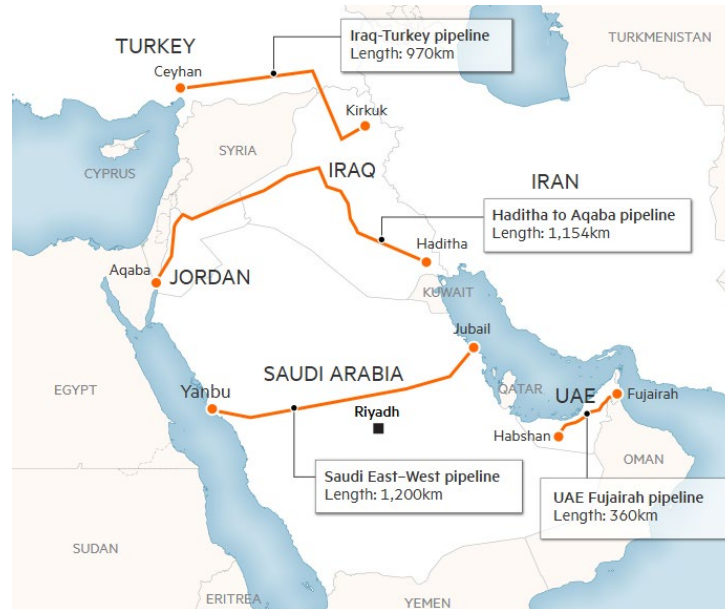


## Chart of the Month: Current and potential pipelines in the Middle East



Source: FT Research, April 2026

There are limited other routes to exporting oil from the Persian Gulf. We assess the volume impacts in our Managers' Comments.

## OIL

### Spot prices sharply higher on Iran war

The WTI and Brent spot oil prices rallied hard in March as the war in Iran brought 20m barrels per day of oil exports through the Strait of Hormuz to a standstill. Brent and WTI closed the month over \$100/bl. Various actions will help to reduce the net supply impact to around 10m b/day but this still dwarfs the supply loss from Russia in 2022 or the Middle East supply disruptions of the late 1970s. Demand destruction is already appearing and higher prices will be needed to force the market to balance if the disruption continues.

## NATURAL GAS

### Global gas prices higher on LNG disruption

Asian and European liquefied natural gas (LNG) prices rose sharply during the month since 20% of global LNG supplies transit the Strait of Hormuz and the world's largest LNG producer, QatarEnergy LNG, shut in production. Mid-month, some LNG facilities in Qatar were damaged, rendering them offline for three to five years.

## EQUITIES

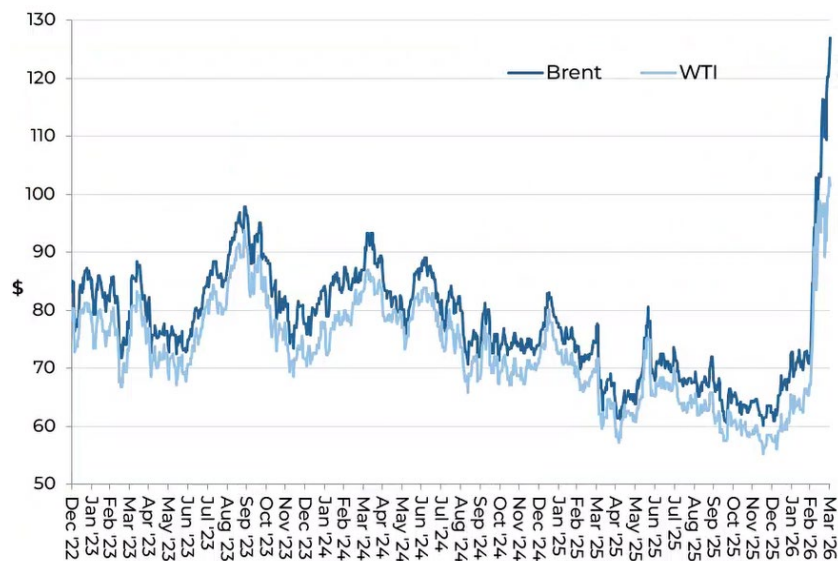
### Energy outperforms the broad market in 1Q 2026

The MSCI World Energy Index (net return) rose by 11.6% (USD) in March, outperforming the MSCI World Index (net return), which fell by 6.4%. Year-to-date, the MSCI World Energy index is up 36.9% versus the MSCI World Index down 3.6%.

## March in Review

### i) Oil market

Oil price (WTI and Brent \$/barrel): December 2022 to March 2026



Source: Bloomberg; Guinness Atkinson, data as of 03.31.2026

The West Texas Intermediate (WTI) oil price began March at \$67/bl and strengthened sharply during the month, reaching a peak of \$102.9/bl on March 30<sup>th</sup> before closing the month slightly lower at \$101.4/bl. WTI has averaged just over \$72/bl so far this year, having averaged \$57/bl in 2025, \$76/bl in 2024 and \$78/bl in 2023. In contrast, Brent oil opened at \$71/bl and broke through \$100/bl on 9<sup>th</sup> March before steadily strengthening to close on its highs at \$127/bl on March 31<sup>st</sup>. Brent has averaged just under \$81/bl so far in 2026, having averaged \$62.5/bl in 2025, \$80/bl in 2024 and \$83/bl in 2023. The gap between the WTI and Brent benchmark oil prices widened sharply over the month, ending March at around \$26/bl. The Brent-WTI spread has averaged around \$5/bl in recent years.

### Factors which strengthened WTI and Brent oil prices in March:

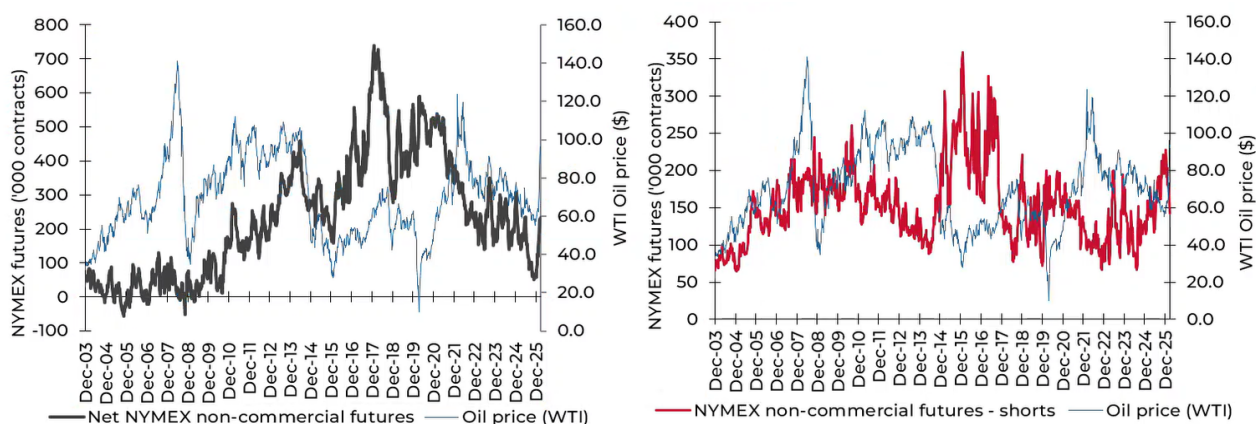
- **War in the Middle East**

War in the Middle East brought sharply higher global oil prices as closure of the Strait of Hormuz caused oil exports from the Middle East to be shut off. Please refer to our Managers' Comments section for analysis of the current situation, and for an overview of energy implications of the conflict, please refer to the Three Scenarios we envisaged in March.

### Speculative and investment flows

New York Mercantile Exchange (NYMEX) net non-commercial crude oil futures open position was 234,000 contracts long at the end of March versus 173,000 contracts long at the end of February. 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 fell to 142,000 contracts at the end of March versus 180,000 at the end of the previous month.

NYMEX Non-commercial net and short futures contracts: WTI January 2004 – March 2026

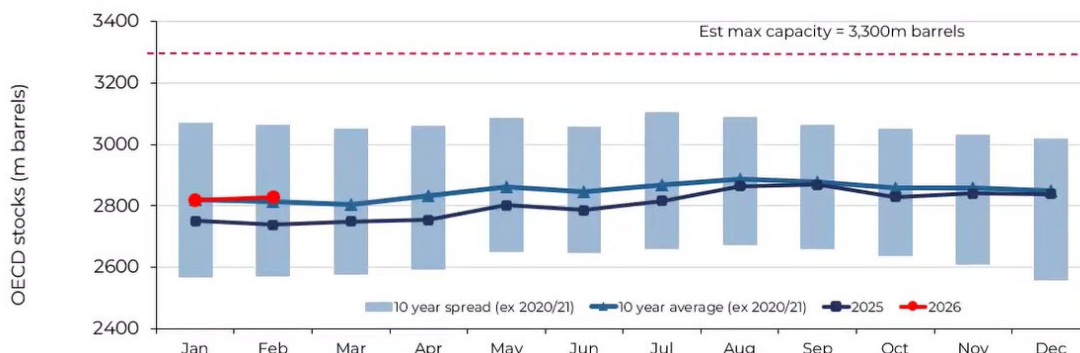


Source: Bloomberg LP/NYMEX/ICE (2026)

### Organization for Economic Co-operation and Development (OECD) stocks

OECD total product and crude inventories at the end of February (latest data point) were estimated by the International Energy Agency (IEA) to be 2,828m barrels, up by 8m barrels versus the level reported for the previous month. The move in February compares to a 10-year average (pre-COVID) draw of 8m barrels, implying that the OECD market was undersupplied by around 0.5m b/day. The significant oversupply situation in 2020 pushed OECD inventory levels close to maximum capacity in August 2020 (about 3.3bn barrels), with subsequent tightening taking inventories below normal levels.

OECD total product and crude inventories, monthly, 2010 to February 2026



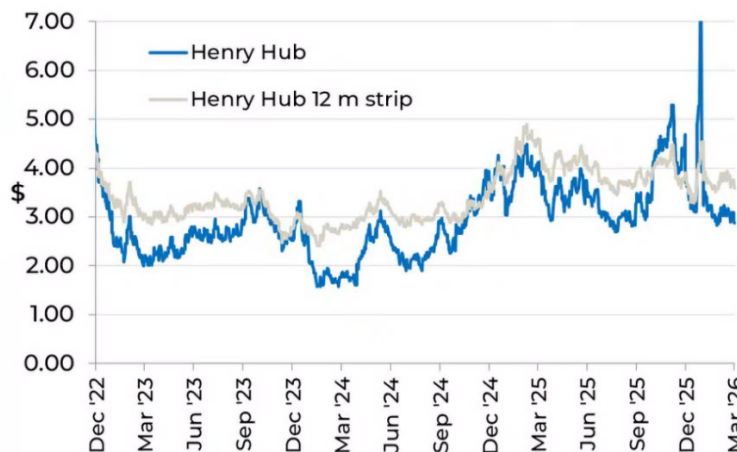
Source: IEA Oil Market Reports (March 2026 and older)

## ii) Natural gas market

The US natural gas price (Henry Hub front month) opened March at \$2.86/Mcf (1,000 cubic feet) and stayed in a tight range during the month closing at \$2.88/Mcf. The spot gas price has averaged \$3.45/Mcf so far in 2026, having averaged \$3.63/Mcf in 2025, \$2.41/Mcf in 2024 and \$2.67/Mcf in 2023.

The 12-month gas strip price (a simple average of settlement prices for the next 12 months' futures prices) traded in a similar but less extreme pattern, opening at \$3.58/Mcf and closing at \$3.60/Mcf. The strip price has averaged \$3.74/Mcf so far in 2026, having averaged \$4 in 2025, \$2.98 in 2024 and \$3.19 in 2023.

Henry Hub gas spot price and 12m strip (\$/Mcf): December 2022 to March 2026



Source: Bloomberg LP, March 2026

### Factors which strengthened global gas prices in March included:

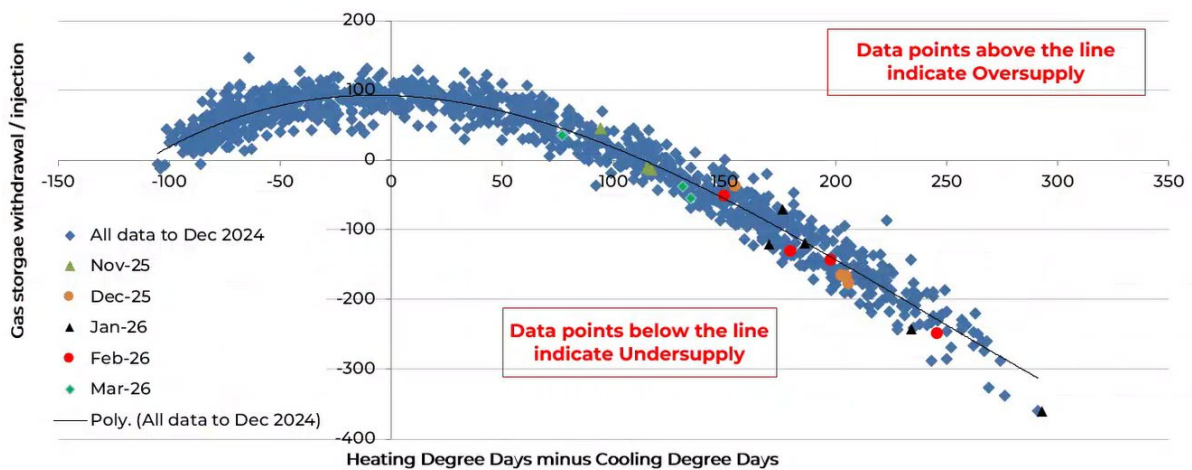
- **War in the Middle East**

The Strait of Hormuz typically sees the passage of around 20m b/day of oil and oil product and around 10-11 billion cubic feet (Bcf) per day of liquefied natural gas (LNG), around 20% of the global LNG market. The largest producer, QatarEnergies, shut in LNG production very shortly after the start of the war as available inventory capacity was limited. The loss of 10-11 Bcf/day of LNG is equivalent to around 75% of the Russian pipeline gas lost by Europe in 2022. Moreover, during the month, two processing lines at the Qatari LNG facility were damaged by Iranian attacks and the company has confirmed that they will be offline for three to five years. Once the Strait reopens, it is unlikely that LNG supplies will restart for at least two weeks, since it takes that time frame to ramp facilities back up to full production.

- **US market undersupplied (ex-weather effects)**

Adjusting for the impact of weather, the US gas market was, on average, around 2 bcf/day undersupplied during March.

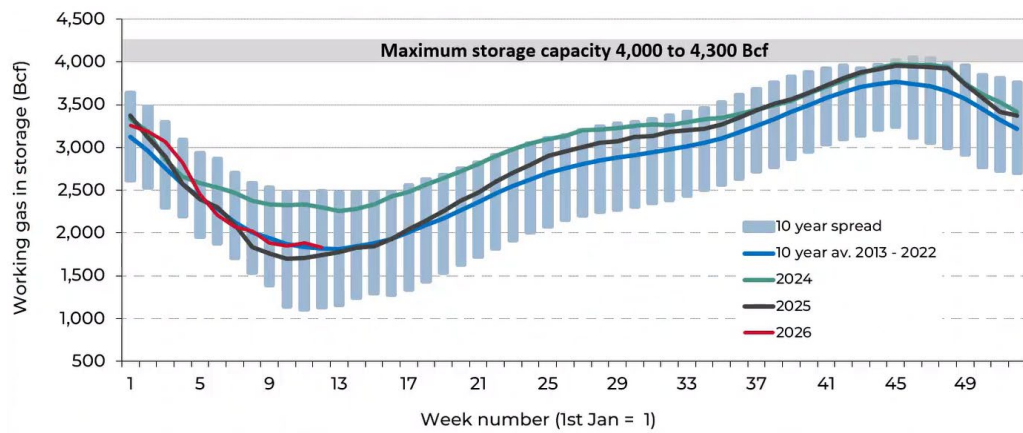
Weather-adjusted US natural gas inventory injections and withdrawals



Source: Bloomberg LP; Guinness Atkinson; March 2026

US natural gas inventories started March just above 10-year average levels. With the US market somewhat insulated from the supply disruption in the international and Asian gas markets, inventories built slightly relative to the 10-year average during the month.

Deviation from 10yr US gas storage norm



Source: Bloomberg; Energy Information Administration (EIA), March 2026

## MANAGERS' COMMENTS

This month, we assess the implications of the war in Iran. Closure of the Strait of Hormuz has disrupted 20m b/day of oil and product exports from the Gulf and we can see around half of this being offset by measures such as pipeline re-routing or strategic/sanctioned inventory releases. The resulting disruption of 10m b/day is the largest that we are aware of historically and will require demand destruction in order for markets to balance. Depending on its duration, prices of \$125-150/bl could be required. Using a \$90/bl and \$80/bl Brent assumption in 2026 and 2027, together with a long-term estimate of \$80/bl, still leaves the energy sector with about 20% upside.

We aim to assess the following:

- The underlying oil and oil product supply impact from the war, after allowing for pipeline re-routing and inventory releases.
- The scale of demand destruction needed and the oil price required to force the oil market into balance.
- The impact on the valuation on energy equities.

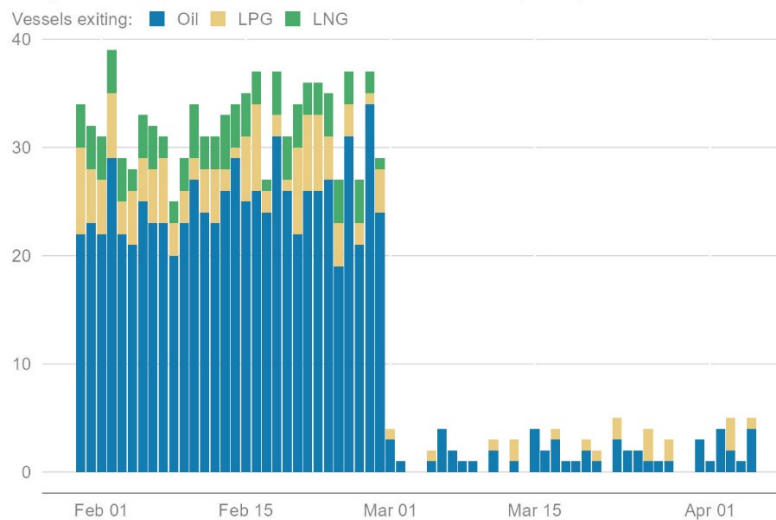
### Understanding the scale of supply disruption

Since the outbreak of war, there have been a number of announcements and actions that have been designed to alleviate the disruption of oil and oil product supply through the Strait of Hormuz. We group them into three categories and assess the impact of each as follows:

### 1. Continued supply through the Strait of Hormuz

The Strait typically sees the passage of around 20m b/day of oil and oil product and around 10-11 Bcf/day of liquefied natural gas (LNG) with a total of around 35 tankers passing through in each direction every day. This remains the key constraint and, since the start of the war, an average of around 2 tankers (mostly Iranian) have been passing through the Strait. The rate of tanker traffic has been increasing in the first few days of April.

Number of daily transits through the Strait of Hormuz (7 April 2026)



Source: Morgan Stanley; data as of 04.07.2026

While the Strait remains essentially closed, we can reasonably estimate that **around 1-2m b/day** of Iranian oil has been flowing to markets.

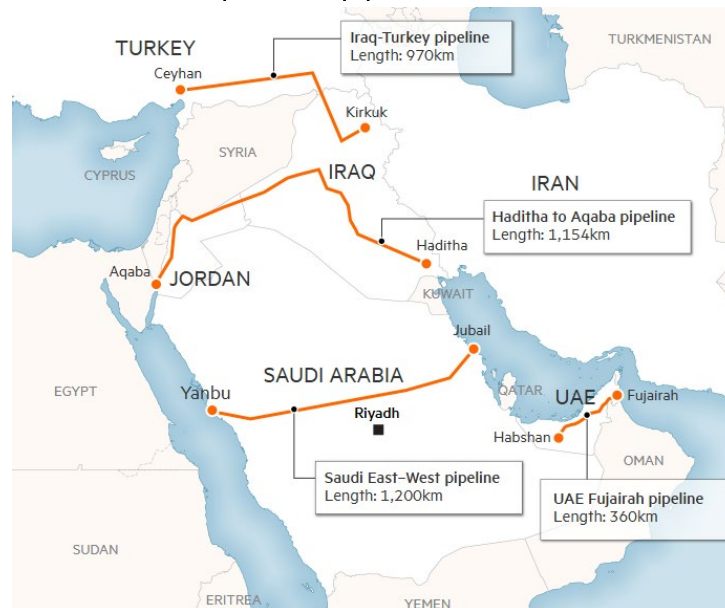
### 2. Re-routing of oil via spare capacity in existing pipelines

There are three possible routes for increasing pipeline exports from the Persian Gulf:

- The **Saudi East-West pipeline** and oil export terminal at Yanbu on the Red Sea offers extra export capacity of **around 3-4m b/day**. While the pipeline has a 'surge' capacity of 7m b/day, the export terminal only has capacity of around 5.5m b/day. Given that 1-2m b/day was already being exported along the pipe and 1m b/d from the terminal, we expect that a further 3-4m b/day could be re-directed away from the Strait of Hormuz. Data from Vortexa already indicates a sharp ramp-up in Saudi's exports from Yanbu, closing in on 5m b/day at the end of March.
- The **UAE Fujairah pipeline** likely offers further export capacity. This pipeline, which avoids the Strait of Hormuz to the south, was already well utilized and there is likely **around 0.5m b/day** of extra export capacity. Exports in the second half of March were 2-2.5m b/day, up from the pre-war average of 1.5-2m b/day.

- The **Iraq-Turkey** pipeline north to Ceyhan also offers a smaller additional export capacity. A recent agreement between Iraq and Kurdistan has allowed a **further 0.25m b/day** of oil to be exported north from Iraq to the Turkish port of Ceyhan, providing access to the Mediterranean Sea (and European markets) without any reliance on the Strait of Hormuz or the Red Sea.

#### Current and potential pipelines in the Middle East



Source: FT Research, April 2026

Combined, we see the three routes as allowing **around 4-5m b/day** of oil to be diverted away from the Strait of Hormuz.

With pipeline capacity fully utilized, the only other way of securing large volumes of exports from the Gulf is via a ‘convoy system’ that would defend tankers passing through the Strait. A comparable effort was last seen for two months in 1987-1988 under Operation “Earnest Will”, when the United States helped to escort Kuwaiti tankers through the Strait. However, the protection was for Kuwaiti tankers only, came in small convoys and was carried out only once every few days. This time, a daily effort would likely be needed to protect all tankers and the combined oil and gas volumes for transit would be greater. We remain sceptical that such a system can be installed quickly or be maintained at a high capacity level. We also note the apparent lack of interest that the US has in such a solution, since the country is broadly neutral in its net imports/exports of crude oil and oil products (such as gasoline, diesel and jet fuel). To quote President Trump regards the Strait, “We don’t need it. We haven’t needed it, and we don’t need it” and subsequently “The United States imports almost no oil through the Hormuz Strait, and won’t be taking any in the future.”

#### Strategic oil inventory and de-sanctioned Russian and Iranian volumes

The third route to increasing supply comes from the release of strategic and sanctioned barrels:

- The first of these is the release of 400m bls of **strategic oil and oil product inventory** by the IEA’s member countries, the largest ever release of strategic oil and oil product inventory. Total inventory capacity is around 1,500m barrels (defined as being a minimum of 90 days’ coverage of member country oil imports) while the United States’ Strategic Petroleum Reserve (SPR) is around 400m

barrels (around 200 days of coverage of US net imports of crude oil).

While strategic inventories are large in volume, the key variable is the amount of oil that can flow daily from them. The most recent use of the IEA's strategic inventories was after the Russian invasion of Ukraine in 2022. Over a period of around six months, the US released around 180m barrels, while the rest of the IEA released around 100m barrels. Combined, these strategic releases provided around 1.5m b/day of oil into the market.

There is also the question of what China might do. China has its own strategic oil reserve, which it has been building energetically since the start of 2025. The build over the last 12 months is thought to be around 200m barrels. Flow rates from China's reserves are unknown, but we would guess comparable to the IEA.

On this basis, we think that the strategic inventory release could provide **the order of 2-3m b/day** of additional oil and oil products.

- ii. The second additional source is the **de-sanctioning of Russian and Iranian oil** that was 'on the water' in tankers at the start of 2026. We know little about the quality of this oil (gravity or sulphur content for example) or the ability of the world refinery system to consume it. Nonetheless, it seems reasonable that could be released into the market at a similar rate to the SPR releases, potentially adding a further **2m b/d of oil supply**.

## Conclusions on net supply to world oil markets

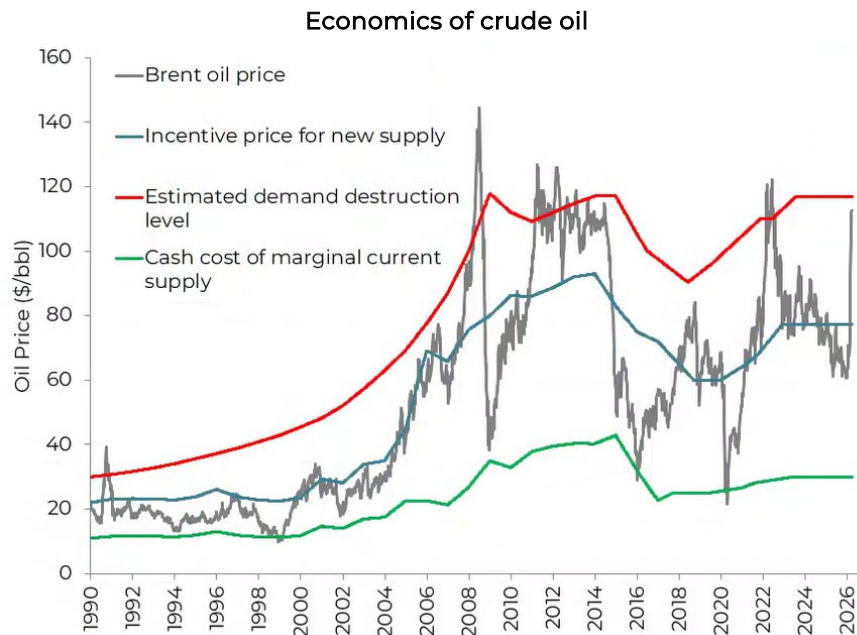
If we allow for the three pipeline diversions plus the strategic and de-sanctioned inventory releases described above, we see the world oil market as being currently **undersupplied by around 10m b/day**. This supply shock is far in excess of that contemplated by the market during the Russian invasion of Ukraine in 2022 and larger than the 5-7m b/day supply shocks that were suffered during the 1970s. This will persist while the Strait remains closed and, while a re-opening of the Strait would clearly improve the near-term supply outlook, the disruption would persist (on a declining scale) for perhaps two to three months while the industry returns to pre-war operation efficiencies. Depending on its duration, this supply disruption can only be solved by physical rationing of some kind – that is, demand destruction.

## Moving towards an oil price that causes demand destruction

Oil-importing countries are now starting to witness physical oil and oil product shortages, since it takes around one month for oil exports from the Gulf to reach their ultimate destination. Inventories will act as a buffer, but demand will need to be destroyed (via higher prices) in order for the market to balance the physical loss of around 10m b/day (10% of total world oil supply).

As of late March, we are already starting to see Asian refiners cutting refinery runs and petrochemical volumes while air traffic and road traffic are running below trend levels. These are the first signs of the required demand destruction.

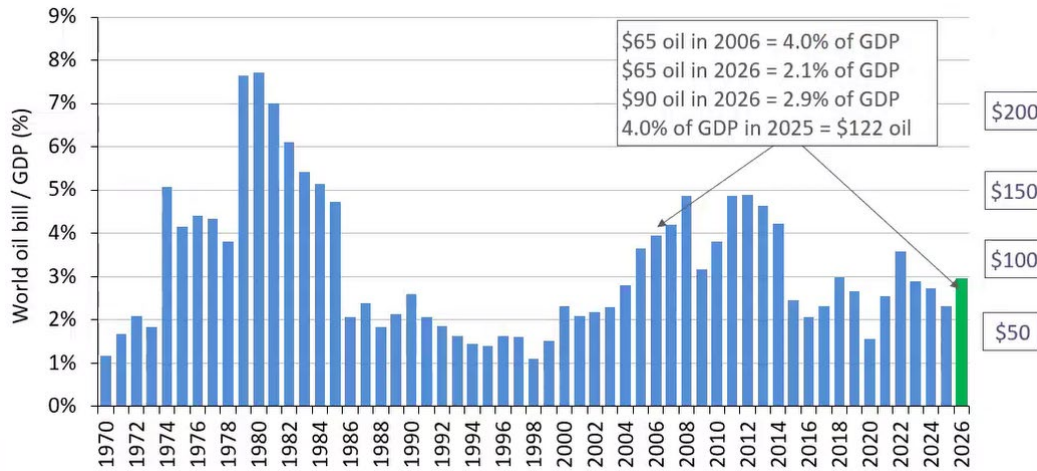
If the Strait of Hormuz remains closed, the oil market needs to find a price that incentivises the shut-in of a material amount of demand. This would require a price in excess of the current level (\$110/bl on 7 April), and also well above our estimated demand destruction level of \$120/bl, as this is simply a price that starts to cause more serious demand ‘pain’.



Source: Bloomberg, Bernstein, Guinness Atkinson, including estimates. Weekly data as of 03.31..2026

Put another way, oil would have to become a much larger burden on the world economy. On our new estimate of \$90/bl Brent in 2026, oil would represent around 2.9% of world GDP, much lower than the levels reached during previous Middle East supply disruptions in the late 1970s (4-8%) or the level seen during the Global Financial Crisis in 2008 (5% of GDP). We believe that oil would need to increase to around \$150/bl, reflecting nearly 5% of world GDP in 2026, if it were to have a noticeable negative impact on the global economy.

The world oil 'bill' as a percentage of GDP

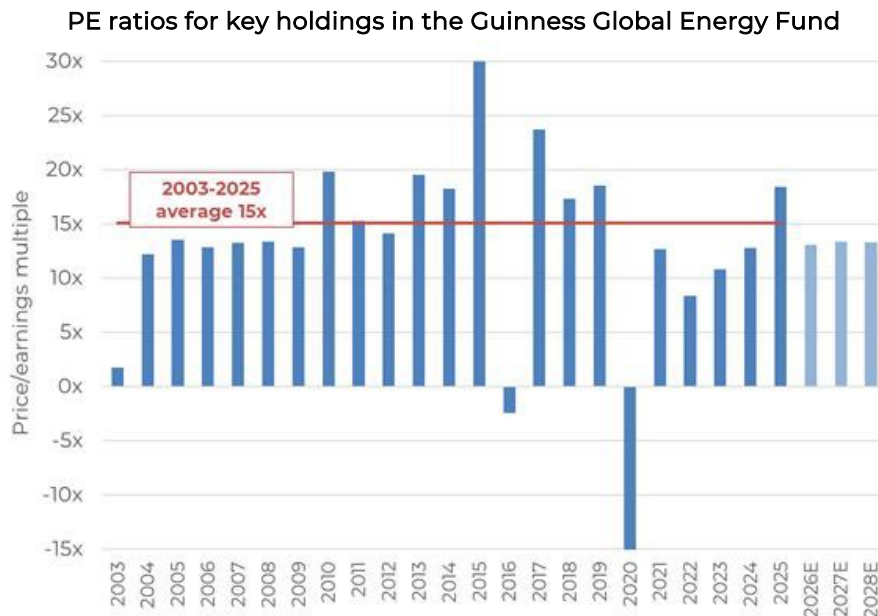


Source: IEA; Bloomberg; Guinness Atkinson, including estimates. April 2026

## Explaining energy equity movements year-to-date

The Iran war has raised both near-term and long-term oil prices, thereby impacting company earnings estimates and equity valuations.

Considering the **near term**, we find that a \$90/\$80 Brent oil price scenario for the fund's holdings in 2026/27 would see increases in earnings for producing companies of around 30-80% (versus our prior forecasts which assumed \$65/oil). In this scenario, we believe the fund's total earnings per share could rise by around 65% in 2026. In turn we expect the fund's price-earnings (PE) ratio to decrease in 2026, which compares to the long-run average PE of around 15x and the current MSCI World PE of around 20x for 2026.



Source: Guinness Atkinson, April 2026

Assuming that these near-term extra cash flows are used to pay down debt or carry out share buybacks, we believe we'll see an increase in share price.

Looking **longer-term**, we note that the five-year forward Brent oil price has risen by around \$7/bl year to date (from \$65/bl to \$72/bl at the end of March) reflecting pressure on the industry's longer-term economics, resulting from sustained Middle Eastern supply risks. Based on our modeling work, we find that a \$7/bl increase in long-term oil prices we believe further increases are possible.

The two effects combined closely match the changes that we have seen in energy equity valuations this year. We conclude that the market today reflects a world of around \$90/bl Brent in 2026, \$80/bl in 2027 and then a long-term price of around \$73/bl thereafter.

As we have previously written, we believe that \$80/bl is a sensible long-term oil price in that it incentivises sufficient oil supply and demand over the next few years, whilst being 'good enough' for OPEC+ balance sheets. Were energy equities to reflect \$80/bl long-term, with 2026 and 2027 estimates unchanged, there would still be a further 20% upside in energy equities.

## Performance

As of 3/31/2026	YTD	1 Year	3 Years	5 Years	10 Years
GAGEX	37.85%	47.60%	19.07%	20.98%	8.52%
MSCI World Index NR	-3.57%	18.90%	16.75%	10.26%	11.79%
MSCI World Energy Index NR	36.86%	40.88%	19.12%	22.35%	10.49%

All returns after 1 year annualized.

Inception 06.30.2004 Expense ratio\* 1.46% (net); 2.13% (gross)

Performance data quoted represents past performance; past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Fund may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by visiting [www.gafunds.com](http://www.gafunds.com) or calling 800-915-6566.

\* The Advisor has contractually agreed to reduce its fees and/or pay Fund expenses (excluding Acquired Fund Fees and Expenses, interest, taxes, dividends on short positions and extraordinary expenses) in order to limit the Fund's Total Annual Operating Expenses to 1.45% through June 30, 2028. To the extent that the Advisor absorbs expenses to satisfy this cap, it may recoup a portion or all of such amounts absorbed at any time within three fiscal years after the fiscal year in which such amounts were waived or absorbed, subject to the expense cap in place at the time recoupment is sought, which cannot exceed the expense cap at the time of the waiver. The expense limitation agreement may be terminated by the Board of the Fund at any time without penalty upon 60 days' notice.

Top 10 Fund Holdings as of 3/31/26:

1.	Exxon Mobil Corp	5.49%
2.	Valero Energy Corp	5.07%
3.	TotalEnergies SE	4.91%
4.	Chevron Corp	4.83%
5.	BP PLC	4.82%
6.	Shell PLC	4.62%
7.	ConocoPhillips	4.44%
8.	Equinor ASA	4.07%
9.	Canadian Natural Resources Ltd	4.00%
10.	Suncor Energy Inc	3.93%

MSCI World Energy Index is designed to capture the large and mid cap segments across 23 Developed Markets countries. All securities in the index are classified in the Energy sector as per the Global Industry Classification Standard.

MSCI World Index captures large and mid cap representation across 23 Developed Markets countries. With 1,546 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The MSCI World Index (Net Return) measures the performance of large and mid-sized companies across 23 Developed Markets countries. It reflects both share price movements and dividends, with dividends reinvested after accounting for local withholding taxes.

Brent Crude is the price benchmark used for the light oil market in Europe, Africa, and the Middle East, originating from oil fields in the North Sea between the Shetland Islands and Norway.

West Texas Intermediate (WTI) is the price benchmark for the US light oil market and is sourced from US oil fields.

Short futures position in oil is when a trader sells an oil's future contract in the belief that the price of oil will decrease before the contract expires.

Organization for Economic Cooperation and Development (OECD) is an intergovernmental organization with 38 member countries meant to stimulate economic progress and world trade.

OPEC+, or the Organization of the Petroleum Exporting Countries Plus, is a loosely affiliated entity consisting of 12 OPEC members and 10 of the world's major non-OPEC oil-exporting nations.

Henry Hub is a natural gas pipeline located in Erath, Louisiana, that serves as the official delivery location for futures contracts on the New York Mercantile Exchange (NYMEX).

The International Energy Agency (IEA) is an international intergovernmental organization based in Paris that was established in 1974. Its stated mandate is to maintain the stability of the international oil supply, although its mission has expanded to emphasize the promotion of renewable energy sources.

Fund holdings and/or sector allocations are subject to change at any time and are not recommendations to buy or sell any security.

One cannot invest directly in an index.

Earnings Growth is not a measure of future performance.

Opinions expressed are subject to change, are not guaranteed and should not be considered investment advice.

*The Guinness Atkinson Global Energy Fund's investment objectives, risks, charges and expenses must be considered carefully before investing. The statutory and summary prospectuses contain this and other important information and can be obtained by calling 800- 915-6565 or visiting [www.gafunds.com](http://www.gafunds.com). Read and consider it carefully before investing.*

**The Fund invests in foreign securities which will involve greater volatility and political, economic and currency risks and difference in accounting methods. The risks are greater for investments in emerging markets. The Fund also invests in smaller and mid-cap companies, which will involve additional risks such as limited liquidity and greater volatility than larger companies. The Fund's focus on the energy sector to the exclusion of other sectors exposes the Fund to greater market risk and potential monetary losses than if the Fund's assets were diversified among various sectors.**

# GAGEX

Guinness Atkinson Global Energy Fund

April 2026 Update

**GUINNESS**  
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