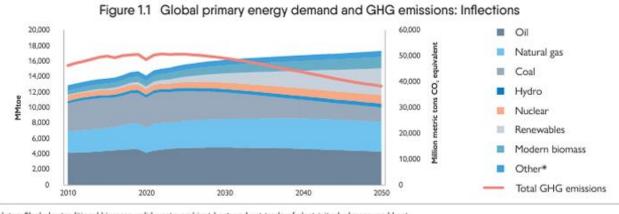
Crude Oil Markets – Trends and Forecasts

Introduction

As we mentioned in our article <u>"Crude Oil - Upward Trend"</u>, crude oil is still the cornerstone of the global energy security, underpinning the stability and growth of economies worldwide. Despite a steady growth in renewable energy, oil remains the primary source of energy. The chart below shows a significant gap between traditional and cleaner energy sources, underscoring oil's ongoing importance.



Notes: *Includes traditional biomass, solid waste, ambient heat, and net trade of electricity, hydrogen, and heat. Source: S&P Global Commodity Insights.

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Source: KAZENERGY National Energy Report 2023

The chart above is perspective of S&P Global published in the KAZENERGY National Energy Report 2023, while the International Energy Agency [IEA] has recently released its World Energy Outlook 2024, where another reputable source supporting the assertion of the vitality of oil and gas for the global energy mix over the next few decades. According to the IEA, oil and gas are expected to remain vital components of the global energy mix by 2050, where the demand for natural gas is remaining steady and demand for oil decreasing very slowly after another "peak" in coming years.



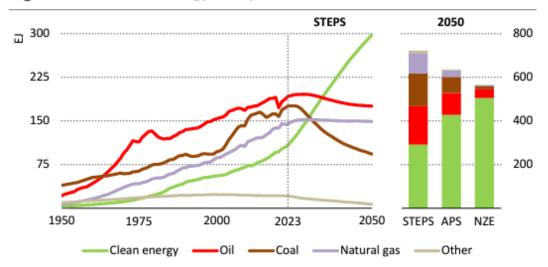


Figure 1.1 > Global energy mix by scenario to 2050

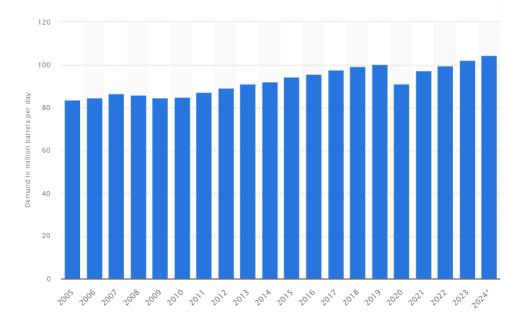
Source: IEA

The current landscape is shaped by significant geopolitical events, including heightened tensions in the Middle East and the looming 2024 U.S. presidential election, both of which have profound implications for global oil markets. Additionally, China's recent fiscal stimulus measures aimed at bolstering its economy further underscore the interconnectedness of global economic policies and energy dynamics. This article immerses into these critical factors, providing strategists and policymakers with the insights needed to navigate the complexities of the oil market and its impact on the global economy. By examining production and sales trends, price fluctuations, and future forecasts, we aim to equip our readers with the tools necessary to make informed decisions in an increasingly volatile world.

Recent trends in Crude oil Supply & Demand, and Pricing

Commodity prices are heavily influenced by the global supply-demand equilibrium. Since 2020, the global oil market has experienced several significant shocks. The onset of the COVID-19 pandemic and the unprecedented global lockdown in the spring of 2020 led to a dramatic crash in oil prices due to a sharp decline in demand. As illustrated in the bar chart below, global oil demand plummeted from approximately 100 million barrels per day [MMbpd] in 2019 to around 91 MMbpd in 2020. The chart also shows that global oil demand only surpassed pre-pandemic levels in 2023, indicating it took three years for demand to return to its steady growth trajectory. For 2024, Statista projects global oil demand to reach 104.46 MMbpd, representing a 2.2% increase compared to 2023.

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Source: Statista

On the other hand, the global lockdown together with disrupted supply chains has also significantly hit global oil production. As we see below, the world crude oil production bottomed in the first half of 2020, and it still has not recovered to pre-pandemic levels of late 2019.

World Crude Oil Production (I:WCOP)

81.04M bbl/d for May 2024



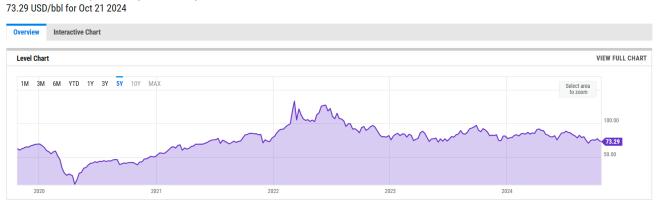
Source: YCharts

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The significant disruption caused by the global lockdown led to a steep decline in crude oil prices due to widespread uncertainty about the duration of restrictions on international travel and quarantine measures within countries. Consequently, crude oil prices recovered to prepandemic levels by mid-2021, as widespread COVID-19 vaccination efforts enabled countries to begin easing quarantine measures.

In early 2022, oil prices spiked significantly following the outbreak of direct military conflict between Russia and Ukraine. This surge was driven by fears of Western sanctions on Russian oil—a major component of the global energy supply—which were indeed imposed later that year. The rally in oil prices was further supported by high expectations for China's economic reopening after strict COVID-19 restrictions.

However, as markets realized that China's economic recovery was slower than anticipated, and due to the adaptability of global energy transfer routes that allowed developed countries to replace Russian oil and gas with alternative sources, oil prices began to stabilize.



Brent Crude Oil Spot Price (I:BCOSPNK)

Source: YCharts

As the world's largest oil consumer, the United States does not benefit from high oil prices and has taken several robust steps to bring them under control. The U.S. Federal Reserve's aggressive monetary policy tightening, resulting in the highest interest rates since the Great Recession, has been a significant factor in controlling oil prices. Additionally, the Biden administration has aggressively depleted the U.S. Strategic Petroleum Reserve.

Beyond the U.S., other developed economies, including Canada, the European Union, and the United Kingdom, have also pursued aggressive monetary policy tightening. These combined efforts have contributed to the stabilization of crude oil prices by the end of 2022 and continue to do so today.

Crude oil Supply & Demand, and Price Forecasts

As discussed in the previous section of our article, the price of Brent crude oil is highly sensitive to fluctuations in global demand and supply. Given the inherent unpredictability of these factors, it is prudent to consult multiple reputable sources that project global demand. Demand is less dependent on political and geopolitical factors, as individuals and businesses require energy regardless of political circumstances. In contrast, supply is more influenced by political and geopolitical decisions made by a limited group of key leaders. For instance, OPEC and OPEC+ leaders regulate production levels, while leaders of developed countries impose sanctions and navigate other geopolitical issues. By focusing on demand projections, we can gain valuable insights into the future direction of oil prices.

Reputable sources expect growth in oil demand next year. For example, the U.S. Energy Information Administration [EIA] <u>expects</u> the global consumption of liquid fuels will increase by 900,000 bpd in 2024 and 1.3 million bpd in 2025. OPEC is more optimistic as <u>the organization expects</u> 2025 global oil demand to grow by 1.74 million bpd. As a result of a growing demand for oil, we can expect that sharp drawdowns in crude oil prices from current levels is highly unlikely. On the other hand, spikes in crude oil prices are also unlikely as the total oil supply is expected to be higher than demand in 2025, according to the below chart.

Table 4: Global oil supply and demand balance, 2025F

mbd	2025F								2025F			2025F					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1Q	2Q	3Q	4Q	
Total Oil Demand	101.1	103.6	102.6	102.1	104.0	105.3	104.5	105.3	104.0	103.9	104.5	104.6	102.4	103.8	104.6	104.3	103.8
Total Oil Supply	104.1	104.5	104.4	104.4	104.9	105.2	105.9	105.8	105.8	106.2	106.5	106.2	104.4	104.8	105.8	106.3	105.3
OPEC Crude	29.0	29.1	29.1	29.0	29.0	29.2	29.1	29.1	29.1	29.0	28.9	29.0	29.1	29.1	29.1	29.0	29.1
OPEC Other Liquids	6.1	6.3	6.1	6.2	6.2	6.2	6.2	6.2	6.3	6.2	6.3	6.2	6.2	6.2	6.2	6.2	6.2
Non-OPEC Crude + Other	66.7	66.9	66.9	66.9	67.4	67.5	68.2	68.1	68.1	68.6	69.0	68.7	66.8	67.2	68.1	68.7	67.7
Processing Gain	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.4	2.3

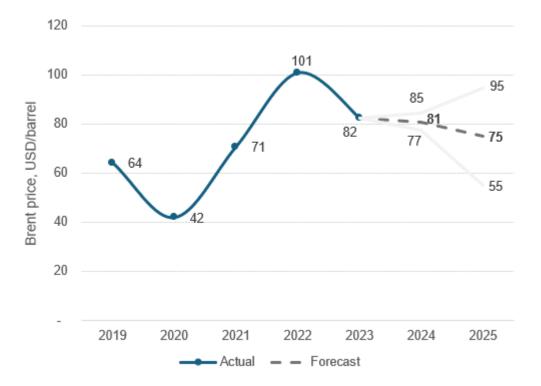
Source: J.P. Morgan

On the other hand, it is important to remember that the demand depends on the health of the global economy, which in turn significantly depends on the world's two largest economies: the U.S. and China. From this perspective, trends might be slightly warning as the OECD <u>has recently downgraded</u> its 2025 growth projection for the U.S. economy from 1.8% to 1.6%. Prominent Wall Street analysts like Goldman Sachs and Citigroup has also <u>recently trimmed growth forecast</u> for the economy of China in 2025 from 4.8%-4.9% to 4.7%. The less optimistic outlook on the U.S. and China's economy growth in 2025 has led to downgrades in Brent crude oil forecasts from EIA, which we can see below.

Notable Forecast Changes	2024	2025
Brent crude oil spot price (dollars per barrel)	\$81	\$78
Previous forecast	\$83	\$84
Percentage change	-2.3%	-7.7%

Source: eia.gov

The chart below illustrates a consensus forecast for Brent average crude oil prices, derived from 11 reputable sources. This analysis provides a comprehensive view of expected price trends, incorporating both historical data and future projections. The consensus forecast for 2024 is \$81, with a standard deviation of 1.18, indicating a relatively narrow range of predictions. For 2025, the forecast is \$75, with a wider standard deviation of 6.55, reflecting greater uncertainty. The ± 3 sigma range highlights potential volatility, underscoring the importance of considering multiple scenarios in strategic planning.



Source: Compiled by ENERGY Insight & Analytics based on consensus

To conclude, forecasts indicate a slight decline in Brent crude oil prices in 2025. Several key factors are expected to significantly impact the global oil demand and supply equilibrium, directly affecting crude oil prices. These factors will be explored in depth in the next part of our analysis.

Factors affecting Crude oil Supply & Demand

First, let's begin with the demand side of the equation. As mentioned earlier, upward trends in demand are less susceptible to political and geopolitical factors because the natural growth in energy needs is driven by the increasing global population. However, the extent of demand growth is influenced by the monetary policies of central banks in the world's largest economies.

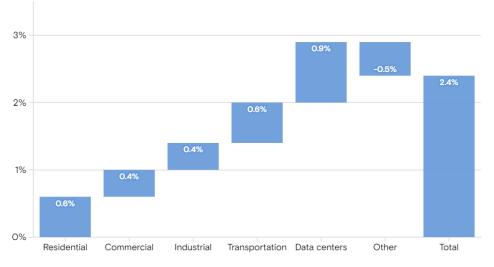
For example, interest rates in the U.S. reached multidecade highs, and the Fed only recently pivoted to monetary easing with a 50-basis point rate cut. Nevertheless, monetary policy remains quite restrictive, as Federal Funds rates are still above 4%. This is certainly a factor that weighs on oil demand growth. The Fed plans to continue cutting rates through 2025 as the U.S. inflation approaches the historical average of 2%. The broader U.S. stock market looks optimistic meaning that it views further monetary easing as the most likely scenario, but the Fed's "Dual Mandate" [pursuing maximum employment and price stability] suggests that the reality will depend on inflation stability. There might be shocks to the global oil supply, which we will discuss later, and if energy prices in the U.S. start soaring as they did in 2022, the Fed might reconsider its plans regarding interest rates.

China's economy, the second largest in the world, is still growing at a CAGR of nearly 5%. This drives up energy demand, but oil prices significantly depend on the pace of demand growth. After decades of rapid economic expansion, analysts are cautious about China's prospects. There are several solid fundamental reasons for this caution: a <u>rapidly ageing</u> population, a sky-high unemployment rate <u>among young people</u>, which results in <u>fewer</u> marriages and a <u>rapidly declining birth rate</u>. Consequently, there is an almost paradoxical situation where a country with a population of 1.4 billion experiences a massive <u>oversupply</u> of <u>apartments</u>. The Chinese government recently announced a <u>stimulus package</u> that primarily focuses on providing more favorable mortgage terms to households, which might temporarily alleviate the oversupply problem. However, less stringent mortgage policies could lead to higher non-performing loan ratios, and the demographic issue is too deep to be resolved by mortgage stimulus alone. Therefore, a sudden growth spike in the Chinese economy is unlikely.

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The sectoral growth in US power demand

The demand for electricity is forecast to rise at 2.4% CAGR between 2022-2030



Source: Goldman Sachs

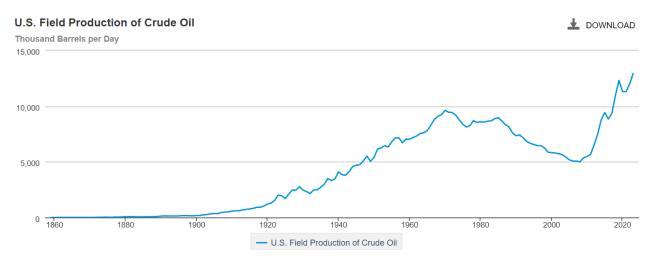
On the other hand, there is a powerful secular trend known as the 'digital revolution,' which requires a substantial amount of energy. Almost every week, we see news that Microsoft, Google, or Amazon has invested billions in building new data centers worldwide. According to the above chart, Goldman Sachs analysts expect data centers to be the main contributor to energy demand growth in the U.S. by 2030. This trend is strong, and it's important to note that U.S. technological giants appear largely unaffected by the tight monetary policy of recent years. This is because these companies have accumulated significant cash reserves. The three aforementioned tech giants have amassed a total of \$265 billion in cash as of the latest reportable date, and their leverage is quite low.

Now, let's proceed with the supply side of the equation. As a prominent player in the global oil market, OPEC can significantly influence supply by adjusting output levels. OPEC members are heavily dependent on oil exports, which means they have an interest in maintaining higher prices. Consequently, in recent years, we have seen several instances where OPEC responded to monetary tightening in the U.S. by implementing output cuts, which helped mitigate the impact of tight monetary conditions. Thus, OPEC remains an important factor in the global supply. It is also important to note that OPEC's influence has grown in recent years with the establishment of "OPEC+," an alliance between OPEC and several other major oil-producing countries. As a prominent player in the global oil supply, Kazakhstan is part of the OPEC+ format, which means our country has commitments regarding crude oil production quotas.

Another crucial, yet less common, factor on the supply side is the two ongoing major military conflicts involving oil-rich countries like Russia and Iran. As mentioned earlier, the global oil market has already adapted to the sanctions imposed on Russian oil, and this factor does

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not appear to significantly affect oil prices at the moment. However, the situation between Israel and Iran is escalating rapidly, with some opinions saying that Iranian oil facilities <u>might</u> <u>be attacked</u>. The probability of such a scenario is extremely low, as Israel's Prime Minister claims the country only <u>plans to target Iran's military infrastructure</u>. Nonetheless, this risk cannot be ignored because the geopolitical landscape in the Middle East is evolving rapidly, and the impact of such a scenario on crude oil prices could be substantial potentially leading to panic in oil markets and driving prices much higher, similar to what occurred in March 2022.



Source: eia.gov

Last but not least on the supply side, we should not forget that the technological revolution in the industry, such as shale oil and fracking, was one of the core reasons why oil prices began to plunge ten years ago, with the bottom for Brent oil prices being quite deep compared to today's levels. From the above chart, we see that U.S. oil production grew by around 50% between 2015 and 2023, making the country the world's largest oil producer and independent of oil imports. As the largest U.S. oil and oilfield services companies continue investing billions in R&D, there is always the possibility of a new technological disruption that could significantly impact the supply side of the global equilibrium.

Break-evens for Crude oil-exporting Countries

The fiscal break-even oil price is a crucial metric for oil-exporting countries, representing the oil price needed to balance the national budget. It reflects the (in)dependency of a country's fiscal health on oil revenues. The below table from the International Monetary Fund [IMF] suggests that, for Kazakhstan, this break-even price is significantly higher than current and projected Brent crude oil prices, posing challenges to economic stability. It is also worth emphasizing that Kazakhstan's fiscal break-even price is among the highest ones compared with peers.

This issue has been recognized at the highest levels of government and is addressed in the <u>National Development Plan of Kazakhstan until 2029</u>. The plan highlights concerns such as the increased debt-to-GDP ratio over the last decade and chronic non-oil budget deficit, which underscores the urgency of implementing effective strategies.

	Table 6. Breakev	en Oil Pric	es						
(U.S. dollars per barrel)									
	Average			Projections					
	2000-2019	2020	2021	2022	2023	2024			
FISCAL BREAKEVEN OIL PRICE1									
Oil exporters									
Algeria	102.1	89.6	111.4	109.8	93.8	125.7			
Azerbaijan	51.9	65.7	57.5	67.3	76.4	88.2			
Bahrain	83.2	120.6	131.6	131.8	138.4	125.7			
Iran	85.6	228.0	118.8	131.4	105.1	121.0			
Iraq	71.7	57.1	54.2	68.5	80.4	93.8			
Kazakhstan		192.1	183.5	95.3	109.3	123.5			
Kuwait ²		64.2	87.6	81.5	81.0	83.5			
Libya	71.7	141.7	52.2	64.4	65.9	66.0			
Oman	69.1	86.4	76.7	55.4	57.2	58.1			
Qatar	45.1	49.3	47.7	46.3	46.5	43.1			
Saudi Arabia	80.4	76.3	83.6	88.1	93.3	96.2			
Turkmenistan		38.2	28.9	31.5	34.2	35.8			
United Arab Emirates	50.0	51.7	53.0	46.6	51.6	56.7			

Source: IMF

To address this, Kazakhstan should enhance budgetary efficiency by implementing stringent cost control measures and reducing expenditures that do not drive economic growth. Prioritizing spending on essential sectors that drive economic growth, and social welfare is vital to ensure effective resource allocation. Increasing the efficiency of governmental spending is also crucial. Streamlining government operations through public sector reforms can improve efficiency and reduce costs. Adopting digital solutions can enhance service delivery and reduce bureaucratic overhead. Introducing performance-based budgeting can ensure that government spending achieves desired outcomes, maximizing the impact of each tenge spent.

Diversifying the economic base is another key strategy. Encouraging investment in non-oil sectors (but not at the expense of the investment attractiveness of the Kazakhstan's oil and gas industry) to the detriment of the investment attractiveness of the oil and gas industry) such as technology, agriculture, and renewable energy can reduce dependency on oil revenues and provide alternative revenue streams. Supporting small and medium-sized enterprises can stimulate innovation and job creation, contributing to a more balanced economic structure.



While adoption of the new National Development Plan of Kazakhstan is a positive step, it is vital to execute it effectively. Without proper implementation, it risks remaining just a plan, and the problems will continue to mount. By taking decisive action, Kazakhstan can better navigate the challenges posed by high fiscal break-even oil prices and work towards a more sustainable and diversified economic future.

Bottom line

In wrapping up our analysis, it's clear that crude oil remains a vital component of global energy security, even as renewable energy sources steadily gain ground. The oil market is shaped by a complex web of geopolitical events, economic policies, and technological advancements, all of which demand careful navigation by strategists and policymakers. Understanding these dynamics is crucial, as they directly impact supply and demand, influencing oil prices and economic stability. By drawing on insights from trusted sources and acknowledging the potential for price volatility, stakeholders can make informed decisions to manage risks and seize opportunities in this ever-evolving global landscape.

ENERGY Insights & Analytics

Analytical center "ENERGY" LLP (ENERGY Insight & Analytics) is a joint venture between <u>the KAZENERGY Association</u> and IT company <u>AppStream</u>. The company aims to become a priority source of data, analytical information, and recommendations for Kazakhstan's oil, gas, and electric power industries, allowing decision-makers to analyze and predict the most significant industry indicators with details on leading market players. Activities of ENERGY Insight & Analytics incorporate the whole analytics cycle with consequent stages: Descriptive, Diagnostic, Predictive, and Prescriptive analytics.

The key tool and product of ENERGY Insight & Analytics is internally developed software - <u>the Analytical Platform EXia</u>, aimed to identify, localize, format, and present data most efficiently for the specified use cases in a kind of Software-as-a-Service.