of full positions.

Sector Breakdown

The following table shows the asset allocation of the Guinness Global Energy Fund at **January 31 2024**.

Asset allocation as %NAV	Current	*Change*	Last year end	Previous year ends							
	Jan-24		Dec-23	Dec-22	Dec-21	Dec-20	Dec-19	Dec-18	Dec-17	Dec-16	Dec-15	Dec-14
Oil & Gas	**98.6%**	**-0.3%**	**98.9%**	**97.4%**	**96.9%**	**94.8%**	**98.3%**	**96.7%**	**98.4%**	**96.7%**	**95.1%**	**93.7%**
Integrated	55.1%	*0.4%*	54.7%	54.7%	57.7%	56.3%	51.1%	46.4%	42.9%	46.4%	41.5%	37.3%
Exploration & Production	22.8%	*-0.4%*	23.2%	23.1%	23.7%	22.2%	29.6%	35.8%	36.9%	35.8%	36.5%	36.2%
Drilling	0.0%	*0.0%*	0.0%	0.0%	0.0%	0.0%	0.1%	2.2%	1.9%	2.2%	1.5%	3.3%
Equipment & Services	9.4%	*-0.6%*	10.0%	9.0%	4.0%	4.6%	9.6%	8.6%	9.5%	8.6%	11.4%	13.4%
Storage & Transportation	4.9%	*-0.1%*	5.0%	4.8%	4.3%	4.4%	4.0%	0.0%	3.5%	0.0%	0.0%	0.0%
Refining & Marketing	6.3%	*0.4%*	6.0%	5.8%	7.2%	7.3%	3.8%	3.7%	3.7%	3.7%	4.2%	3.5%
Solar	0.1%	*-0.1%*	0.2%	0.7%	1.0%	1.8%	0.7%	0.9%	1.4%	0.9%	4.7%	3.7%
Coal & Consumable Fuels	0.0%	*0.0%*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Construction & Engineering	0.0%	*0.0%*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	1.2%	*0.4%*	0.9%	1.9%	2.1%	3.3%	1.1%	2.4%	0.2%	2.4%	0.2%	2.6%

Source: Guinness Global Investors. Basis: Global Industry Classification Standard (GICS)

The Fund at end of January 2024 was on a price to earnings ratio (P/E) for 2024/2025 of 8.8x/8.6x versus the MSCI World Index at 18.1x/16.4x as set out in the following table:

As at 31 January 2024	P/E		
	2023	2024E	2025E
Guinness Global Energy Fund	8.6x	8.8x	8.6x
MSCI World Index	18.8x	18.1x	16.4x
Fund Premium/(Discount)	*-54%*	*-51%*	*-48%*

Source: Bloomberg; Guinness Global Investors

Portfolio holdings

Our integrated and similar stock exposure (c.55%) is comprised of a mix of mid-cap, mid/large-cap and large-cap stocks. Our five large caps are Chevron, BP, ExxonMobil, Shell and TotalEnergies. Mid/large and mid-caps are ENI, Equinor, GALP, Repsol and OMV. At January 31 2024 the median P/E ratio of this group was 7.4x 2024 earnings. We also have three Canadian integrated holdings, Suncor, Cenovus and Imperial Oil. All three companies have significant exposure to oil sands in addition to downstream assets.

Our exploration and production holdings (c.23%) give us exposure most directly to rising oil and natural gas prices. We include in this category non-integrated oil sands companies, as this is the GICS approach. The stock here with oil sands exposure is Canadian Natural Resources. The pure E&P stocks have a bias towards the US (EOG, Diamondback, Pioneer and Devon), with one other name (ConocoPhillips) having a mix of US and international production. One of the key metrics behind a number of the E&P stocks held is low enterprise value / proven reserves.

We have exposure to two emerging market stocks, Petrochina and Sinopec, which in total represent around 3.5% of the portfolio.

The portfolio contains two midstream holdings, Enbridge and Kinder Morgan, two of North America's largest pipeline companies. With the growth of hydrocarbon demand expected in the US and Canada over the next five years, we believe both companies are well placed to execute their pipeline expansion plans.

We have reasonable exposure to oil service stocks, which comprise around 9% of the portfolio. The stocks we own provide exposure to both North American and international oil and natural gas development.

Our independent refining exposure is currently in the US in Valero, the largest of the US refiners. Valero has a reasonably large presence on the US Gulf Coast and is benefitting from a recovery in refining margins.

Portfolio at December 31 2023 (for compliance reasons disclosed one month in arrears)

Guinness Global Energy Fund (31 December 2023)			P/E			EV/EBITDA			Price/Book			Dividend Yield		
Stock	**ISIN**	**% of NAV**	**2022**	**2023E**	**2024E**	**2022**	**2023E**	**2024E**	**2022**	**2023E**	**2024E**	**2022**	**2023E**	**2024E**
Integrated Oil & Gas														
Exxon Mobil Corp	US30231G1022	5.2%	7.1x	10.8x	10.7x	4.7x	5.8x	5.6x	2.0x	2.0x	1.7x	3.6%	3.7%	3.8%
Chevron Corp	US1667641005	4.6%	7.8x	11.1x	10.6x	5.0x	5.8x	5.5x	1.7x	1.7x	1.7x	3.8%	4.1%	4.3%
Shell PLC	GB00BP6MXD	5.4%	5.9x	8.0x	7.6x	3.1x	3.7x	3.9x	1.1x	1.1x	1.0x	3.2%	3.9%	4.2%
Total SA	FR0000120271	5.3%	4.4x	6.8x	7.0x	3.0x	3.6x	3.8x	1.4x	1.4x	1.2x	4.4%	4.6%	4.9%
BP PLC	GB0007980591	4.8%	5.6x	7.2x	6.4x	4.9x	3.3x	3.3x	1.4x	1.4x	1.2x	4.0%	4.7%	5.1%
Equinor ASA	NO0010096985	3.6%	3.9x	8.1x	8.0x	1.0x	1.9x	1.9x	1.9x	2.0x	2.0x	2.8%	11.1%	8.4%
ENI SpA	IT0003132476	3.7%	4.0x	6.0x	6.3x	2.8x	3.0x	3.1x	1.0x	0.9x	0.8x	5.5%	6.1%	6.3%
Repsol SA	ES0173516115	3.6%	3.4x	3.7x	4.7x	3.2x	2.5x	2.7x	0.7x	0.6x	0.6x	5.0%	5.5%	5.9%
Galp Energia SGPS SA	PTGAL0AM00	3.5%	13.9x	11.3x	10.4x	3.7x	3.6x	3.9x	2.6x	2.5x	2.3x	3.7%	4.0%	4.0%
OMV AG	AT0000743059	2.8%	3.9x	5.0x	5.4x	1.8x	2.9x	3.0x	0.9x	0.7x	0.7x	12.1%	10.9%	9.4%
		42.5%												
Integrated / Oil & Gas E&P - Canada														
Suncor Energy Inc	CA8672241079	3.6%	5.2x	8.2x	7.7x	2.9x	4.1x	4.2x	1.4x	1.3x	1.2x	4.5%	4.9%	5.2%
Canadian Natural Resources Ltd	CA1363851017	3.8%	9.1x	11.7x	10.8x	4.6x	6.1x	5.8x	2.4x	2.4x	2.3x	5.4%	4.3%	4.7%
Cenovus Energy Inc	CA15135U1093	3.2%	6.8x	8.9x	7.3x	3.4x	4.2x	3.8x	1.5x	1.4x	1.3x	0.5%	2.4%	2.7%
Imperial Oil Ltd	CA4530384086	3.6%	6.7x	8.9x	8.1x	3.7x	5.0x	5.1x	1.8x	1.9x	1.6x	2.0%	2.5%	2.7%
		14.2%												
Integrated Oil & Gas - Emerging market														
PetroChina Co Ltd	CNE1000003W	1.9%	3.8x	5.1x	5.2x	3.2x	3.5x	3.5x	0.6x	0.6x	0.6x	9.5%	9.7%	9.1%
		1.9%												
Oil & Gas E&P														
ConocoPhillips	US20825C1045	4.8%	8.6x	13.1x	11.8x	4.4x	5.8x	5.5x	2.9x	2.9x	2.7x	4.3%	1.8%	2.4%
EOG Resources Inc	US26875P1012	3.5%	5.3x	10.1x	9.5x	5.0x	5.3x	5.0x	2.5x	2.5x	2.2x	7.3%	4.8%	5.5%
Diamondback Energy Co	US25278X1090	3.8%	6.4x	8.4x	7.7x	4.8x	5.4x	5.1x	1.7x	1.7x	1.5x	7.3%	4.9%	3.8%
Pioneer Natural Resources Co	US7237871071	3.7%	7.4x	10.6x	9.8x	4.5x	5.8x	5.5x	2.3x	2.3x	2.1x	11.3%	2.9%	2.8%
Devon Energy Corp	US25179M1036	2.8%	5.5x	7.8x	7.5x	3.1x	4.5x	4.4x	2.5x	2.4x	2.1x	11.4%	4.8%	4.8%
		18.7%												
International E&Ps														
Pharos Energy PLC	GB00B572ZV9	0.1%	8.7x	27.2x	4.0x	0.8x	1.3x	1.1x	0.4x	n/a	n/a	3.7%	2.9%	2.6%
		0.1%												
Midstream														
Kinder Morgan Inc	US49456B1017	2.3%	15.5x	16.1x	14.5x	11.3x	9.3x	8.8x	1.3x	1.3x	1.3x	6.3%	6.4%	6.6%
Enbridge Inc	CA29250N1050	2.7%	n/a	17.0x	17.3x	18.1x	10.9x	10.4x	n/a	1.7x	1.8x	n/a	7.4%	7.6%
		5.0%												
Equipment & Services														
Schlumberger Ltd	AN8068571086	3.4%	23.9x	17.5x	14.4x	11.0x	10.3x	8.9x	3.8x	3.6x	3.2x	1.4%	1.9%	2.0%
Halliburton Co	US4062161017	3.4%	19.5x	11.8x	10.5x	9.5x	7.4x	6.7x	3.5x	3.4x	2.8x	1.3%	1.8%	1.9%
Baker Hughes a GE Co	US05722G1004	2.1%	41.3x	21.5x	16.7x	15.1x	10.1x	8.5x	2.3x	2.2x	2.1x	2.1%	2.3%	2.3%
Helix Energy Solutions Group Inc	US42330P1075	1.0%	n/a	31.7x	15.3x	9.8x	5.7x	4.9x	1.0x	1.0x	1.0x	n/a	n/a	n/a
		10.0%												
Oil & Gas Refining & Marketing														
China Petroleum & Chemical Corp	CNE1000002Q	1.4%	8.0x	6.1x	5.6x	4.1x	4.1x	3.8x	0.6x	0.6x	0.5x	10.1%	10.3%	10.7%
Valero Energy Corp	US91913Y1001	4.5%	4.4x	5.3x	8.9x	2.8x	3.5x	5.4x	1.7x	1.7x	1.6x	3.0%	3.1%	3.3%
		6.0%												
Research Portfolio														
Deltic Energy PLC	GB00BNTY2N0	0.1%	n/a	n/a	n/a	n/a	n/a	n/a	0.9x	n/a	n/a	n/a	n/a	n/a
EnQuest PLC	GB00B635TG2	0.3%	n/a	3.6x	1.0x	1.2x	1.1x	1.0x	0.8x	0.7x	0.5x	n/a	2.6%	5.2%
Reabold Resources PLC	GB00B95L0557	0.0%	n/a	n/a	n/a	15.0x	n/a	n/a	0.2x	n/a	n/a	n/a	n/a	n/a
Sunpower Corp	US8676524064	0.2%	16.5x	n/a	n/a	19.5x	n/a	21.5x	2.0x	2.1x	2.3x	n/a	n/a	n/a
Maxeon Solar Technologies Ltd	SGXZ25336314	0.0%	n/a	n/a	n/a	n/a	34.5x	n/a	2.2x	3.1x	n/a	n/a	n/a	n/a
Diversified Energy Company	GB00BQHP5P	0.2%	n/a	1.7x	6.0x	n/a	4.1x	4.8x	1.3x	2.0x	3.1x	23.9%	24.7%	24.7%
		0.8%												
Cash	Cash	0.9%												

The Fund's portfolio may change significantly over a short period of time; no recommendation is made for the purchase or sale of any particular stock.

OUTLOOK

i) Oil market

The table below illustrates the difference between the growth in world oil demand and non-OPEC supply since 2015:

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024E
								IEA	*IEA*	*IEA*
World Demand	***95.3***	***96.4***	***98.2***	***99.5***	***100.7***	***91.8***	***97.5***	***99.5***	***101.7***	***103.0***
Non-OPEC supply (inc NGLs)	*62.1*	*61.5*	*62.5*	*65.0*	*67.0*	*64.4*	*64.7*	*66.8*	*69.1*	*70.4*
OPEC NGLs	*5.2*	*5.3*	*5.4*	*5.5*	*5.3*	*5.2*	*5.3*	*5.4*	*5.5*	*5.6*
Non-OPEC supply plus OPEC NGLs	**67.3**	**66.8**	**67.9**	**70.5**	**72.3**	**69.6**	**70.0**	**72.2**	**74.6**	**76.0**
Call on OPEC (crude oil)	**28.0**	**29.6**	**30.3**	**29.0**	**28.4**	**22.2**	**27.5**	**27.3**	**27.1**	**27.0**
Congo supply adjustment	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Gabon supply adjustment	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Eq Guinea supply adjustment	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Call on OPEC-9 (crude oil)	**27.4**	**29.0**	**29.7**	**28.4**	**27.8**	**21.6**	**26.9**	**26.7**	**26.5**	**26.4**

Source: Bloomberg; IEA; Guinness Global Investors, January 2024

Global oil demand in 2019 was 13m b/day higher than the pre-financial crisis (2007) peak. The demand picture for 2020, down by around 9m b/day, was heavily clouded by the impact of the COVID-19 virus and efforts to mitigate its spread. Demand recovered in 2021 and 2022 by around 6m and 2m b/day respectively, leaving overall consumption in 2022 still around 1m b/day below the 2019 peak.

OPEC

The last few years have proved testing for OPEC. They have tried to keep prices strong enough that OPEC economies are not running excessive deficits, whilst not pushing the price too high and over-stimulating non-OPEC supply.

The effect of $100+/bl oil, enjoyed for most of the 2011-2014 period, emerged in 2014 in the form of an acceleration in US shale oil production and an acceleration in the number of large non-OPEC (ex US onshore) projects reaching production. OPEC met in late 2014 and responded to rising non-OPEC supply with a significant change in strategy to one that prioritised market share over price. Post the November 2014 meeting, OPEC not only maintained their quota but also raised production significantly, up by 2.5m b/day over the subsequent 18 months. This contributed to an oversupplied market in 2015 and 2016.

In late 2016, faced with sharply lower oil prices, OPEC stepped back from their market share stance, announcing plans for the first production cut since 2008. The announcement included a cut in production from Russia (a non-OPEC country), creating for the first time the concept of an OPEC+ group. Late in 2023, Angola announced its intention to leave OPEC.

OPEC-9 oil production to January 2024

('000 b/day)	31-Dec-19	31-Dec-23	31-Jan-24	Current vs Dec 2019	Current vs last month
Saudi	9,730	9,000	**8,940**	-790	-60
Iran	2,080	3,160	**3,120**	1,040	-40
Iraq	4,610	4,330	**4,200**	-410	-130
UAE	3,040	3,110	**3,130**	90	20
Kuwait	2,710	2,550	**2,440**	-270	-110
Nigeria	1,820	1,490	**1,490**	-330	0
Venezuela	730	810	**820**	90	10
Libya	1,110	1,140	**1,020**	-90	-120
Algeria	1,010	950	**900**	-110	-50
OPEC-9	**26,840**	**26,540**	**26,060**	**-780**	**-480**

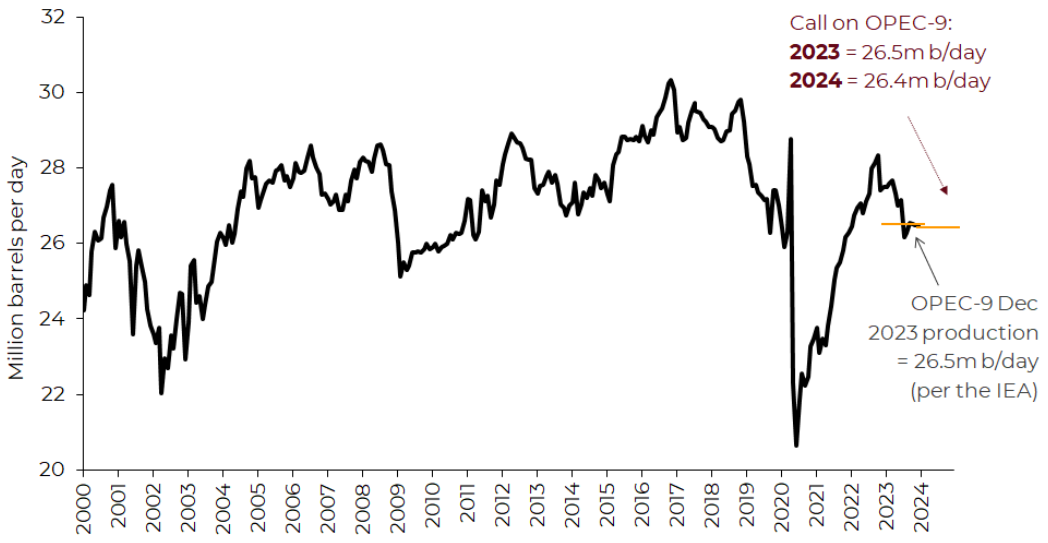
Source: Bloomberg; Guinness Global Investors

The 2017-19 period continued to be volatile for OPEC, with further production cuts necessary to balance ongoing non-OPEC supply growth.

The challenge for OPEC+ then ballooned in 2020 with the onset of COVID around the world. Initially, OPEC and their non-OPEC partners failed to reach agreement around their response to demand from the spread of the virus, precipitating a fall-out between participants and a short-lived price war. In light of extreme oil market oversupply, OPEC and non-OPEC partners reconvened in April 2020 and confirmed a deal to cut their production by nearly 10m b/day.

In July 2021, with demand largely recovered after COVID, the OPEC+ group agreed to taper their quota cuts at 0.4m b/day each month until September 2022. The actions of OPEC through the pandemic gave us confidence that OPEC was looking to do 'what it takes' to keep the market in balance, despite extreme challenges.

OPEC-9 apparent production vs call on OPEC 2000 – 2024



Source: IEA Oil Market Report (Jan 2024 and prior); Guinness estimates

OPEC's actions in recent years have generally demonstrated a commitment to delivering a reasonable oil price to satisfy their own economies but also to incentivise investment in long-term projects. Saudi's actions at the head of OPEC have been designed to achieve an oil price that to some extent closes their fiscal deficit (c.$80/bl is needed to close the gap fully), whilst not spiking the oil price too high and over-stimulating non-OPEC supply.

In the shorter term, the COVID-19 and Russia/Ukraine crises have created particularly challenging conditions, adding to oil price volatility. Longer-term, we believe that Saudi seek a 'good' oil price, one that satisfies their fiscal needs. Overall, we reiterate two important criteria for Saudi:

1. Saudi is interested in the average price of oil that they get; they have a longer investment horizon than most other market participants.

2. Saudi wants to maintain a balance between global oil supply and demand to maintain a price that is acceptable to both producers and consumers.

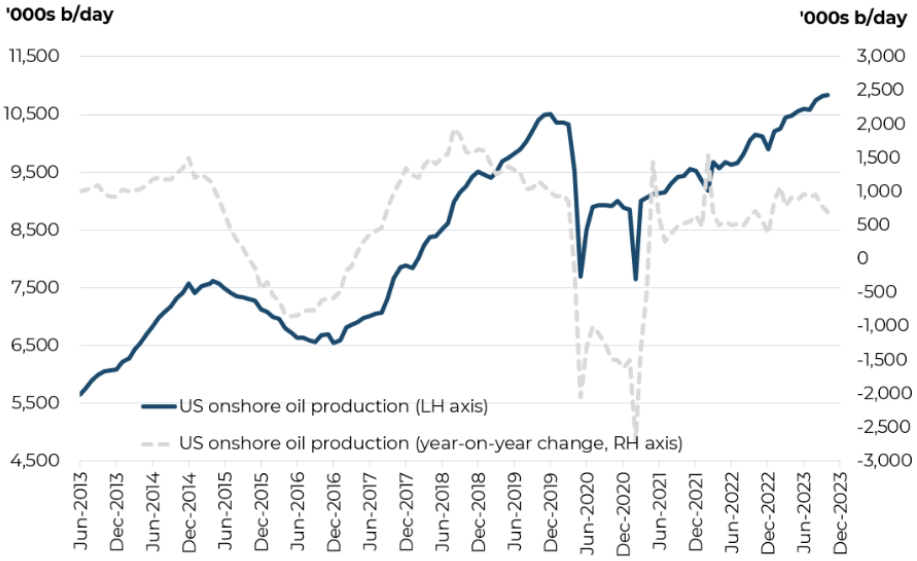
Nothing in the market in recent years has changed our view that OPEC can put a floor under the price – as they did in 2020, 2018, 2016, 2008, 2006, 2001 and 1998.

Supply looking forward

The non-OPEC world has, since the 2008 financial crisis, grown its production more meaningfully than in the period before 2008. The growth was 0.9% p.a. from 2001-2008, increasing to 1.6% p.a. from 2008-2022.

Growth in the non-OPEC region since the start of the last decade has been dominated by the development of shale oil and oil sands in North America (up around 8m b/day between since 2010), implying that the rest of the non-OPEC region has barely grown over this period, despite the sustained high oil price until mid-2014.

US onshore oil production



Source: EIA; Guinness Global Investors, January 2024

The growth in US shale oil production, especially the Permian Basin, raises the question of how much more there is to come and at what price. Our assessment is that US shale oil is capital-intensive but some growth is viable, on average, at around $70 oil prices. In particular, there appears to be ample inventory in the Permian Basin to allow growth into the mid-2020s. The rate of development is heavily dependent on the cashflow available to producing companies, which tends to be recycled immediately into new wells, and the underlying cost of services to drill and fracture the wells. Since 2019, we have seen increased shareholder pressure applied to US E&P companies to improve their capital discipline and to cut their reinvestment rates.

The collapse in oil prices at the start of 2020 to a level well below $50/bl changed the landscape, with US E&P companies reducing capital spending further as they attempted to live within their cashflows. Shale oil production dropped by nearly 3m b/day in 2020 (peak to trough) and has taken nearly three years to recover to the previous peak of late 2019.

Non-OPEC supply growth outside the US has been sustained in recent years, despite lower oil prices, with projects that were sanctioned before 2014 (when oil was $100/bl+) continuing to come onstream. However, with a lack of major project additions post 2020, new supply is only strong enough to offset the decline profiles of existing production, causing overall supply to stagnate.

Future demand

The IEA estimate that 2024 oil demand will rise by around 1.2m b/day to 103.0m b/day, around 2.3m b/day ahead of the 2019 pre-COVID peak. The global spread of the COVID virus initiated major restrictions on the movement of people which have now been reversed, but slower economic growth and the switch to passenger electric vehicles (EVs) is curtailing demand growth in certain sectors.

Post the COVID demand recovery and assuming typical economic growth, we expect the world to settle back into annual oil demand growth of plus or minus 1m b/day, led by increased use in the non-OECD region. China has been, and continues to be, the most important component of this growth, although signs are emerging that India will also grow rapidly.

The trajectory of global oil demand over the next few years will be a function of global GDP, the pace of the 'consumerisation' of developing economies, the development of alternative fuels, and price. At $75/bl, the world oil bill as a percentage of GDP is around 3%, and this will still be a stimulant of further demand growth. If oil prices were in a higher range (say around $100/bl, representing 4% of GDP), we would probably return to the pattern established over the past five years, with a flatter picture in the OECD more than offset by growth in the non-OECD area. Flatter OECD demand reflects improving oil efficiency over time, dampened by economic, population and vehicle growth. Within the non-OECD, population growth and rising oil use per capita will both play a significant part.

We keep a close eye on developments in the 'new energy' vehicle fleet (electric vehicles; hybrids etc). Sales of electric vehicles (pure electric and plug-in hybrid electrics) globally were around 14m in 2023, up from 10m in 2022 and 6m in 2021. We expect to see strong EV sales growth again in 2024, up to over 16m, around 20% of total global sales. Even applying an aggressive growth rate to EV sales, we see EVs comprising only around 3-4% of the global car fleet by the end of 2024. Looking further ahead, we expect the penetration of EVs to accelerate, causing global gasoline demand to peak at some point in the middle of the 2020s. However, owing to the weight of oil demand that comes from sources other than passenger vehicles (around 75%), which we expect to continue growing linked to GDP, we expect total oil demand not to peak until around 2030.

Conclusions about oil

The table below summarises our view by showing our oil price forecasts for WTI and Brent in 2024 versus recent history.

Average WTI & Brent yearly prices, and changes

Oil price																		*Est*
12 month MAV	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
WTI	72	100	62	80	95	94	98	93	49	43	51	65	57	39	68	94	78	79
Brent	73	99	63	80	111	112	109	99	54	45	55	72	64	43	71	99	83	83
Brent/WTI (12m MAV)	**73**	**99**	**62**	**80**	**103**	**103**	**103**	**96**	**51**	**44**	**53**	**68**	**61**	**41**	**70**	**97**	**80**	**81**
Brent/WTI y-on-y change	-3%	37%	-37%	28%	29%	0%	0%	-7%	-47%	-13%	19%	29%	-11%	-32%	68%	39%	-17%	1%
Brent/WTI (5yr MAV)	59	72	75	78	83	89	90	97	91	80	70	63	55	53	58	67	70	74

Source: Guinness Global Investors estimates, Bloomberg, January 2024

We believe that Saudi's long-term objective remains to maintain a 'good' oil price, something north of $80/bl. The world oil bill at around $80/bl represents 3.2% of 2023 global GDP, under the average of the 1970 – 2021 period (3.4%).

ii) Natural gas market

US gas demand

On the demand side for the US, industrial gas demand and power generation gas demand (each about 25-35% of total US gas demand) are key. Commercial and residential demand, which make up a further quarter, have been fairly constant on average over the last decade – although yearly fluctuations due to the severity of winter weather can be marked.

US natural gas demand

Bcf/day	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023E	2024E
US natural gas demand:													
Residential/commercial	19.2	22.4	23.4	21.4	20.5	20.9	23.4	23.5	21.5	21.5	23.3	21.8	22.6
Power generation	24.9	22.3	22.3	26.5	27.3	25.3	29.0	30.9	31.7	30.9	33.1	34.0	31.8
Industrial	19.7	20.3	20.9	20.6	21.1	21.6	23.0	23.1	22.3	22.5	23.0	23.1	23.7
Pipeline exports (Mexico)	1.8	1.9	1.9	2.7	3.8	4.0	4.6	5.1	5.4	5.9	5.7	6.0	6.5
LNG exports	-	-	-	0.1	1.0	2.6	2.8	4.8	6.4	9.7	11.8	13.0	13.7
Pipeline/plant/other	6.1	6.7	6.3	6.5	6.4	6.5	7.0	7.8	7.7	7.8	8.8	9.0	9.1
Total demand	**71.7**	**73.6**	**74.8**	**77.8**	**80.1**	**80.9**	**89.8**	**95.2**	**95.0**	**98.3**	**105.7**	**106.9**	**107.4**
Demand growth	**3.1**	**1.9**	**1.2**	**3.0**	**2.3**	**0.8**	**8.9**	**5.4**	**- 0.2**	**3.3**	**7.4**	**1.2**	**0.5**

Source: EIA; GS; Guinness estimates, January 2024

Industrial demand (of which around 35% comes from petrochemicals) trends up and down depending on the strength of the economy and the differential between US and international gas prices. Electricity gas demand (i.e. power generation) is affected by weather, in particular by warm summers, which drive demand for air conditioning, but the underlying trend depends on GDP growth and the proportion of incremental new power generation each year that goes to natural gas versus the alternatives of coal, nuclear and renewables. Gas has been taking market share in this sector: in 2022 38% of electricity generation was powered by gas, up from 22% in 2007. The big loser here is coal, which has consistently given up market share.

Total gas demand in 2023 (including Mexican and LNG exports) was around 106.9 Bcf/day, up by 1.2 Bcf/day versus 2022 and 7 Bcf/day (7%) higher than the 5-year average. The biggest contributors to the growth in demand in 2023 were LNG exports and power generation.

We expect a more muted US demand growth picture in 2024 of 0.5 Bcf/day versus average growth of nearly 4 Bcf/day between 2021 and 2023. Growth is expected to be driven by higher LNG exports and a strong US economy lifting residential, commercial and industrial demand, offset by declining power generation demand (-2.2 Bcf/day). Beyond 2024, we expect to see a material increase in US LNG export capacity as higher international gas prices incentivise new LNG export investment. Proposed projects imply capacity growth of around 6-7 Bcf/day by the end of 2025 and a further 5-6 Bcf/day in 2026-2028, bringing total export capacity to around 25 Bcf/day by 2028.

US gas supply

Overall, whilst gas demand in the US has been strong over the past five years, it has been overshadowed by a rise in onshore supply, holding the gas price lower.

The supply side fundamentals for natural gas in the US are driven by three main moving parts: onshore and offshore domestic production, pipeline imports of gas from Canada, and LNG imports. Of these, onshore supply is the biggest component, making up over 90% of total supply.

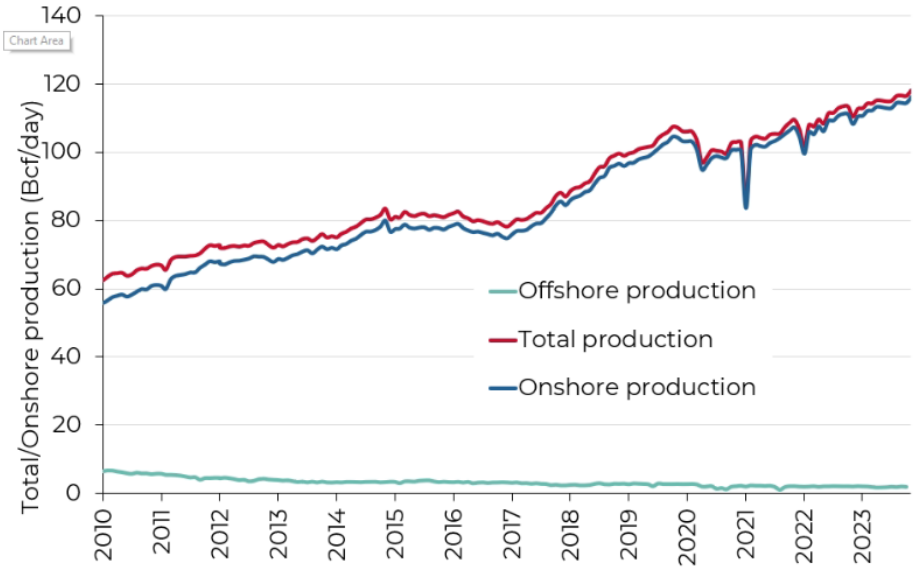
US natural gas supply

Bcf/day	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023E	2024E
US natural gas supply:													
US (onshore & offshore)	65.7	66.3	70.9	74.2	73.4	73.6	84.3	91.4	91.1	91.8	97.3	100.9	101.7
Net imports (Canada)	5.4	5.0	4.9	4.9	5.5	5.8	5.4	4.7	4.4	5.1	5.6	5.2	5.2
LNG imports & other	0.8	0.6	0.5	0.5	0.4	0.3	0.1	0.1	-	-	0.1	-	-
Total supply	**71.9**	**71.9**	**76.3**	**79.6**	**79.3**	**79.7**	**89.8**	**96.2**	**95.5**	**96.9**	**103.0**	**106.1**	**106.9**
Supply growth	2.4	-	4.4	3.3	- 0.3	0.4	10.1	6.4	- 0.7	1.4	6.1	3.1	0.8
(Supply)/demand balance	- 0.2	1.7	- 1.5	- 1.8	0.8	1.2	-	- 1.0	- 0.5	1.4	2.7	0.8	0.5

Source: EIA; GS; Guinness estimates, January 2024

Since 2010, the weaker gas price in the US reflects growing onshore US production driven by rising shale gas and associated gas production (a by-product of growing onshore US oil production). Interestingly, the overall rise in onshore production has come despite a collapse in the number of rigs drilling for gas, which has dropped from a 1,606 peak in September 2008 to a trough of 68 in July 2020, before recovering to around 119 at the end of January 2024. However, offsetting the fall, the average productivity per rig has risen dramatically as producers focus their attention on the most prolific shale basins, whilst associated gas from oil production has grown handsomely.

US natural gross gas production 2010 – 2023 (Lower 48 States)



Source: EIA 914 data (January 2024 data)

The outlook for gas production in the US depends on three key factors: the rise of associated gas (gas produced from wells classified as oil wells); expansion of the newer shale basins, principally the Marcellus/Utica, and the decline profile of legacy gas fields.

Associated gas production is expected to rise again in 2024 albeit at a slower pace (+0.8 Bcf/day) than in 2022 (+5.5 Bcf/day) and 2023 (+3.6 Bcf/day). Lower supply growth is expected from onshore properties as weaker natural gas prices have brought a lower rig count (down 25% to 119 rigs at end January 2024) and lower investment. A 10% reduction in rig count in the Permian also has a knock-on effect of reducing associated gas supply in 2024 while Haynesville production in 2024 may be down versus 2023.

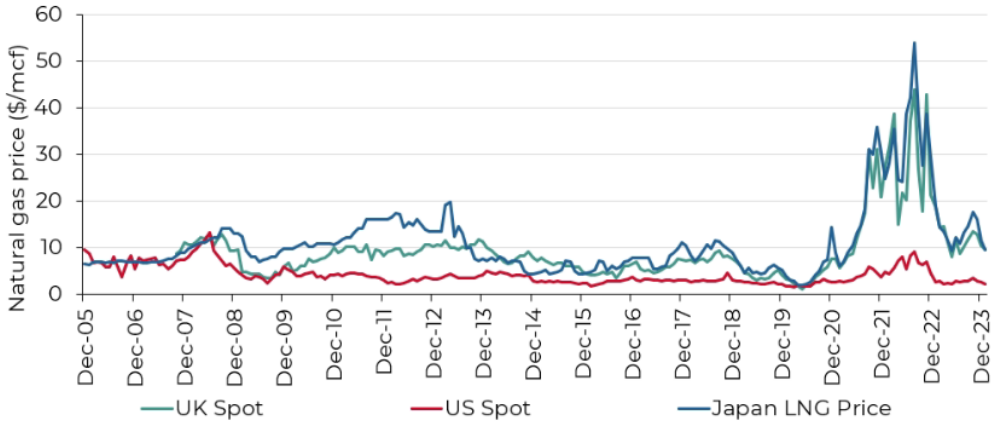
Outlook for US LNG exports – global gas arbitrage

We expect the LNG market is going to be quite finely balanced over the next couple of years. In the event of moderate Chinese LNG demand and a "normal" European winter, LNG supply and demand appear to be roughly in balance and global

LNG prices appear to be fairly priced at around $12/mcf. However, stronger Asian demand (including South Korea and Japan as well as China) or a colder than expected European winter could easily see LNG in tight supply and cause international gas prices spike this winter, although it is unlikely that they revert to the $40-$50 levels seen in winter 2022/2023.

Looking further ahead, we see international gas prices settling in a $10-14/mcf range. This price range should be sufficient to incentivise new US LNG supply to come online from 2025. It would also allow Europe to displace permanently almost all its Russian gas imports. An international gas price in the $10-14/mcf is well down on the highs seen in 2022, but would leave the market at a c.50% higher price point than that seen in the few years prior to COVID and the Russian invasion of Ukraine.

International gas prices to January 2024

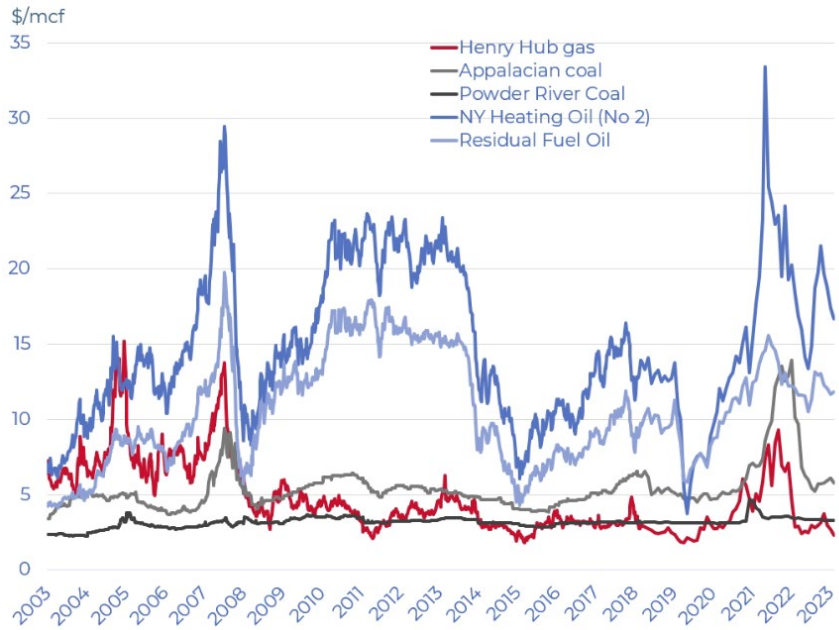


Source: Bloomberg; Guinness Global Investors (January 2024)

Relationship with oil and coal

The following chart of the front month US natural gas price against heating oil (No 2), residual fuel oil (No 6) and coal (Sandy Barge adjusted for transport and environmental costs) seeks to illustrate how coal and residual fuel oil switching provide a floor and heating oil a ceiling to the natural gas price. When the gas price has traded below the coal price support level (2012 and 2016), resulting coal-to-gas switching for power generation was significant.

Natural gas versus substitutes (fuel oil and coal) - Henry Hub vs residual fuel oil, heating oil, Sandy Barge (adjusted) and Powder River coal (adjusted)



Source: Bloomberg; Guinness Global Investors (January 2024)

Conclusions about US natural gas

The US natural gas price since 2010 has mainly fluctuated between $2 and $4/mcf. The extremes of this range have tended to coincide with warm and cold winters, and any sustained recovery over $3.50/mcf has generally been muted by strength in gas supply. With inflationary pressures, we estimate that new onshore supply has an incentive price of around $3.50/mcf. Assuming normal weather in 2024, we expect a Henery Hub price at around this level.

APPENDIX: Oil and gas markets historical context

Oil price (WTI $) since 1989

Source: Bloomberg, January 2024

For the oil market, the period since the Iraq/Kuwait war (1990/91) can be divided into four distinct periods:

1) **1990-1998:** broadly characterized by decline. The oil price steadily weakened 1991 – 1993, rallied between 1994 – 1996, and then sold off sharply, to test 20-year lows in late 1998. This latter decline was partly induced by a sharp contraction in demand growth from Asia, associated with the Asian crisis, partly by a rapid recovery in Iraq exports after the UN Oil for food deal, and partly by a perceived lack of discipline at OPEC in coping with these developments.

2) **1998-2014:** a much stronger price and upward trend. There was a very strong rally between 1999 and 2000 as OPEC implemented 4m b/day of production cuts. It was followed by a period of weakness caused by the rollback of these cuts, coinciding with the world economic slowdown, which reduced demand growth and a recovery in Russian exports from depressed levels in the mid 90's that increased supply. OPEC responded rapidly to this during 2001 and reintroduced production cuts that stabilized the market relatively quickly by the end of 2001.

   Then, in late 2002 early 2003, war in Iraq and a general strike in Venezuela caused the price to spike upward. This was quickly followed by a sharp sell-off due to the swift capture of Iraq's Southern oil fields by Allied Forces and expectation that they would win easily. Then higher prices were generated when the anticipated recovery in Iraq production was slow to materialise. This was in mid to end 2003 followed by a much more normal phase with positive factors (China demand; Venezuelan production difficulties; strong world economy) balanced against negative ones (Iraq back to 2.5 m b/day; 2Q seasonal demand weakness) with stock levels and speculative activity needing to be monitored closely. OPEC's management skills appeared likely to be the critical determinant in this environment.

   By mid-2004 the market had become unsettled by the deteriorating security situation in Iraq and Saudi Arabia and increasingly impressed by the regular upgrades in IEA forecasts of near record world oil demand growth in 2004 caused by a triple demand shock from strong demand simultaneously from China; the developed world (esp. USA) and Asia ex China. Higher production by OPEC has been one response and there was for a period some worry that this, if not curbed, together with demand and supply responses to higher prices, would cause an oil price sell off. Offsetting this has been an opposite worry that non-OPEC production could be within a decade of peaking; a growing view that OPEC would defend $50 oil vigorously; upwards pressure on inventory levels from a move from JIT (just in time) to JIC (just in case); and pressure on futures markets from commodity fund investors.

   Continued expectations of a supply crunch by the end of the decade, coupled with increased speculative activity in oil markets, contributed to the oil price surging past $90 in the final months of 2007 and as high as $147 by the middle of 2008. This spike was brought to an abrupt end by the collapse of Lehman Brothers and the financial crisis

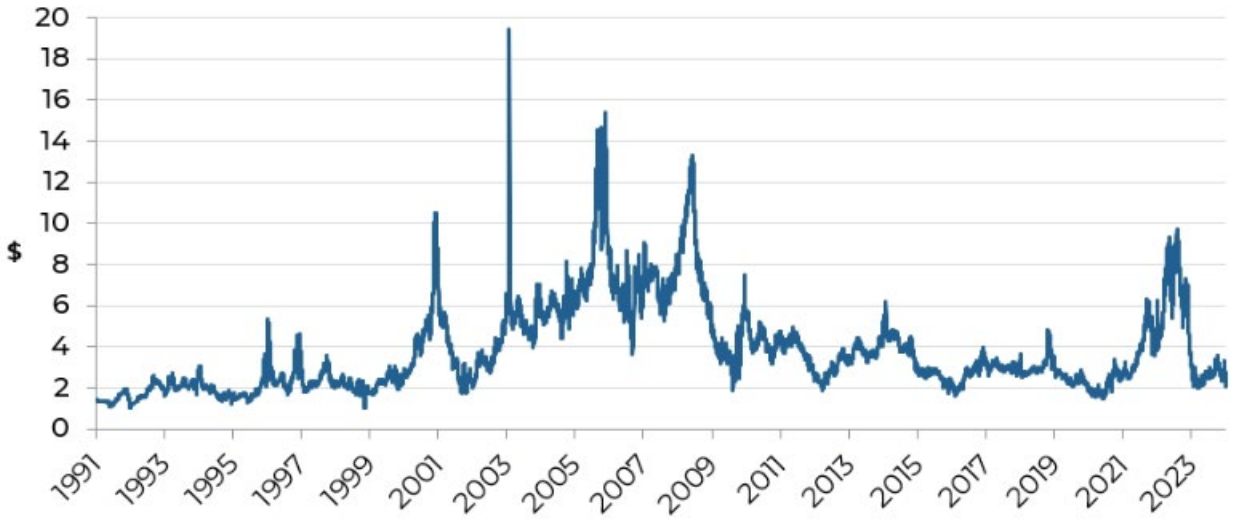
and recession that followed, all of which contributed to the oil price falling back by early 2009 to just above $30. OPEC responded decisively and reduced output, helping the price to recover in 2009 and stabilise in the $70-95 range where it remained for two years.

Prices during 2011-2014 moved higher, averaging around $100, though WTI generally traded lower than Brent oil benchmarks due to US domestic oversupply affecting WTI. During this period, US unconventional oil supply grew strongly, but was offset by the pressures of rising non-OECD demand and supply tensions in the Middle East/North Africa.

3) **2014-2020:** a further downcycle in oil. Ten years of high prices leading up to 2014 catalysed a wall of new non-OPEC supply, sufficient that OPEC saw no choice but to stop supporting price and re-set the investment cycle. Oil prices found a bottom in 2016 (as a result of OPEC and non-OPEC partners cutting production again), but its recovery was capped by the volume of new supply still coming into the market from projects sanctioned pre the 2014 price crash. Average prices were pinned 2017-19 in the $50-70/bl range, with prices at the top end of this rang stimulating oversupply from US shale. The alliance between OPEC and non-OPEC partners fell apart briefly in March 2020 and, coupled with an unprecedented collapse in demand owing to the COVID-19 crisis, oil prices dropped back below $30/bl, before recovering to around $50/bl by the end of 2020 thanks to renewed OPEC+ action.

4) **2021 onwards:** Underinvestment in new oil capacity in the 2015-2020 period catalysed the start of a new cycle in 2021, pushing prices above $75/bl.

North American gas price since 1991 (Henry Hub $/Mcf)



Source: Bloomberg, January 2024

With regard to the US natural gas market, the price traded between $1.50 and $3/Mcf for the period 1991 - 1999. The 2000s were a more volatile period for the gas price, with several spikes over $8/mcf, but each lasting less than 12 months. On each occasion, the price spike induced a spurt of drilling which brought the price back down. Excepting these spikes, from 2004 to 2008, the price generally traded in the $5-8 range. Since 2008, the price has averaged below $4 as progress achieved in 2007-8 in developing shale plays boosted supply while the 2008-09 recession cut demand. Demand has been recovering since 2009 but this has been outpaced by continued growth in onshore production, driven by the prolific Marcellus/Utica field and associated gas as a by-product of shale oil production.

North American gas prices are important to many E&P companies. In the short term, they do not necessarily move in line with the oil price, as the gas market is essentially a local one. (In theory 6 Mcf of gas is equivalent to 1 barrel of oil so $60 per barrel equals $10/Mcf gas). It remains a regional market more than a global market, though the development of the LNG industry is creating a greater linkage.

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GUINNESS GLOBAL ENERGY FUND

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