RystadEnergy

ENERGY insights & analytics

Oil & Gas Regulatory Landscape – Learning Cases for Kazakhstan

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Introduction

Kazakhstan's oil and gas industry faces significant challenges. Megaprojects such as Tengiz and Kashagan have boosted their output, but the country's participation in OPEC+ imposes substantial constraints for crude oil production. The discovery of new oilfields and the further development of existing ones require investment, yet the current tax regime remains insufficiently attractive to investors. Kazakhstan’s national oil company and most domestic subsoil users ensure loading of Kazakhstan's refineries; however, regulated prices for oil products do not offer profitability on par with export.

In a previous joint article by Rystad Energy and ENERGY Insights & Analytics, "To cut or not to cut – Kazakhstan's quandary", we explored the implications of Kazakhstan’s ambiguous position within OPEC+ and highlighted the challenges already encountered by the country’s oil and gas regulator. This article examines how peer countries approach regulation of the industry and its effect on production profiles and investments.

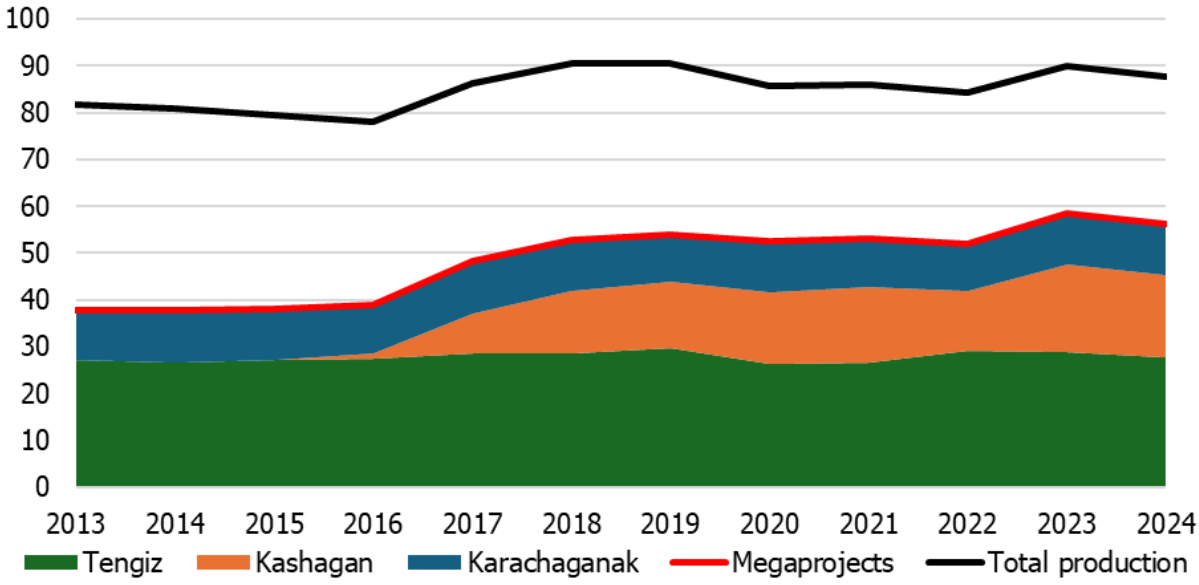
Challenges of Kazakhstan’s O&G Industry

Kazakhstan's crude oil [hereinafter, oil means crude oil and condensate] production faces several challenges that require a systematic, state-level approach. These issues are related to regulatory requirements for subsoil users, investment attractiveness, tax regime, and the level of exposure of the national oil company to the industry.

Concentration of oil production in megaprojects. Nearly two-thirds of Kazakhstan's total oil production in 2024 comes from three megaprojects: Tengiz, Kashagan, and Karachaganak oilfields. The share of these megaprojects has been steadily growing (please see Figure 1) since the Kashagan field was re-launched in 2016 and is expected to continue increasing up to 78% in 2033, driven by megaproject expansion initiatives and a decline in production at other (mature) oilfields.

Kazakhstan is not the operator of these megaprojects, the national oil company of Kazakhstan holds stakes of 20%, 16.877%, and 10% in the Tengiz, Kashagan, and Karachaganak projects, respectively. With limited exposure to these megaprojects through shareholding, Kazakhstan protects its interests by filing claims in arbitration against the international investors.

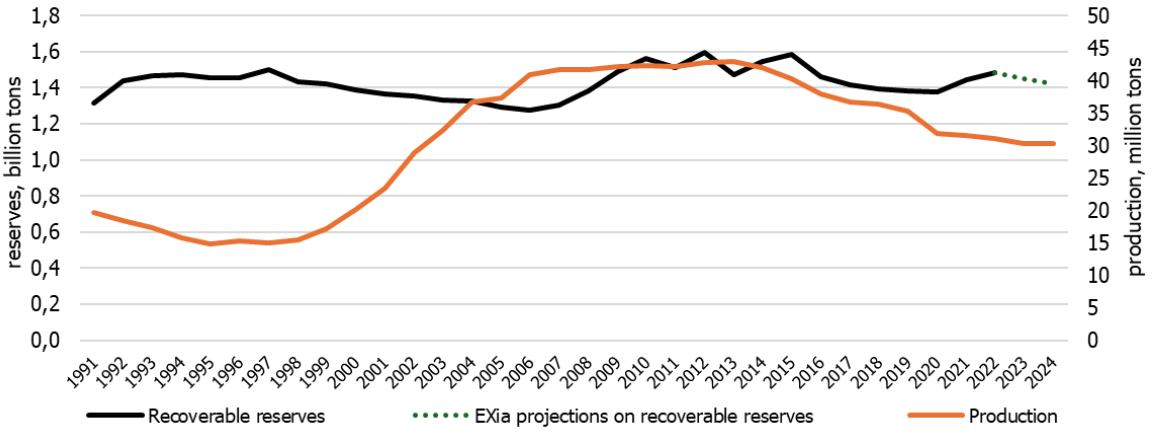
Figure 1. Kazakhstan oil production
Million tons



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

Mature oilfields' investment unattractiveness. Oil production, excluding megaprojects, has been declining since 2014 (see Figure 2), even though recoverable oil reserves [categories A+B+C1+C2 according to the Kazakh classification] have been increasing due to adjustments and re-estimation of reserves. Mature oilfields' production amounted to 30 million tons in 2024, which is 29% lower than in 2013. A decline in production despite the presence of reserves may indicate not enough profitability of oil extraction and, consequently, a lack of investment.

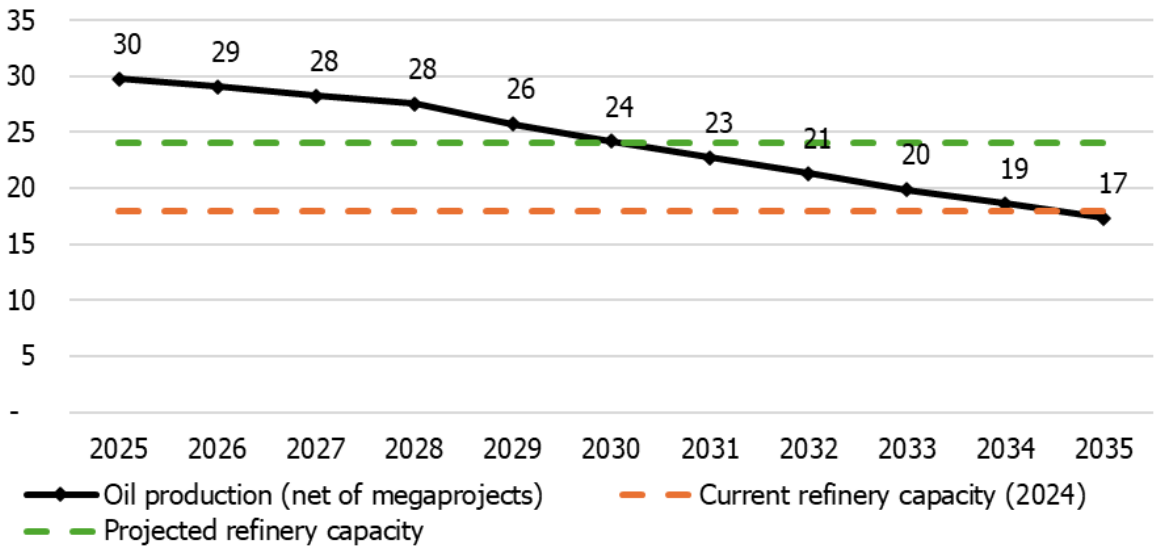
Figure 2. Recoverable reserves and production of oil (net of megaprojects)
Billion tons (reserves) & Million tons (production)



Source: ENERGY Insight & Analytics, National Geological Survey JSC, Ministry of Energy of Kazakhstan / SAC FEC RK

According to the forecast (please see Figure 3), 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.

Figure 3. Forecast of oil production at mature oilfields and capacity of oil refineries
Million tons



Source: ENERGY Insight & Analytics

Low margins on oil supplies to the domestic market. In 2024, the ratio of the world oil price to netback in Kazakhstan was 42% for exports and 32% for the domestic market. Thus, oil exports are 10% more profitable than domestic sales for producing companies. Apart from megaprojects, which export all produced oil, the remaining producers supply oil to the domestic market according to a schedule set by the Ministry of Energy.

Subsoil users also cannot capture full margins on oil products, as fuel prices in Kazakhstan are significantly lower than in neighboring countries due to the state regulation of gasoline (AI-92) and diesel fuel prices, which remained in effect until January 30, 2025. The adjustment of motor fuel prices to market levels will occur gradually, while the ban on the export of gasoline and diesel outside the customs territory of the Eurasian Economic Union, and its export by road and rail from Kazakhstan, remains in place. The long-awaited liberalization of gasoline and diesel prices has already begun, but there is a risk that the increase in prices for motor fuel will be withdrawn through excise duty and traders' margins.

Supporting role of the national oil company. KazMunayGas, the national oil company of Kazakhstan, accounted for just 27% [23.8 million tons] of the country's oil production in 2024, whereas, on average, national oil companies in OPEC+ countries produced 67% of their total national oil output.

However, if we exclude KazMunayGas' share interests in megaprojects, the national company's share of total production would be 16% [14.1 million tons], with 59% [8.3 million tons] of this oil being supplied to Kazakh refineries. The outlook for the resource base for oil refining will not change soon. It is possible to expect oil from megaprojects to be available for refinery use closer to the end of the stabilized contracts for Tengiz, Kashagan, and Karachaganak, which expire in 2033, 2037, and 2041, respectively. Until then, KazMunayGas is committed to supplying refineries with oil from its own resource base.

Ambiguity of Kazakhstan's membership in OPEC+. Kazakhstan's recent non-compliance with OPEC+ production quotas has drawn scrutiny and even criticism from within the alliance, leading to the country being labelled by some in the group as a "cheater".

Kazakhstan faces a dilemma in balancing compliance with voluntary OPEC+ quotas and its economic dependence on growing oil production. On the one hand, the Ministry of Energy has reaffirmed its commitment to adhering to quotas, with plans to return to the established production levels and even compensate for accumulated overproduction. On the other, the Ministry of National Economy has based the state budget on projections of increased oil output. Additionally, the natural gas that will accompany this increase in oil production is already allocated for new gas chemical projects and to meet the rising population's domestic demand. It is possible that it is precisely because of the lack of discipline regarding compliance with quotas that OPEC+ members have planned an increase in oil production, which in turn pushes and puts pressure on world oil prices.

Kazakhstan's challenges did not arise all at once; their effects have been accumulating for decades. However, the lack of systemic changes in the approach to managing the oil industry could lead to reputational and financial losses for the Republic. To prevent this, it is crucial to define the role and mandate of the oil and gas regulator in line with the current and, more importantly, the future configuration of the industry.

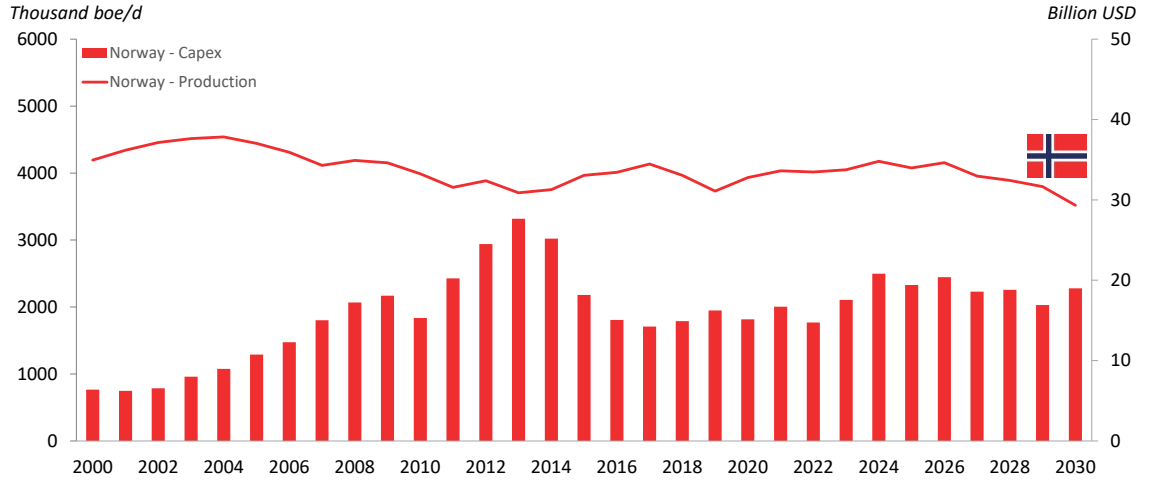
In seeking answers to the challenges facing Kazakhstan's oil and gas industry, it is essential to turn to the historical experience of other comparable countries. Examining the dynamics of investment and production allows us to assess the effectiveness of different models of industry regulation.

Norway

Norway's oil and gas industry is supported by a stable and investor-friendly regulatory framework. While the tax regime imposes an effective 78% tax on petroleum income, it is structured to encourage exploration and capital-intensive projects. Companies can deduct significant exploration and development costs, improving project viability and ensuring competitive returns on capital.

The Norwegian Petroleum Directorate (NPD) oversees compliance and resource management, while the Ministry of Petroleum and Energy sets policies. Norway's model balances state participation with market competition. Petoro manages the state's direct financial interests, while Equinor competes alongside international oil companies (IOCs). This creates an environment of fair competition and operational efficiency.

Figure 4. Norway - Production and Capital Expenditure in 2000-2030
Thousand boe/d (production) & Billion USD (Capex)



Source: Rystad Energy

Incentives such as exploration refunds—where the state reimburses up to 78% of exploration costs for companies without taxable income—reduce risk for new entrants and promote continual resource discovery. Combined with a transparent regulatory framework and predictable fiscal terms, these measures ensure Norway remains a key destination for global energy investment.

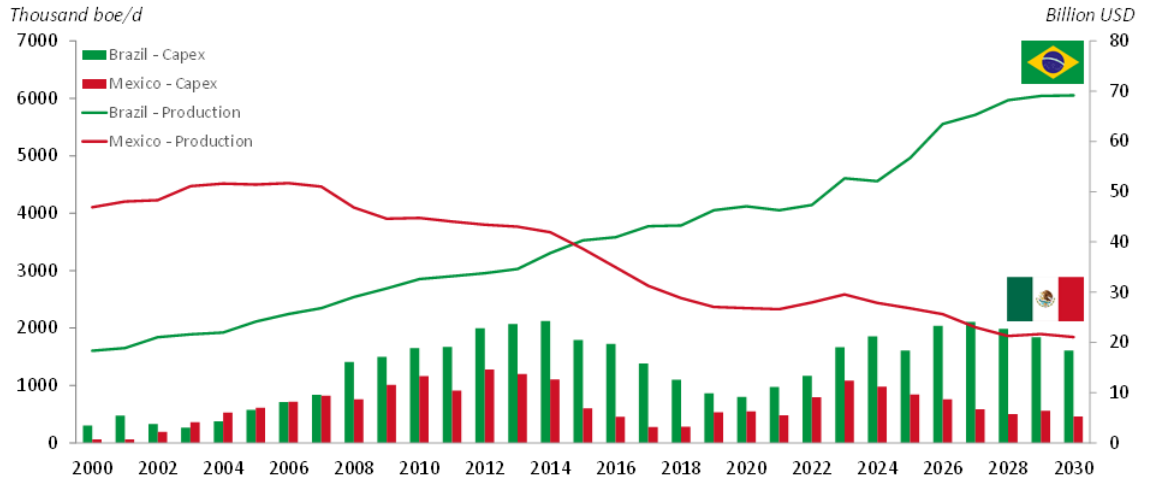
Fiscal changes in the early 2000s allowed Norway to attract a plethora of independent players boosting the country's production profile. This is increasingly important in maturing basins to attract top technologies and allow competition for smaller players with niche capabilities. When comparing to its neighbor UK, Norway has been much more successful in driving continued exploration success and replenishment of reserves.

Brazil vs Mexico

Brazil and Mexico share notable similarities in their oil and gas sectors. Both have significant offshore reserves and a history of political instability, bribery scandals, and state dominance through their national oil companies—Petrobras in Brazil and Pemex in Mexico. Their offshore basins have attracted global interest due to their high-quality reserves.

However, their regulatory trajectories have diverged. Brazil has steadily liberalized its oil sector, opening it to foreign competition through transparent bidding rounds. By contrast, Mexico has experienced back-and-forth reforms. The 2013 energy reforms initially opened the sector, but subsequent political changes led to partial reversals, reinforcing state control and reducing foreign participation.

Figure 5. Brazil and Mexico - Production and Capital Expenditure in 2000-2030
Thousand boe/d (production) & Billion USD (Capex)



Source: Rystad Energy

Brazil's liberalized market has attracted major IOCs such as Shell, BP, and Equinor, which have invested heavily in pre-salt fields. Petrobras remains a significant player but no longer holds a monopoly. Mexico, however, remains heavily dominated by Pemex, with foreign companies playing a limited role due to policy uncertainty and the company's preferential treatment.

Brazil offers a more transparent regulatory framework, with competitive bidding processes and a clearer tax regime. Its regulatory body, the National Agency of Petroleum, Natural Gas, and Biofuels (ANP), is seen as independent and reliable. In contrast, Mexico's regulatory environment has grown less predictable, with Pemex enjoying significant influence over government decisions.

Brazil's main challenge is to maintain regulatory stability while balancing environmental commitments. Its pre-salt reserves provide immense potential, but political shifts could disrupt progress. Mexico's outlook depends on Pemex's recovery and whether the government can restore investor confidence by clarifying and stabilizing its policies.

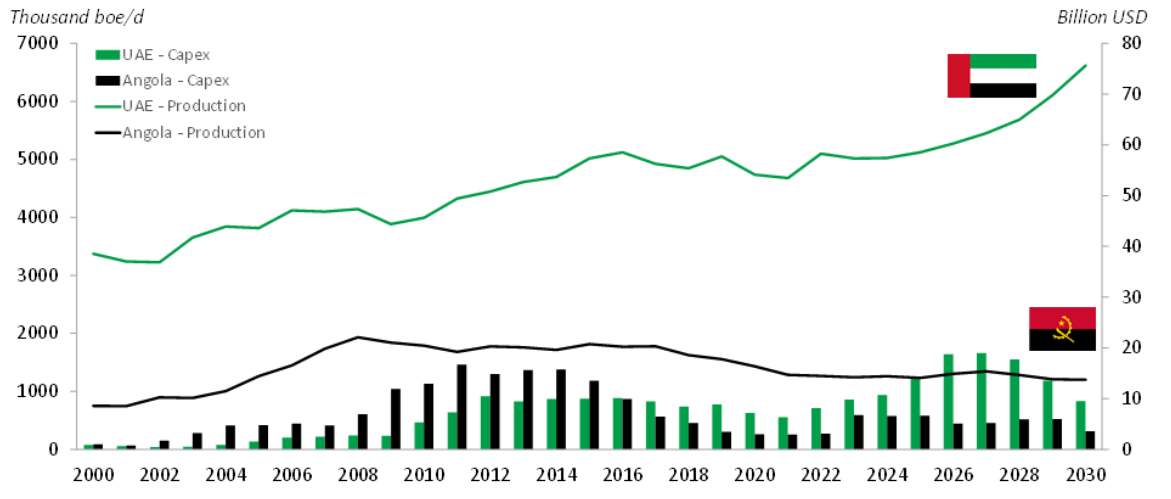
Angola vs UAE

Both Angola and the UAE are historically state-controlled oil economies with extensive presence in OPEC, but their regulatory frameworks and tax policies highlight different strategic priorities.

Angola's oil sector is heavily dependent on Sonangol, the national oil company, which plays a regulatory and operational role. The country's tax regime consists of a 10% royalty rate and a variable production-sharing system that can limit profitability for operators. While recent reforms aim to improve transparency and streamline regulatory processes, bureaucracy and corruption remain obstacles.

Angola's exit from OPEC reflects its struggle to meet production quotas and the urgent need for new investments. The ease of doing business in Angola remains one of the lowest globally, further complicating foreign participation.

Figure 6. Angola vs UAE - Production and Capital Expenditure in 2000-2030
Thousand boe/d (production) & Billion USD (Capex)



Source: Rystad Energy

The UAE's regulatory framework is business-friendly, with no royalty tax and a corporate tax rate of 55% on oil revenue. ADNOC, the national oil company, has modernized its operations and actively seeks partnerships with IOCs, enhancing its technological capabilities. The UAE's approach is characterized by openness to foreign investment and diversification into renewable energy, making it a regional leader in the energy transition.

The ease of doing business in the UAE ranks among the highest in the region, reflecting its investor-friendly policies. The country's focus on expanding gas production and hydrogen projects underscores its forward-looking strategy.

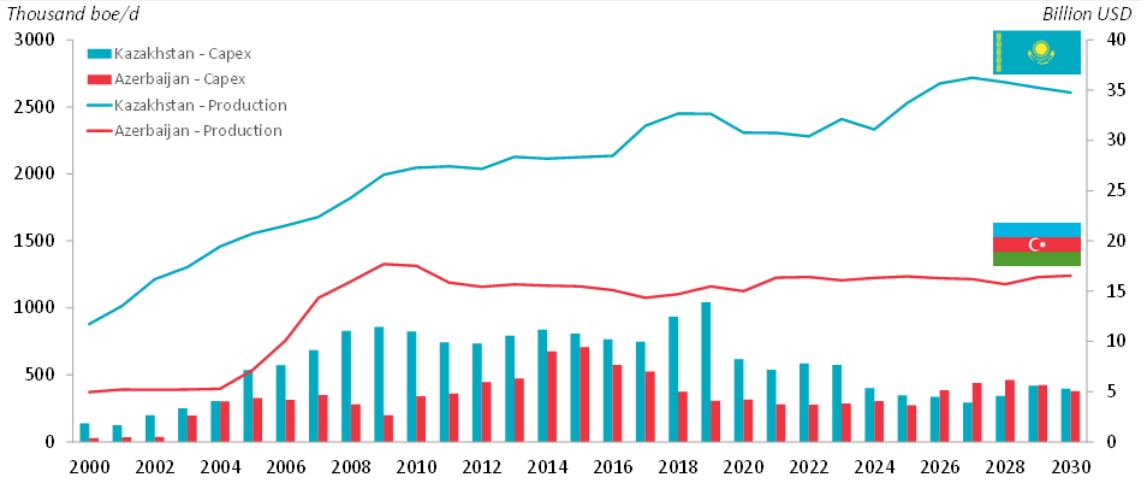
Kazakhstan vs Azerbaijan

Post-Soviet countries, rich in hydrocarbon potential. Both have benefited from the collapse of the Soviet Union in 1990s to attract foreign investment for development of their mega-fields: Azeri–Chirag–Gunashli, Karachaganak, and Tengiz with the later addition of Kashagan. All these projects were signed on rewarding (in case of project success) PSA [Product Sharing Agreement] terms for investors, whilst government revenues were not as high as within the standard petroleum fiscal regimes. This raised a lot of questions on transparency and possible wealth drainage via exploitation of the countries' natural resources.

Whilst in the case of Azerbaijan the PSA terms are transparent and have been prolonged until the 2040s, we see that in Kazakhstan these terms spark a wide debate. Major projects have their PSAs expiring in 2030s with Tengiz first in line in 2033. Notably Tengiz will generate over US$5 billion and US$6 billion of free cash flow for Chevron - it's largest shareholder - in 2025 and 2026 respectively. Similarly, Caspian fields are seen as strategic cash-generating assets by most majors. However, there is potential for a partial conclusion and review of PSA terms in 2030s in favor of Kazakhstan's national interests.

Little exploration incentives (carry financing clause) and a ban on PSA contracts in Kazakhstan have made the country less attractive to foreign capital. Outside of the mega-projects, both Kazakhstan and Azerbaijan have mature resource bases and rapidly declining production from mature oilfields. Renewed exploration activity and targets after 15-20 years of lull should spur additional interests amongst investors. However, the question remains on the new agreement terms and if there is at all potential to find new mega-fields.

Figure 7. Kazakhstan vs Azerbaijan - Production and Capex in 2000-2030
Thousand boe/d (production) & Billion USD (Capex)



Source: Rystad Energy

The Bottom Line

Kazakhstan is shaping a unique story in the oil and gas industry, marked by both progress and setbacks. While the country's daily production levels are at all-time high, concerns persist around mature oilfields, exploration success, and civil unrest at some sites driven by a reducing resource base and mounting operational cost pressures.

Kazakhstan can draw many lessons from the experiences of other countries, both positive and negative, but ultimately, three key pillars must align for the sustained success of its oil and gas industry.

First, the intrinsic resource base. Kazakhstan possesses substantial conventional hydrocarbon resources. To confirm the full extent of these resources and hydrocarbon potential, renewed exploration is essential, often requiring foreign investment and advanced technology. Alongside frontier exploration, near-field developments are critical to sustain declining mature oilfields, where enhanced oil recovery (EOR) technologies play a key role in unlocking remaining reservoir potential.

Second, a sound fiscal regime. To attract foreign capital and technology, Kazakhstan's fiscal regime must be stable, predictable, and competitive relative to its peers, the criteria currently under question. The country has abolished the PSA, a widely recognized framework for developing complex and capital-intensive oilfields, and introduced the IMC (Improved Model Contract), which has yet to prove its effectiveness. Provisions in the proposed new Tax Code do not enhance the sector's investment appeal, while mandatory domestic crude supply at non-market prices continues to deter exploration and development investment.

Lastly, amid increased market volatility and geopolitical instability, short development cycles are essential to capture project value from FID [Final Investment Decision] to execution. "Time is money," and the success stories of Guyana and Egypt illustrate the advantages of rapid time-to-market. To replicate such success, Kazakhstan needs well-developed infrastructure, including access to high-quality (digitized) geological and analytical data, reliable oil services contractors with modern equipment and experienced personnel, and the ability to market extracted products without artificial constraints such as OPEC+ quotas.

All the above depends on the quality of regulation in Kazakhstan's oil and gas sector. Robust regulatory frameworks can ensure stable GDP [Gross Domestic Product] growth, attract direct (including foreign) investment, support a stable tenge exchange rate, and ultimately enhance the country's overall prosperity. While Kazakhstan follows its own unique development path, it should carefully study the experience of peer nations and adapt relevant practices to fit its specific political, economic, and cultural context.

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Analytical center "ENERGY" LLP (ENERGY Insight & Analytics) is a joint venture between the KAZENERGY Association and IT company AppStream. 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 – the Analytical Platform EXia, aimed to identify, localize, format, and present data most efficiently for the specified use cases.

For more information, visit www.exia.kz

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