Refined Products 2024 – Balance and Prices

Introduction

Kazakhstan almost completely meets its domestic demand for refined products [gasoline, diesel, kerosene, mazut] through its own oil refining industry. Only relatively small volumes of light-oil refined products are imported, while most of the mazut produced in Kazakhstan is exported.

The resource base for refined product production is crude oil from mature oilfields in Kazakhstan, where output is gradually declining. As noted by ENERGY Insights & Analytics in the article <u>"Mature Oilfields – Nurture and Revitalize"</u>, one of the primary reasons for this decline is the low investment attractiveness of these oilfields due to the price disparity between crude oil sold for export and that sold on the domestic market. If this downward trend in production continues, Kazakhstan will be forced to divert highly profitable export oil from major oil and gas projects at the Tengiz, Kashagan, and Karachaganak fields to meet the growing demand for oil to produce refined products. While this would address the issue of refinery loading, it would significantly reduce revenues to the National Fund and the state budget, which, given the rising government spending, would lead to a further increase in the budget deficit.

A potential solution for securing domestic crude oil supply is the long-awaited liberalization of gasoline and diesel prices, a process that has already begun. Aligning prices with market levels would encourage new investment in both crude oil production and refining. However, this will only be effective if subsoil users benefit economically from deregulation. If the increase in prices for motor fuel is withdrawn through excise duty and traders' margins, then the issue of declining production at mature oilfields will not be solved.

Resource Base for Refined Products

Refined products, as is known, are produced from crude oil¹, so let us begin by reviewing the dynamics of crude oil production and supply to oil refineries in Kazakhstan (please see Fig. 1). Over the past 10 years, production has increased by 10%, from 79 million tons in 2015 to 88 million tons in 2024. This growth, however, was driven by megaprojects – Tengiz,

¹ Hereinafter, oil refers to liquid hydrocarbons [oil and condensate]

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Kashagan, and Karachaganak – which saw a 47% increase in production over the same period. In contrast, production from other projects decreased by 25%, falling to 30 million tons in 2024 compared to 40 million tons in 2015. Further growth in Kazakhstan's crude oil production is expected from megaprojects. The Ministry of Energy of Kazakhstan forecasts production will reach <u>96.2 million tons in 2025</u>, largely due to the completion of key stages of Tengizchevroil LLP's Future Growth Project and the commissioning of the Third Generation Plant at the Tengiz oilfield².



Fig. 1 Dynamics of oil production and supply to refineries

Along with the growth in production, the supply of crude oil to Kazakhstan's refineries has also increased. Compared to 2015, the volume rose by 27%, reaching 18.3 million tons in 2024. On the surface, it may appear that the resource base for refined product output is stable. However, the oil supplied to Kazakhstan's refineries comes from the declining production of **non**-megaprojects, which are mature oilfields. In 2015, oil supplied to domestic refineries accounted for 36% of total production, excluding megaprojects. By 2024, this figure had risen to 60%.

The situation regarding the resource base for refining is unlikely to change soon. Kazakhstan can expect crude oil from megaprojects to reach the refineries closer to the completion of the stabilized contracts for Tengiz, Kashagan, and Karachaganak, which expire in 2033, 2037, and 2041, respectively. Until then, <u>National Company KazMunayGas will continue to meet its obligations to supply the refineries using its own resources</u>.

Source: ENERGY Insight & Analytics, Ministry of Energy of Kazakhstan / SAC FEC RK

² More information about the Tengiz oilfield and its impact on Kazakhstan in our article <u>"Tengiz Effect – 2033</u> and beyond"

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According to the conservative forecast by ENERGY Insights & Analytics (please see Fig. 2), crude oil production from mature oilfields in Kazakhstan will amount to approximately 30 million tons in 2025 and decrease to 24 million tons by 2030. This is a critical threshold as it corresponds to the expanded capacity of the country's oil refineries [currently 18 million tons, increasing to 24 million tons with the expected expansion of the Shymkent oil refinery]. This trend is concerning because, without intervention, production could continue to decline by 6-7% annually, requiring the purchase of crude oil from megaprojects at global market prices to meet domestic demand. While this forecast is conservative, as the saying goes, "hope for the best but prepare for the worst."



Fig. 2 Forecast of oil production at mature oilfields of RoK and capacity of oil refineries

The resource base for oil refining is shrinking due to the insufficient investment attractiveness of crude oil production in Kazakhstan, as we discussed in the article <u>"Mature Oilfields – Nurture and Revitalize"</u>. One of the key reasons for this is the lower profitability of supplying oil to the domestic market compared to exports.

Oil Sales Price and Netback

To evaluate the economic incentives for crude oil producers regarding domestic market supply, and consequently to the oil refineries of the Republic of Kazakhstan, it is important to begin by comparing crude oil prices for domestic sales and exports (please see Fig. 3), as presented by S&P Global Commodity Insights in <u>the KAZENERGY National Energy Report</u> 2023. Since 2016, the average domestic price has shown no correlation with export prices, and by 2022, it stood at around 30 US dollars per barrel – only 32% of the export price.

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Fig. 3 Comparison of domestic Kazakh and international crude oil prices



Source: S&P Global Commodity Insights, KAZENERGY

However, to accurately compare the profitability of a crude oil producer from crude oil sales, we must consider the netback parameter. Netback is a key indicator in the oil industry that measures the profitability of crude oil production by calculating the revenue remaining after deducting all costs associated with bringing the crude oil to market. These costs include transportation fees, royalties, and taxes, which vary depending on the price of crude oil. More information about oil sales routes and pricing can be found in our article <u>"Route to Sell</u> <u>– Markets and Netbacks"</u>.

Fig. 4 shows crude oil sales prices and netbacks, depending on the sales direction – either export or domestic market, for the years 2022–2024. Netback values for 2022 and 2023 are calculated based on actual figures for crude oil producers that ship significant volumes to the domestic market, including Mangistaumunaigas, Ozenmunaigas, and Embamunaigas, while the values for 2024 are extrapolated based on the current world [Brent] oil price. In 2024, the ratio of Brent price to netback is 42% for exports and 32% for the domestic market, meaning that exports are 10% more profitable for crude oil producers than domestic sales.



Fig. 4 Oil sales price and Netback

Kazakhstan's procedure for distributing crude oil supplies to the domestic market is regulated by <u>the Rules for the Formation of an Oil Supply Schedule</u>, aimed at ensuring the country's energy security by fully loading domestic oil refineries to meet the demand for refined products.

The Ministry of Energy of the Republic of Kazakhstan recognizes the need to improve the profitability of mature oilfields that supply crude oil to the domestic market and has already prepared tax measures, contingent on mandatory reinvestment in the development and implementation of new production technologies. This approach is expected <u>to add up an</u> additional 40 million tons of oil production by 2045. Additional crude oil production will indeed be required, as Kazakhstan's output of refined products continues to grow.

Balance of Refined Products

The major refined products produced from crude oil supplied by domestic producers include gasoline, diesel, kerosene [mostly jet fuel], and mazut. Figure 5 illustrates the dynamics of production [shipments from oil refineries], consumption, and the trade balance [exports minus imports] of refined products. Over the past ten years, the production of refined products increased by 32%, reaching 14.1 million tons in 2024. Consumption also rose, but by a more modest 26%, from 10.4 million tons in 2015 to 13 million tons in 2024.

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Fig. 5 Balance of production and consumption of refined products

Source: ENERGY Insight & Analytics, Ministry of Energy of Kazakhstan / SAC FEC RK

The gap between the consumption and production of refined products is explained by changes in the trade balance, which fluctuated around zero until 2017. However, since 2018, the export of refined products has exceeded imports. As shown in Fig. 6, there is a positive trade balance of 1 279 thousand tons in 2024, primarily driven by the export of mazut and, to a lesser extent, gasoline. At the same time, Kazakhstan imported 210 thousand tons of kerosene and 110 thousand tons of diesel.



Fig. 6 Details of the trade balance of refined products in 2024

Source: ENERGY Insight & Analytics, Ministry of Energy of Kazakhstan / SAC FEC RK

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The availability of international trade in refined products is crucial for the proper functioning of Kazakhstan's refined products market. Kazakhstan traditionally imports the necessary refined products from the Russian Federation, and as part of the Eurasian Economic Union (EAEU), it is planned to establish common markets for crude oil and refined products within the EAEU by approximately 2027. Specifically, due to the disparity in motor fuel prices with neighboring countries (please see the next section), Kazakhstan regularly extends the ban on the export of gasoline and diesel outside the EAEU's customs territory. Additionally, it restricts (with some exceptions) the export of refined products by automobile and railway transport from Kazakhstan.

The largest suppliers of crude oil to the domestic market (please see Fig. 7) are Mangistaumunaigas, Ozenmunaigas, and CNPC-Aktobemunaigas. These three companies supplied 50% of all crude oil deliveries to Kazakhstan's oil refineries in 2024. The three main oil refineries – Atyrau Oil Refinery, Pavlodar Petrochemical Plant, and Shymkent Oil Refinery – account for 91% of total oil supplies. The breakdown of refined products produced is as follows: 39% gasoline, 39% diesel, 17% mazut, and 5% kerosene.



Fig. 7 Structure of oil supplies to refineries and production of refined products

Source: ENERGY Insight & Analytics, Ministry of Energy of Kazakhstan / SAC FEC RK

According to forecasts by the Ministry of Energy of Kazakhstan, production of light-oil refined products will reach 19 million tons by 2032. Oil refineries will produce 8.2 million tons of gasoline, 9.3 million tons of diesel, and 1.5 million tons of kerosene. At the same time, imports of motor fuel and lubricants will come to an end, and exports of surplus products, amounting to 10% of domestic production, will begin.

The planned increase in refined product production, as outlined by the Ministry of Energy, is intended to meet the growing demand driven by <u>population growth</u> and <u>the goal of doubling</u>



<u>the country's GDP by 2029</u>. With such an ambitious macroeconomic plan, domestic oil consumption is expected to rise. The forecast for apparent consumption of refined products in Kazakhstan (please see Fig. 8) was prepared by S&P Global Commodity Insights as part of <u>the KAZENERGY National Energy Report 2023</u>.



Fig. 8 Outlook for apparent consumption of refined products in Kazakhstan

Refined Products Prices

The largest share [86%] of refined products consumed in Kazakhstan in 2024 consisted of gasoline [42%] and diesel [44%], which we will focus on below. The aforementioned ban on the export of motor fuel from Kazakhstan is mostly due to its lower price compared to neighboring countries and partners within the customs union. Figure 9 presents a comparison of gasoline and diesel prices in countries that, along with Kazakhstan, are members of the EAEU, share a common land border with Kazakhstan, or border the Caspian Sea.

Fig. 9 Prices for gasoline and diesel



Source: Global Petrol Prices - 27.01.2024

Prices for motor fuel are lower than in Kazakhstan only in Iran and Turkmenistan, with prices in other selected countries being significantly higher. The reason for the relatively low prices in Kazakhstan is the state regulation of prices for gasoline (AI-92) and diesel that existed until recently. From January 30, 2025, the relevant orders through the Ministry of Energy of Kazakhstan have been terminated, which will make it possible to switch to a sustainable pricing model for motor fuel: market balance between supply and demand, eliminating motor fuel shortages, stimulating the modernization of oil refineries, creating new jobs and attracting long-term investments. According to the Ministry of Energy of the Republic of Kazakhstan, the increase in prices for gasoline and diesel to the market level will take place gradually, considering the established corridor of inflation and preventing high monopoly income by gas stations.

The Bottom Line

The deregulation of prices for gasoline and diesel that has begun is taking place in the framework of the Decree of the President of the Republic of Kazakhstan dated May 8, 2024 <u>"On Measures to Liberalize the Economy</u>", in particular, the clause on the ending of regulatory legal acts of the Republic of Kazakhstan, which directly or indirectly restrict the independence of price and tariff formation.

Bringing prices for refined products to the market level is a long-awaited measure that should increase the investment attractiveness of the oil industry by leveling the netback for exports and the domestic market. In turn, increasing investment attractiveness should attract new investments in crude oil exploration and production, so additional crude oil production will increase the economic [taxes and other mandatory payments] and energy [self-sufficiency in oil and refined products] security of Kazakhstan.

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The key tool and product of ENERGY Insight & Analytics is internally developed software - the Analytical Platform EXia, aimed to identify, localize, format, and present data most efficiently for the specified use cases.

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