ҚазМұнайГаз NATIONAL COMPANY ҰЛТТЫҚ КОМПАНИЯСЫ






JSC NC KAZMUNAYGAS ANNUAL REPORT 2023

BRINGING IDEAS TO LIFE

Boundaries of the Annual Report of JSC NC KazMunayGas / Disclaimer

The Report of JSC National Company KazMunayGas for 2023 includes the performance results of the parent company and its subsidiaries and associates, referred to as JSC NC KazMunayGas (KMG, the Company, KMG Group), which are compiled using the principles of the KMG consolidated financial statements prepared under International Financial Reporting Standards (IFRS).

In the Annual Report, a number of production and economic performance indicators are determined under IFRS and in relation to the aggregate of KMG companies for the purposes of KMG's IFRS consolidated financial statements for the year ended 31 December 2023 and may differ from similar indicators of KMG's reporting documents prepared in accordance with the requirements of the legislation of the Republic of Kazakhstan.

However, some of the Company's performance indicators presented use the principles that are followed in the preparation of management statements and other statements. Due to variations in the procedures utilised to generate the consolidated financial statements and other statements, there may be inconsistencies in the indicators calculated using these procedures.

The analysis of financial performance must be viewed in the context of the Company's audited IFRS consolidated financial statements for the year ended 31 December 2023.

The Annual Report includes statements that are, or may be deemed to be, «forward-looking statements» relating to KMG's future operating performance based on projections and estimates of the Company's management based on the current situation. Forward-looking statements cover all matters that are not historical facts. They include, but are not limited to, statements regarding KMG's intentions, beliefs and current expectations concerning the Company's performance, financial condition, liquidity, prospects, growth, strategies and the industries in which the Company operates. By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances that may or may not occur, i.e., due to the influence of various objective factors, actual performance may differ from these projections and estimates.

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New fields launched

As part of the initiative to increase gas production at its operating and exploration assets, the Company put three new gas fields – South Aksay, East Urikhtau, and Rozhkovskoye – into production in 2023.

The new fields in operation will increase gas supplies to the domestic market.

Strategic goal:

Improved efficiency across the Company's value chain

South Aksay

Gas condensate field

Start of production: **May 2023**

1.7 bln m³ — recoverable gas reserves

+100 mln m³ — gas per year

With South Aksai put into production, KMG's joint venture Kazgermunai will additionally supply up to 100 mln m³ of gas per year for the needs of Kyzylorda Region residents.

East Urikhtau

Oil and gas field

Start of production: **December 2023**

4 mln tonnes — recoverable oil reserves

2.2 bln m³ — dissolved gas reserves

East Urikhtau is the first field in Kazakhstan to be commercially developed under the improved model contract.

With six production wells currently in operation, there are plans to drill another nine production wells. This is expected to increase oil production to 200 thous. tonnes per year, while also boosting associated gas production to 100 mln m³ per year.

Rozhkovskoye

Gas condensate field

Start of production: **December 2023**

26.9 bln m³ — recoverable gas reserves

12.5 mln tonnes — recoverable condensate reserves

The extracted raw gas will be transported to the gas processing facilities of Zhaikmunai, and the resulting marketable gas will be supplied to domestic market consumers.

When reaching full capacity:

1 bln m³ per year — gas production

500+ thous. tonnes per year — gas condensate production

150+ thous. tonnes per year — liquefied petroleum gas production

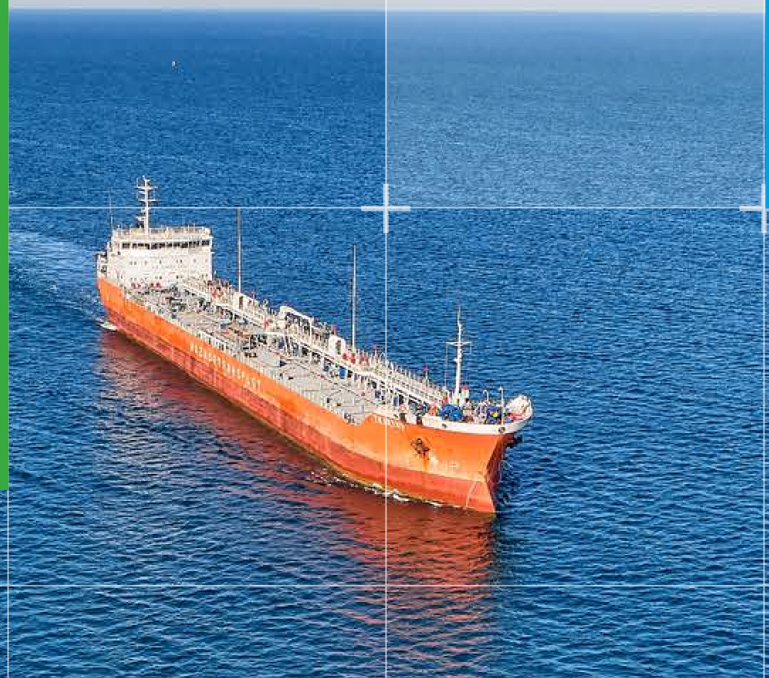
USD 147 mln — project investments

Alternative oil export routes

KMG consistently takes steps to develop alternative export routes for Kazakhstan's oil.

These steps include:

- crude oil supplies to Germany through the Druzhba pipeline;
- crude oil supplies from the Port of Aktau via Azerbaijan to the Baku–Tbilisi–Ceyhan pipeline;
- Kazakhstan–China oil pipeline expansion in partnership with CNPC.



Improved efficiency across the Company's value chain

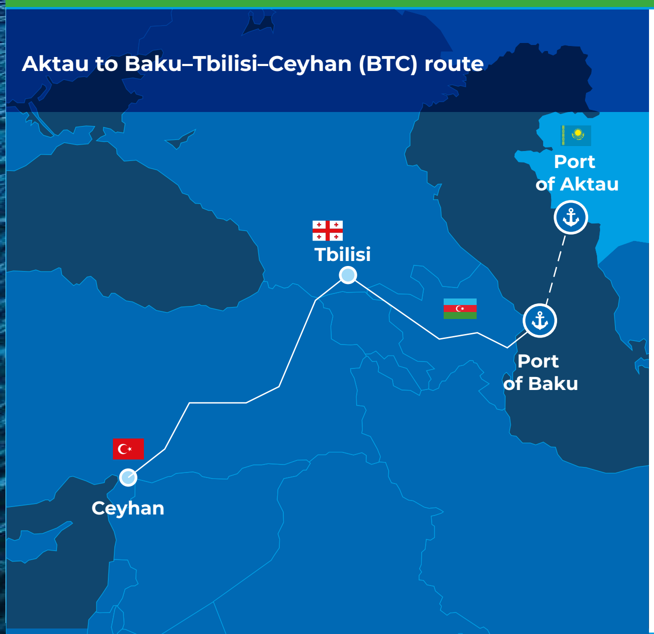
Strategic goal:

Expansion of maritime operations

In January 2023, to refine maritime operations technology-wise, KMG established a joint venture with Abu Dhabi Ports (ADP) from the UAE and bought two tankers, Taraz and Liwa. The vessels are now actively engaged in transporting Kazakhstan's oil in the Caspian Sea.

In mid-2023, KMG/ADP's combined tanker fleet embarked on its first joint venture of carrying Tengiz oil in the open sea.

Crude oil supplies via Azerbaijan



1,057 thous. tonnes

shipped from the Port of Aktau in 2023

Shipments of Kazakhstan's oil via the Aktau–Baku–Tbilisi–Ceyhan (BTC) route commenced in 2023. In November 2022, KMG and Azerbaijan's SOCAR inked an agreement for the transit of Kazakhstan's oil via the Port of Aktau and further on via Baku and the Baku–Tbilisi–Ceyhan pipeline.

The oil is transported from the Port of Aktau to Baku on the tankers operated by KMG's subsidiary Kazmortransflot (KMTF).

Oil supplies to Germany

993 thous. tonnes

shipped to Germany in 2023

Shipments of Kazakhstan's oil to Germany (the refinery in Schwedt) via the Atyrau–Samara pipeline and further on via the Druzhba pipeline commenced in February 2023.

The German partners are keen on amplifying oil imports from Kazakhstan to 200 thous. tonnes per month. In December 2023, the current oil supply contract was extended for six months until June 2024, potentially extendable until the year-end.

Climate agenda: new initiatives

Republic of Kazakhstan's national goal: carbon neutrality by 2060

KMG pursues a balanced approach to limiting its carbon footprint. As part of its 2022–2031 Development Strategy, the Company sets the following targets:

- 15% reduction in CO_2 emissions from the 2019 level;
- At least 10% reduction in carbon intensity and energy intensity of production operations;
- Commissioning of at least 300 MW of renewable energy capacity.

Sustainable development and gradual reduction in carbon intensity of production

Strategic goal:

Zhanaozen hybrid power plant

On 18 January 2024 in Rome, KMG and Italian Eni S.p.A. signed the Joint Confirmation Agreement on the initiation of the Zhanaozen hybrid power plant construction project.

The project provides for the construction of:

- 77 MW wind power plant
- 50 MW solar power plant
- 120 MW gas power plant

The goal is to secure power supply for KMG's local production facilities.

This will be the first-of-a-kind hybrid power plant in Kazakhstan.

The preliminary cost estimate for the project is USD 306 mln.

The plant is planned to reach its full capacity by the end of 2025.There will be up to 800 people employed in the construction phase, and up to 80 people in the operation phase.

The construction project meets KMG's and Eni's goals of business diversification and decarbonisation, while contributing to a long-term sustainable partnership.

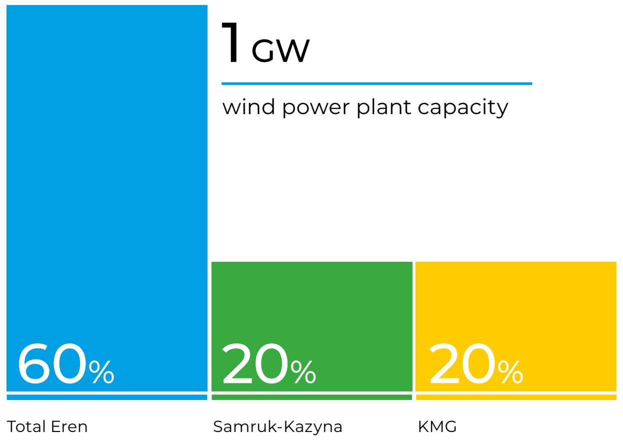
Wind power plant in the Zhambyl Region

On 1 November 2023, as part of French President Emmanuel Macron's official visit to Kazakhstan, a Joint Venture Agreement was finalised with Total for the construction of a 1 GW wind power plant. This initiative builds on the Term Sheet entered into by Samruk-Kazyna, KMG, and Total Eren in November 2022.

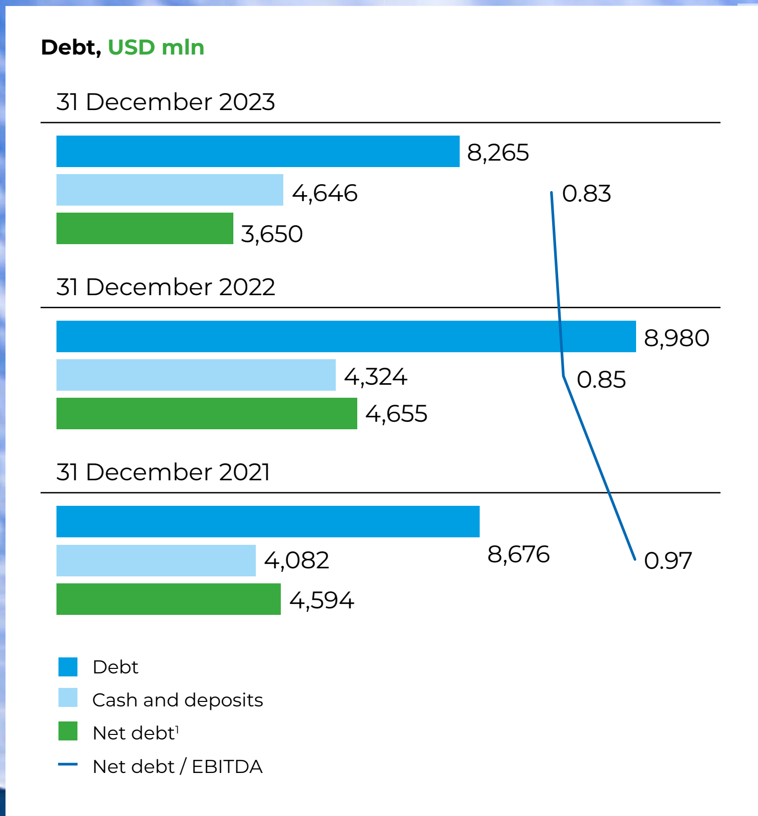
The 1 GW wind power plant and a 300 MW / 600 MWh electricity storage system will be built in the town of Mirny, Zhambyl Region.

The initiative is a major step towards strengthening Kazakhstan–France bilateral cooperation in power engineering, renewable energy, and green technologies.

Project participants:



Maintaining a comfortable leverage



Credit ratings

Moody's	S&P Global Ratings	FitchRatings
Baa1	BBB+	BBB+
Baa2 (Positive) Baa2 (Positive)	BBB	BBB (Stable) BBB (Stable)
Baa3	BBB- (Stable)	BBB-
Investment grade		
Ba1	BB+ (Stable)	BB+
Ba2	BB	BB
Ba3	BB-	BB-

- Kazakhstan's sovereign credit ratings
- KMG's credit ratings

Early repayment

KMG is a leading borrower in Kazakhstan's Eurobond market. The Company is the second largest issuer of Eurobonds in Kazakhstan following the nation's government.

KMG borrows both on the national and global capital markets in line with its flexible and balanced debt management policy. The Company's bonds are among the most liquid instruments among those offered by Kazakhstan's issuers. KMG's Eurobonds have been historically attractive to a wide range of investors.

In April 2023, KMG made a full early redemption of Eurobonds in the amount of USD 500 mln with a coupon rate of 4.75% and maturity date on 24 April 2025.

On 26 December 2023, Atyrau Refinery (a subsidiary of KMG) made a full early repayment of a loan from VTB Bank for a total of RUB 42.4 bln (equivalent to KZT 213.7 bln).

USD 500 mln

early repayment of Eurobonds

RUB 42.4 bln

early repayment of a loan (equivalent to KZT 213.7 bln)

Credit rating upgrade

In 2023, despite significant external economic risks, leading international credit rating agencies upgraded the Company's credit ratings

- On 9 March 2023, Standard & Poor's (S&P) affirmed the Company's rating at BB+, and revised outlook to stable reflecting the agency's rating action on Kazakhstan (the rating being affirmed at BBB-, with outlook revised to stable).
- On 3 May 2023, S&P updated the likelihood of extraordinary government support from high to very high without changing the Company's rating.
- Fitch Ratings upgraded KMG's credit rating on 22 June 2023 from BBB- to BBB with a stable outlook, following an upgrade in its standalone credit profile. This rating aligns with the sovereign rating of the Republic of Kazakhstan.
- On 13 December 2023, Moody's affirmed KMG's Baa2 rating, but revised the outlook to positive indicating confidence in the Company's sustained standalone credit profile. This rating aligns with the sovereign rating of the Republic of Kazakhstan.
- On 26 December 2023, S&P affirmed KMG's BB+ rating, while upgrading its standalone credit profile from bb- to bb.

[1] Net debt = long-term loans plus current loans minus cash and cash equivalents minus short-term bank deposits minus long-term bank deposits.

Value growth for shareholders

In 2023, the Company paid its shareholders a record KZT 300 bln in dividends, with KMG's shares adding over 37% in price since the IPO date.

Total shareholder return (TSR) growth

As of 31 December 2023, the price of KMG shares since the offering date went up by 37.3%. Taking into account the dividends paid, the share price increase as of 31 December 2023 compared to the offering date was 43.1%.

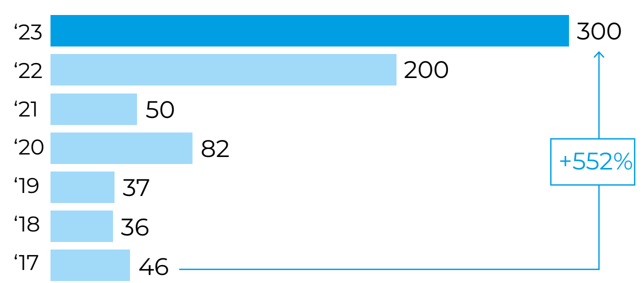
As of the end of 2023, KMG has a market capitalisation of KZT 7.0 tln or USD 15.5 bln.

Record-breaking dividends

KMG's dividend policy is aimed at balancing the interests of shareholders, creditors and the Company, as well as ensuring transparency in determining the amount of dividend payments to its shareholders.

In 2023, KMG's Annual General Meeting of Shareholders decided on a dividend payout of KZT 300 bln, reflective of the Company's business performance in 2022. This is a record-breaking amount in our history.

Dividends, KZT bln



[1] From the offering date to 31 December 2023.

The Company keeps successfully navigating its strategic path and achieving the goals that serve the best interests of all stakeholders, including KMG's shareholders and investors, employees, partners, communities in the regions of operation, and the entire country.

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KMG started production operations at three new fields

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KMG makes progress on initiatives promoting alternative routes for oil exports

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KMG makes progress on sustainability initiatives, including joint renewable energy projects with Eni and Total Eren.

01 STRATEGIC REPORT

ABOUT THE COMPANY

733 mln toe
of 2P hydrocarbon reserves

23.5 mln tonnes
of oil and condensate production

9.5 bln m³
of gas production

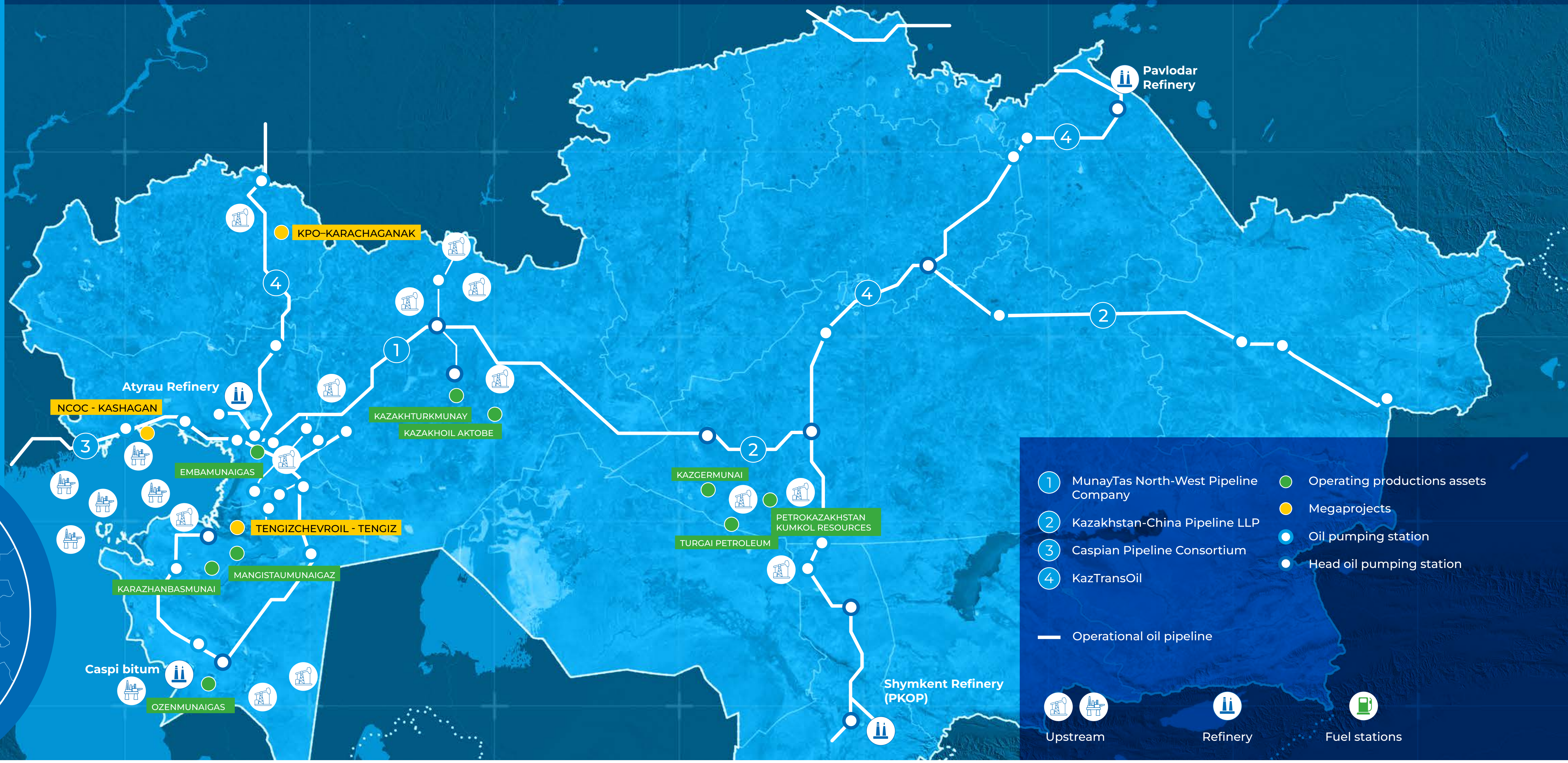
80.4 mln tonnes
of oil transportation

19.6 mln tonnes
of hydrocarbons processing

Scope of operation

JSC National Company KazMunayGas ("JSC NC KazMunayGas", "KMG", the "Company") is a Kazakhstan's leading vertically integrated oil and gas company.

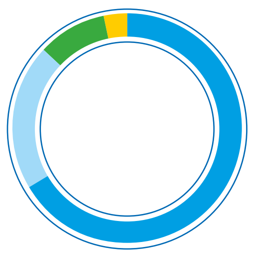
KMG operates assets across the entire production cycle from exploration and production of hydrocarbons to transportation, refining and provision of services. Established in 2002, the Company represents the interests of the Republic of Kazakhstan in the national oil and gas industry.



Foreign assets

Capital structure

Shareholders of JSC NC KazMunayGas



67.42% Sovereign Wealth Fund Samruk-Kazyna

20% Kazakhstan's Ministry of Finance

9.58% the National Bank of Kazakhstan

3% free float on the KASE and AIX

KMG is owned by Sovereign Wealth Fund Samruk-Kazyna (the Fund) – 67.42%, Kazakhstan's Ministry of Finance – 20%, the National Bank of Kazakhstan – 9.58%, and public investors – 3% (free float on the KASE and AIX). The shares owned by the National Bank of Kazakhstan are under Samruk-Kazyna's trust management.

Samruk-Kazyna is a sovereign wealth fund with the Government of the Republic of Kazakhstan as its sole shareholder. The Fund's mission is to improve the sovereign wealth of the Republic of Kazakhstan and ensure long-term sustainability for future generations. The Fund's portfolio includes companies operating in the oil and gas, transport, logistics, chemical, nuclear, mining and metals, energy, and real estate industries.

The Ministry of Finance of the Republic of Kazakhstan manages and performs inter-sectoral coordination in the financial sphere to the extent permitted by law.

The National Bank of Kazakhstan (the "National Bank") is the central bank of Kazakhstan representing the upper (first) tier of the banking system of the country. Within its remit, the National Bank acts on behalf of the Republic of Kazakhstan when liaising with other countries' banks and central banks, as well as international banks and other financial institutions. The primary goal of the National Bank is to ensure price stability in Kazakhstan.

Asset structure

MATERIAL ASSETS OF KMG

EXPLORATION AND PRODUCTION

OPERATING ASSETS

- 100% Ozenmunaigas (OMG)
- 100% Embamunaigas (EMG)
- 100% Kazakhturkmunay (KTM)
- 100% Urikhtau Operating (UO)
- 60% Dunga Operating GmbH (Dunga)
- 50% Mangistaumunaigaz (MMG)
- 50% JV Kazgermunai (KGM)
- 50% Karazhanbasmunai (KBM)
- 50% Kazakhoil Aktobe (KOA)
- 50% Ural Oil and Gas (UOG)
- 33% PetroKazakhstan Inc. (PKI)

MEGAPROJECTS

- 20% Tengizchevroil (Tengiz)
- 16.9% North Caspian Operating Company N.V. (Kashagan)[1]
- 10% Karachaganak Petroleum Operating (Karachaganak)

OIL TRANSPORTATION

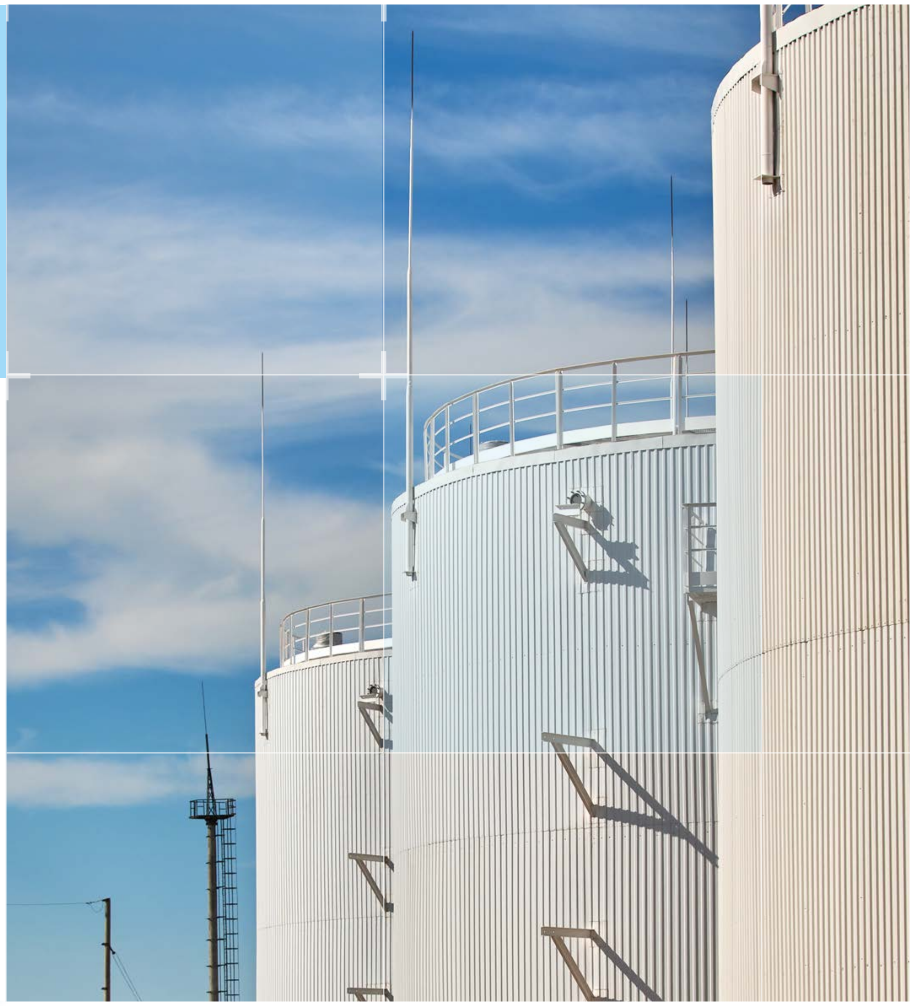
- 100% NMSC Kazmortransflot (KMTF)
- 90% KazTransOil (KTO)
  - 100% Batumi Oil Terminal (BOT)
  - 51% MunayTas North-West Pipeline Company (MT)
  - 50% Kazakhstan–China Pipeline (KCP)
- 20.8% Caspian Pipeline Consortium-R[2] (CPC-R)
- 20.8% Caspian Pipeline Consortium-K[3] (CPC-K)

OIL REFINING AND PETROCHEMICALS

- 100% Pavlodar Refinery
- 100% KMG International N.V.
  - Rompetrol Rafinare SA:
    - 54.6% Petromidia Refinery
    - 54.6% Vega Refinery
- 99.5% Atyrau Refinery
- 50% Caspi Bitum
- 49.7% PetroKazakhstan Oil Products (PKOP)
- 49.5% Kazakhstan Petrochemical Industries (KPI Inc.)

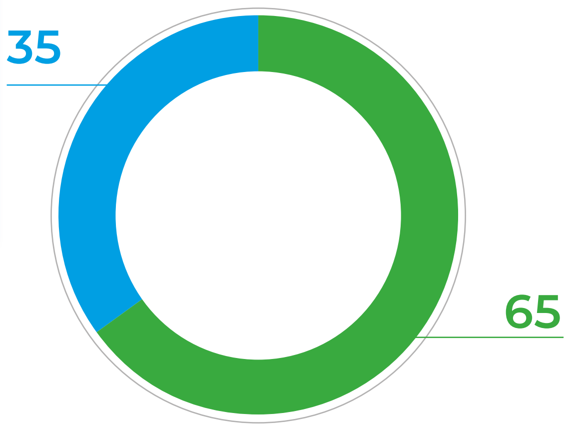
OILFIELD SERVICES AND OTHER

- 100% TOO KMG Systems & Services
- 50% KazRosGaz
- 49% TOO KMG Nabors Drilling Company
- 49% TOO KMG Parker Drilling Company
- 49% TOO KMG Automation
- 48.9% TenizService

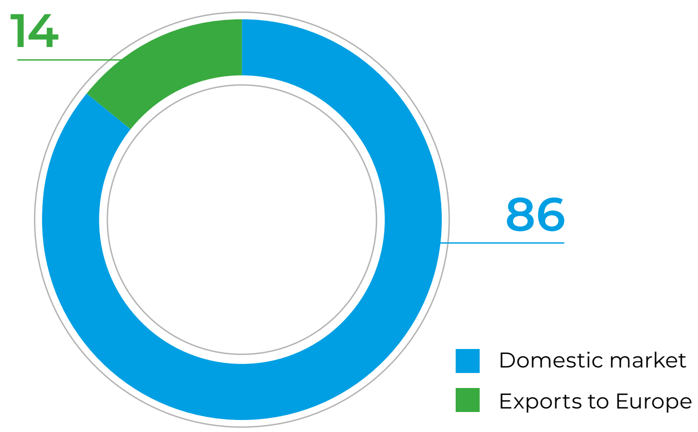


KEY MARKETS

Oil sales, %



Oil product sales, %



[1] On 15 September 2022, KMG exercised its call option as part of the 2015 share option agreement to buy back 50% of KMG Kashagan B.V. from Samruk-Kazyna for USD 3.8 bln. KMG Kashagan B.V. owns 16.88 % of the North Caspian Production Sharing Agreement (Kashagan project).
[2] 19% held via KMG and 1.75% held via Kazakhstan Pipeline Ventures (KPV).
[3] 19% held via KMG and 1.75% held via Kazakhstan Pipeline Ventures (KPV).

Business model

COMPETITIVE ADVANTAGES

Unique geography

Kazakhstan has an extensive resource base, favourable location, and a unique opportunity to export to Europe and fast-growing Asian markets

Full integration across the value chain

KMG is the national leader in Kazakhstan's oil and gas industry with a fully integrated value added chain

Financial stability

The Company maintains its financial stability and provides sufficient conditions for its long-term development

Diversified upstream portfolio

KMG has a diversified portfolio of oil and gas production assets with an attractive growth potential

Leading position in Kazakhstan's oil midstream sector

KMG has a 56% share in the national oil transportation market and is involved in all of its projects

Advanced oil refineries

The Company operates four largest refineries in Kazakhstan and two in Romania

Petrochemical projects as a new growth driver

KMG is tapping into a new business of petrochemicals. A polypropylene plant came on-stream, while a polyethylene project is in progress.

Advanced corporate governance and commitment to sustainability

INTEGRATED VALUE ADDED CHAIN

EXPLORATION AND PRODUCTION

RESOURCES

Proved plus Probable Reserves (2P)

733 mln toe

5,680 mln boe

Oil and condensate production

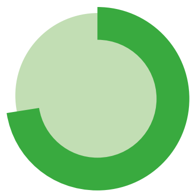
23.5 mln tonnes

486 thous. bbl per day

Gas production

9.5 mln m³

EBITDA



72%
3,157 USD mln

GOALS TO 2031

299+ mln tonnes of increase in reserves (ABC1)

240 mln tonnes of total oil output in ten years by 2031

OIL TRANSPORTATION

RESOURCES

Oil transportation

80.4 mln tonnes:

69.6 by pipeline

10.8 by sea

Total length of oil trunklines

9,091 km

EBITDA

10%
435 USD mln

GOALS TO 2031

Improved utilisation of existing capacities

Sea transportation synergy

REFINING AND SALES OF CRUDE OIL AND OIL PRODUCTS

RESOURCES

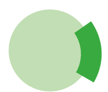
Oil refining

19.6 mln tonnes:

14.2 by Kazakhstan refineries

5.4 by Romania refineries

EBITDA



20%
863 USD mln

GOALS TO 2031

Increase in the depth of refining at Kazakhstan refineries

to **89%**

Implementation of planned polyethylene, polypropylene, and other projects

STAKEHOLDER VALUE

With leadership and presence across all sectors of Kazakhstan's oil and gas industry, from exploration to product sales, KMG is well-positioned to create value for a wide range of stakeholders. KMG makes regular payouts to shareholders, duly meets its obligations to investors and creditors and is a major employer and taxpayer. The Company promotes mutually beneficial cooperation with partners, invests in social projects and ensures high standards of environmental protection:

KZT 300 bln in dividends

KZT 1,162 bln in taxes and other mandatory payments to the national budget

49+ thous. permanent workplaces

KZT 27 bln in social assistance to employees

KZT 5.6 bln in social investments under subsoil use contracts

KZT 2,186 bln in procurement supplies

77% share of in-country value

Performance highlights

FINANCIAL PERFORMANCE[1], USD MLN

EBITDA

'23	4,372
'22	5,502
'21	4,730

Revenue

'23	18,236
'22	18,845
'21	15,161

Share in the earnings of joint ventures and associates

'23	1,171
'22	2,151
'21	1,597

Net profit

'23	2,026
'22	2,858
'21	3,020

CAPEX on an accrual basis

'23	1,761
'22	1,161
'21	1,107

CAPEX on a cash basis

'23	1,498
'22	979
'21	1,065

Net debt

'23	3,620
'22	4,655
'21	4,594

Free cash flow

'23	2,157
'22	2,421
'21	1,774

Net debt / EBITDA

'23	0.83
'22	0.85
'21	0.97

OPERATIONAL HIGHLIGHTS

2P hydrocarbon reserves, mln toe

'23	733
'22	707
'21	645

Oil and gas condensate production, thous. tonnes

'23	23,532
'22	22,012
'21	21,651

Natural and associated gas production, mln m³

'23	9,459
'22	8,241
'21	8,081

Oil transportation, thous. tonnes

'23	80,359
'22	74,658
'21	74,565

Oil refining, thous. tonnes

'23	19,593
'22	19,900
'21	18,833

SOCIAL HIGHLIGHTS

Actual headcount[2]

'23	49,710
'22	47,526
'21	47,437

Lost Time Incident Rate (LTIR)

'23	0.30
'22	0.36
'21	0.31

Fatal Accident Rate (FAR)

'23	2.11
'22	1.00
'21	2.93

Social stability level (Samruk Research Services index), %

'23	75
'22	74
'21	79

ENVIRONMENTAL HIGHLIGHTS

NO_x emissions, tonnes per 1,000 tonnes of produced hydrocarbons

'23	0.36
'22	0.31
'21	0.24

SO_x emissions, tonnes per 1,000 tonnes of produced hydrocarbons

'23	0.23
'22	0.21
'21	0.22

APG flaring rate, tonnes per 1,000 tonnes of produced hydrocarbons

'23	1.4
'22	1.5
'21	2.1

1 2022 and 2021 data reflects KMG's acquisition on 15 September 2022 of 50% in KMG Kashagan B.V. from Samruk-Kazyna. KMG Kashagan B.V. owns 16.88% of the North Caspian Production Sharing Agreement (Kashagan project).

2 In 2020, the Company revised its methodology to calculate the actual headcount (by including employees from consolidated companies with an ownership interest of 51% or above).

STATEMENT FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS

KMG maintains its solid status of the largest oil and gas company in Kazakhstan.

YERNAT BERDIGULOV
Chairman of the Board of Directors of JSC NC KazMunayGas

DEAR SHAREHOLDERS, INVESTORS AND PARTNERS

KMG maintains its solid status of the largest oil and gas company in Kazakhstan, successfully working as the nation's principal oil and gas operator.

In 2023, the Company showed strong production results, demonstrating growth in most of its business segments. The downturn in world oil prices from the peak figures of 2022 had its impact on the Company's financial performance. Still, we have maintained financial health and stability. Total revenue reached USD 18.2 bln, while EBITDA came in at USD 4.4 bln.

The eagerly anticipated IPO, a milestone in KMG's history, unfolded with resounding success, marking a commendable feat in both investor engagement and the magnitude of capital raised on Kazakhstan's stock market. Now that the first reporting year after the IPO is over, we can draw some conclusions. As of 31 December 2023, the price of KMG shares has gone up by 37.3% since the offering date. In 2023, we paid our shareholders record-high dividends in the amount of KZT 300 bln. Accounting for the dividends paid, total shareholder return (TSR) for KMG shareholders in the period from the offering date until the end of the reporting year came in at approximately 43.1%. As of the end of 2023, KMG has a market capitalisation of KZT 7.0 tln or USD 15.5 bln.

Ensuring an adequate resource base

KMG is earnestly consolidating its resource base through exploration endeavours, engaging experienced international partners for the exploration of new blocks on the basis of carry financing (projects such as Kalamkas-Sea, Khazar and Auezov, and Karaton Subsalt). There are also ongoing exploration projects run exclusively by KMG (for example, Turgai Paleozoic where the first 5,500 m prospecting well is planned to be drilled in 2024).

Improving efficiency across the value chain

Ramping up oil and gas output continues to be a strategic priority for KMG. In his speeches, Kazakhstan's President has repeatedly emphasised the importance of developing the nation's gas industry as a major driver of economic growth. To this end, in the reporting year the Company started operations at three new fields – South Aksay, Rozhkovskoye, and East Urikhtau.

In 2023, there was an impressive rise in oil production of 1.7 mln tonnes due to an increase of the Company's stake in the Kashagan field after the successful completion of a stake buy-back deal in the second half of 2022. A considerable acquisition enhancing KMG's upstream portfolio was the purchase of a 60% interest in the Dunga field, previously held by France's TotalEnergies.

1.7 mln tonnes

rise in oil production from an increased share in the Kashagan field

KMG continues to capitalise on its robust oil transportation infrastructure to enhance export and transit businesses. We introduced new export routes: via the Trans-Caspian International Transport Route towards Baku and further on through the Baku–Tbilisi–Ceyhan pipeline, as well as to Germany through the Druzhba pipeline. Efforts are underway to increase oil shipments via these pipelines. That said, CPC remains our primary and economically viable route for delivering our oil to the export markets.

up to 12 mln tonnes per year

a plan to expand the Shymkent Refinery's capacity by 2030

One of KMG's key objectives for the coming years is to ensure the supply of locally manufactured oil products to Kazakhstan's domestic market. Following the comprehensive modernisation of all refineries in recent years, KMG's refining capacities have significantly amplified. With the oil product demand expected to rise, we are considering joining forces with our partner CNPC to expand the Shymkent Refinery's capacity from 6 to 12 mln tonnes by 2030.

Expanding product portfolio

As part of our strategic goal to diversify product offering, we have commenced manufacturing six polypropylene grades at KPI Inc.'s petrochemical complex, a polypropylene production facility brought on stream at the end of 2022. This endeavour is undertaken in partnership with our strategic ally, SIBUR, which holds a 40% stake in the project. Polypropylene from Kazakhstan is already successfully exported to China, Turkey, Europe, and Russia. But in the mid term, our key objective is to meet the domestic demand for locally produced polypropylene, as this would ensure a ripple effect stimulating broader economic growth.

1.25 mln tonnes a year

a projected capacity of the new polyethylene plant

The proposed polyethylene production plant with a capacity of 1.25 mln tonnes annually will embody our commitment to furthering product refinement and advancing the petrochemical sector. Owing to its technological sophistication and capital intensity, we are engaging in this venture with SIBUR (30%) and Sinopec (30%) as our partners. To provide the necessary feedstock inputs for this project and create the infrastructure required for extracting ethane from dry gas, KMG is considering joining forces with Tengizchevroil for the construction of a gas separation unit with a capacity of 9.7 bln m^3.

These petrochemical projects do not only promise economic returns for our nation, but will also contribute to the sustainable development of our regions and create new employment opportunities: we expect over 9,600 jobs at the construction phase and approximately 940 permanent positions post-commissioning.

KMG continues to integrate sustainability principles into its key business processes.

Ensuring sustainable development

The new status of a public company has provided an additional impetus for the Company's development, improvement of its corporate governance and increased transparency in line with global best practices. KMG continues to integrate sustainability principles into its key business processes. In 2023, the Company received a "strong" rating for its ESG risk management from Sustainalytics, with an ESG score of 32.3. According to the analysts, KMG's exposure to ESG risks is on a par with the industry average, i.e. risks inherent in the oil and gas industry.

In its commitment to limit carbon footprint, the Company pursues a balanced approach, targeting a 15% reduction in greenhouse gas emissions by 2031 from the 2019 level. Considering that on 2 February 2023 Kazakhstan approved the national Strategy for Carbon Neutrality by 2060, the Company plans to enhance its Low-Carbon Development Programme by the end of 2024, with the planning horizon extended to 2060.

Another important step towards reducing the carbon footprint was made when KMG joined UNEP's OGMP (Oil & Gas Methane Partnership) 2.0, an initiative which involves setting and reporting individual targets for reducing methane emissions.

Alongside climate initiatives, we consistently focus on human rights, social responsibility, and improvements in the management of human capital to fully unlock the potential of our employees, as skilled and motivated employees committed to the Company's values are the main asset of any organisation. KMG strives to ensure social stability at its enterprises through a constructive dialogue with employee representatives and aims to prevent potential labour disputes. The results of an annual survey reflect an uptick in the overall index, marking progress from the prior year. In 2023, the Corporate Centre introduced the practice of visiting KMG subsidiaries and providing assistance in drafting action plans to improve social stability.

Turning to corporate governance matters, it stands to note that in August 2023 Christopher Walton, independent director and former Chairman of KMG's Board of Directors, stepped down from the Board. During his more than 9 years on the Board of Directors, Mr Walton made a significant contribution to safety, corporate governance and financial resilience improvements. We take this opportunity to express our sincere gratitude to Mr Walton and wish him further success.

Reflecting on the past year, I extend my heartfelt appreciation to our team, the Management Board, shareholders, partners, and all stakeholders for their collective input and steadfast support. Looking ahead, we anticipate a future filled with challenging yet promising pursuits. Achieving these ambitions requires great expertise and strong commitment from our senior leadership and every member of our team.

YERNAT BERDIGULOV
Chairman of the Board of Directors
Of JSC NC KazMunayGas

STATEMENT FROM THE CHAIRMAN OF THE MANAGEMENT BOARD

> The Company keeps successfully navigating its strategic path and achieving the goals that serve the best interests of all KMG's stakeholders.

MAGZUM MIRZAGALIYEV
Chairman of the Management Board of JSC NC KazMunayGas

DEAR SHAREHOLDERS, INVESTORS AND PARTNERS,

The Company keeps successfully navigating its strategic path and achieving the goals that serve the best interests of all stakeholders, including KMG's shareholders and investors, employees, partners, communities in the regions of operation, and the entire nation.

In the reporting year, KMG delivered growth across key production indicators in almost all of its business segments. Oil and gas condensate production increased by 6.9% year-on-year, reaching 23.5 mln tonnes. 2P hydrocarbon reserves grew by 3.7% to 733 mln toe. Oil transportation volume was up 7.6% to 80.4 mln tonnes. Our refineries in Kazakhstan and Romania cumulatively processed 19.6 mln tonnes of hydrocarbons.

In 2023, the global average oil price went down by 18.4%, hence the Company's financials were lower than in 2022, while staying moderately high and robust. In June 2023, the Company paid record-high dividends in the amount of KZT 300 bln, or KZT 491.71 per ordinary share, to its shareholders.

Exploration

We made significant progress on the Kalamkas-Sea, Khazar and Auezov project. We established a joint venture with our partner and signed a production contract, moving on to the FEED (Front End Engineering Design) stage. The commercial production at the field is expected to commence in 2028–2029.

In 2023, KMG entered into an agreement with Sinopec to launch a joint geological study on 17 exploration projects within the main and underexplored sedimentary basins.

The Company used its own resources in 2023 to do the seismic as part of its subsoil exploration programme. Field seismic surveying was completed at three blocks – Northern Ozen, Zharkyn, and Berezovsky – in the Mangistau and West Kazakhstan Regions. Field work is underway at the Mugodzhary block in the Aktobe Region.

As part of the in-house Turgai Palaeozoic project, the reporting period saw completion of preparations for the first prospecting well 5,500 m deep to be drilled in 2024.

Hydrocarbon production

As part of an initiative to increase gas production at operating and exploration assets, we started production operations at three new fields in the reporting year. In May, we launched South Aksay, in early December – East Urikhtau, and in late 2023 – Rozhkovskoye.

In late November 2023, the Company closed a deal to buy 60% of the Dunga oil and gas project (Mangistau Region) from France's TotalEnergies.

The Government supported the reclamation project at the Uzen and Karamandybas fields operated by our subsidiary Ozenmunaigas, and the capital released as a result of tax incentives will be invested in the financing thereof, including drilling new wells, applying new reservoir recovery enhancement technologies, and upgrading surface infrastructure at the Uzen and Karamandybas fields.

Oil transportation

The Company keeps diversifying its export routes. As part of the Trans-Caspian International Transport Route development, we started pumping oil via the port of Aktau and further on through the Baku–Tbilisi–Ceyhan pipeline, with approximately 1 mln tonnes transported in 2023, and through the Atyrau–Samara pipeline and further on towards Germany – about another 1 mln tonnes of oil.

Other highlights included establishing in January 2023 a sea transportation joint venture with Abu Dhabi Ports (ADP), a partner from the UAE, and the purchase of two tankers, Taraz and Liwa, with a deadweight of 8,000 tonnes each. These vessels are now actively engaged in transporting Kazakhstan's oil in the Caspian Sea.

Refining and marketing

In the reporting year, we ensured stable lubricant and fuel supplies to the domestic market. Petrol and liquefied gas production hit a new high, growing by 7% and 8% respectively, while the light product yield exceeded 72% for the first time (compared to 66% average in previous years). In 2023, Atyrau Refinery started producing Euro-5 petrol, which is in line with today's environmental requirements.

Petrochemicals

The petrochemical sector is a significant driver of the Company's growth, and it also has a positive multiplier effect on the entire national economy. At KPI Inc., KMG's polypropylene plant, the work is underway to reach its design capacity. The plant has already commenced the production of six polypropylene grades. The completion of all procedures for SIBUR to purchase a 40% stake in KPI Inc. was another highlight of the reporting year. I am convinced that cooperation with SIBUR will benefit all project stakeholders.

Another large-scale petrochemical project implemented by KMG is the construction of a polyethylene plant with a capacity of 1.25 mln tonnes per year. To date, we have completed a feasibility study and signed strategic partnership agreements with SIBUR and Sinopec.

Ensuring sustainable development

Sustainable development and gradual reduction in the carbon intensity of production are among the Company's priorities set out in its long-term development strategy. KMG makes continuous progress towards its targets in this area, including through the Low-Carbon Development Programme. We are currently completing a feasibility study for 1 GW Mirny wind power plant constructed jointly with Total Eren. Commencement of construction is scheduled for this year for a hybrid power plant project implemented jointly with Eni.

In 2023, the Company paid KZT 1,162 bln as taxes and other mandatory contributions to the country's budget. In addition to that, KMG runs a number of social projects at its own initiative. The December of the reporting year saw such an important event as the launch of the Astrakhan-Mangyshlak main water pipeline after its reconstruction and expansion. This project increased the pipeline's daily throughput capacity from 110 thous. to 170 thous. m3, ensuring a higher supply of water from the Volga River to the region's residents, industrial and agricultural facilities.

KZT **1,162** bln

Company paid as taxes and other mandatory contributions to the country's budget

Looking back on 2023, I would like to thank each employee of the Company and everyone involved in KMG's operations for their responsible work and achievements in the reporting year. The team's united efforts are key to implementing the Company's mission to use natural resources in an efficient and sustainable manner with a view to ensuring energy security, development and prosperity of Kazakhstan, while also caring about future generations. To have our strategic vision come to life, we will continue this work across the board. We have ambitious targets set for the next year. To achieve them, the Company needs strong engagement and proof of professionalism from everyone. I am confident that together we can achieve all set goals.

MAGZUM MYRZAGALIEV
Chairman of the Management Board
of JSC NC KazMunayGas

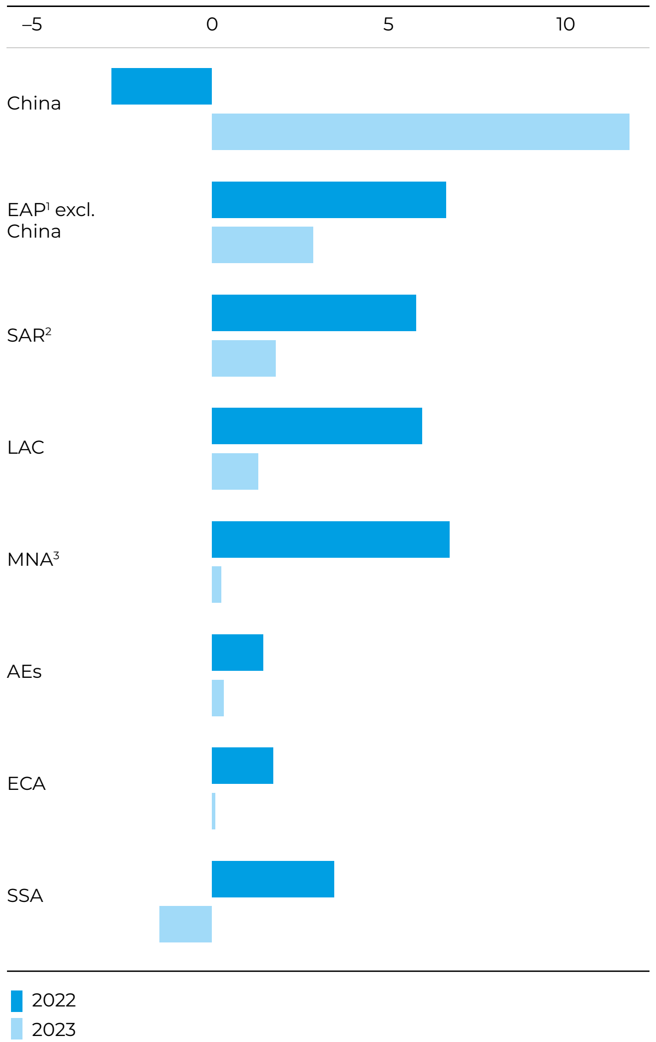
STRATEGY

Market overview

1. Global demand drivers

In 2023, global demand for oil demonstrated considerable growth, driven largely by strong economic activity and the lifting of COVID-19 restrictions, particularly in China. The International Energy Agency (IEA) reported that oil demand surged by around 2.3 mln bbl per day, reaching 101.7 mln bbl per day. However, the weakening global economy slowed this momentum, with flailing demand in Europe contributing to over half of the deceleration. For 2024, the IEA forecasts that oil demand growth will drop twofold to 1.1 mln bbl per day as major economies face subdued GDP growth and advances in energy efficiency, coupled with the proliferation of electric vehicles (EVs), take effect.

Oil demand growth by region, %



Source: IEA, World Bank

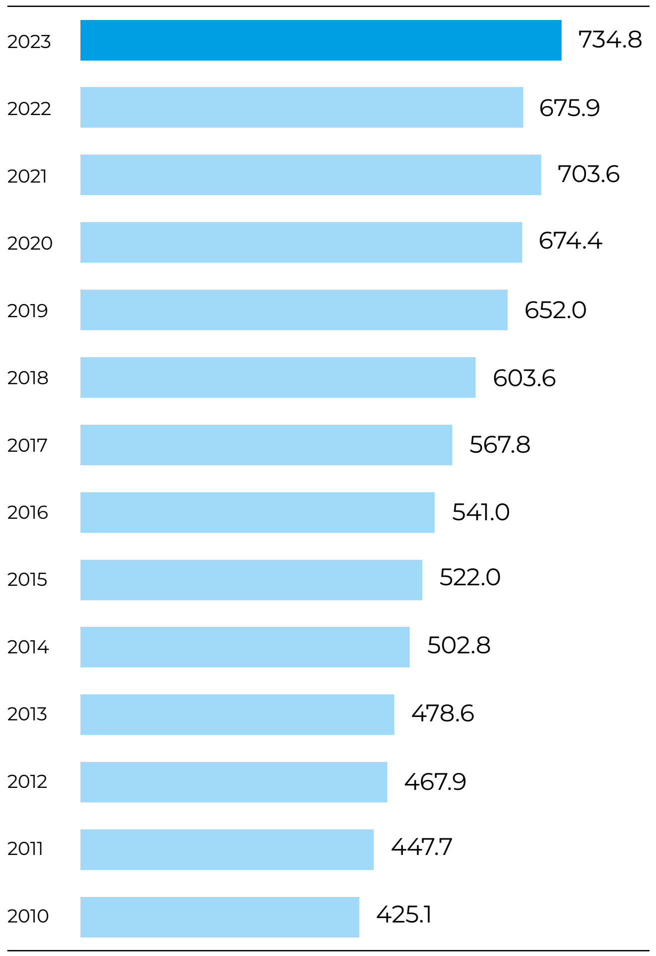
1.1. China as the main driver behind growing demand

According to the IEA, China contributed nearly half of the increase in global oil demand in 2023, following the removal of COVID-19 restrictions. This surge was underscored by China's record-breaking oil demand, peaking at 17.1 mln bbl per day in September, fuelled by a thriving petrochemical sector, which saw a 1.7 mln bbl per day growth from 2019. China's contribution accounted for 1.8 mln bbl per day out of the worldwide growth of 2.3 mln bbl per day.

Refinery capacities in China rose to a record high in 2023 —

by 9.3%

Chinese refinery throughput, mln t



Source: National Bureau of Statistics of China

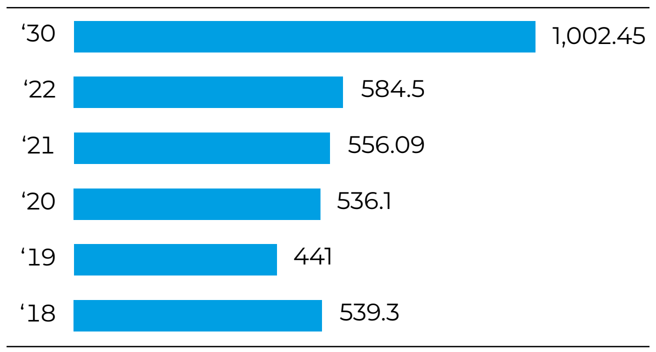
[1] Asia and the Pacific.
[2] South Asian Association for Regional Cooperation.
[3] Middle East and North Africa.

1.2. Petrochemical industry growth

In 2023, the global petrochemicals market was propelled by the increasing demand for ethylene and methanol on the back of their extensive application across various industries. Ethylene, accounting for over 40% of the market share in terms of revenue, saw strong demand mostly from the construction, packaging, and transport sectors, particularly in emerging markets such as India and China. Methanol, which is expected to deliver the highest growth rate, has been a major component of essential chemicals such as formaldehyde and acetic acid, catering to construction, cars, and pharmaceuticals. This substantial market expansion is evidenced by the projected annual growth rate of 7.3% from 2024 to 2030, with an estimated market size of USD 1,002.45 bln by 2030.

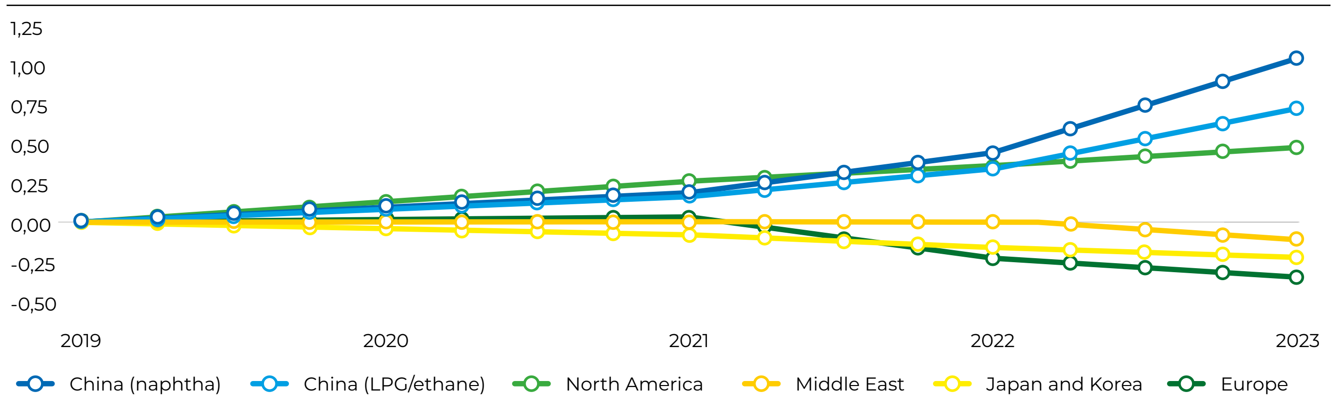
From 2022 to 2028, Petroleum Economist projects demand for petrochemical feedstocks like LPG/ethane and naphtha to increase by 1.7 mln and 1.5 mln bbl per day respectively.

Global petrochemicals market size, USD bln



Source: IEA

Growing regional demand for crude-based petrochemical feedstock from 2019, mln bbl per day



Source: IEA

1.3. Energy transition

Global investment in clean energy surged by 17% in 2023, setting a new record at USD 1.77 tln. This growth underscores the rapid transition to renewable energy, EVs, and other low-carbon technologies, despite challenges like geopolitical tensions and cost inflation.

According to McKinsey's Global Energy Perspective 2023, the ongoing energy transition has significantly altered the global oil demand trajectory. Although oil demand rebounded to pre-pandemic levels in 2023, it is projected to peak before 2030, mainly due to efficiency improvements in various sectors and the rising adoption of EVs, with demand for them increasing by a third in 2023.

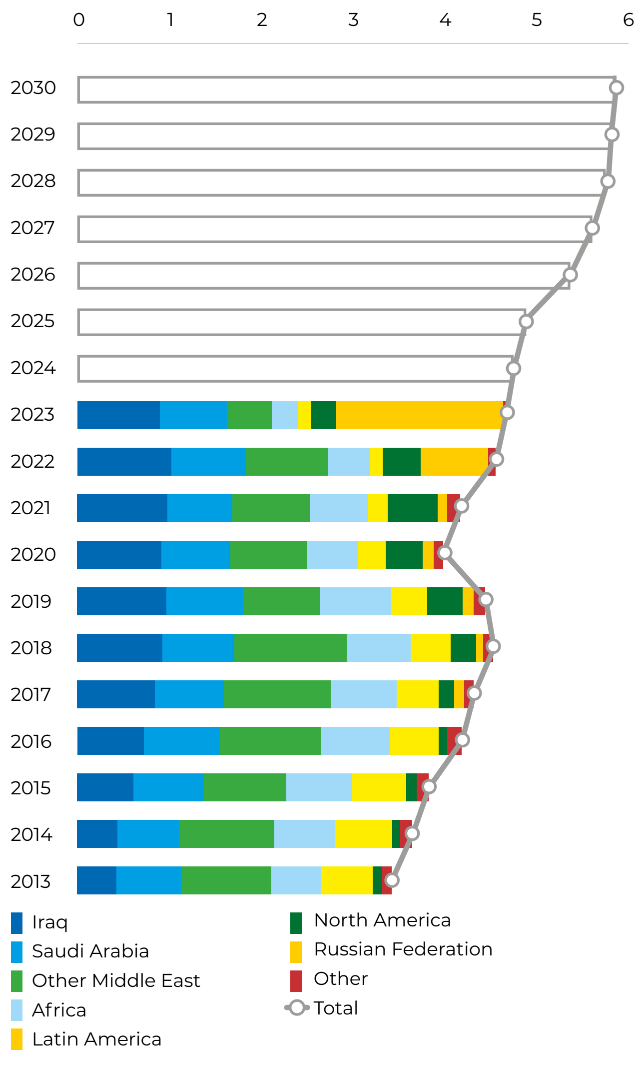
1.4. Refocus of India's demand

Over the last decade, India has emerged as the second largest net importer of crude oil globally (4.6 mln bbl per day in 2023), lagging behind only China (10.6 mln bbl per day) and significantly outpacing South Korea (2.8 mln bbl per day), which came third. This resulted from the consistent growth of India's refining capacities.

Since the start of the conflict between Russia and Ukraine, Indian refineries have altered their import structure. India started purchasing more Russian oil, mostly Urals, as well as considerable volumes of light low-sulphur oil from the Pacific region. Russia's share in India's total imports increased from less than 3% in 2021 to almost 40% in 2023, reducing other regions' share. The Middle East's share dropped from 61% to 45%, West Africa's share from 12% to 4.5%, and Latin America's share from 4.5% to 3%.

Global oil trade flows continue to undergo major changes as a result of international embargoes on the export of energy resources from Russia. India is now one of the biggest buyers of highly discounted Russian oil, increasing imports from near-zero levels to 1.7 mln bbl per day in 2023, peaking at 2.2 mln bbl per day in May 2023. In 2023, India purchased 36% of Russian crude oil exports, with Russia making up 38% of India's crude oil imports. On the other hand, in 2023 India increased its imports of Russian petroleum products from 70 thous. bbl per day to 130 thous. bbl per day (mainly fuel oils and feedstock), which was only 5% of Russia's total sales.

India's oil and gas condensate imports by source country, mln bbl per day



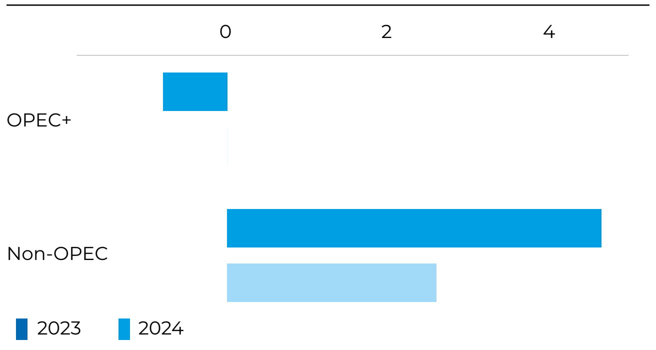
Source: IEA

2. Supply

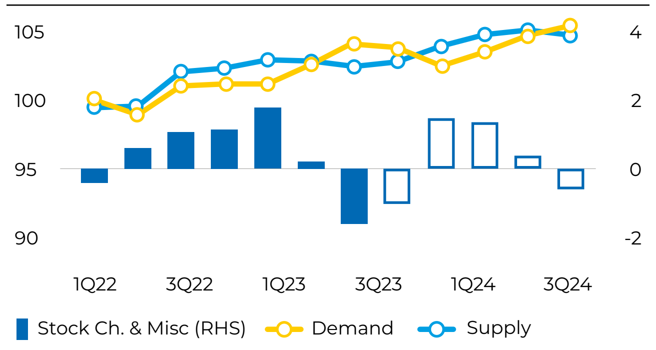
In 2023, global oil supply was shaped by several key factors, resulting in an overall production increase despite challenges and geopolitical tensions. The USA, Brazil, and Iran made substantial contribution to this growth. The increase was partially triggered by record-breaking oil shipments from the USA, surpassing 4.5 mln bbl per day in December 2023. Brazil and Iran also delivered strong production records at 3.4 mln and 1.29 mln bbl per day respectively. Despite voluntary output cuts and sanctions, the stability of Russian oil supplies remained an important factor, with exports peaking before the conflict began.

According to the IEA, the complex interplay of supply and demand factors led to an overall increase in supply of 1.9 mln bbl per day for the year. Compared to the previous year, when growth was triggered by OPEC+, a 1.9 mln bbl per day rise in supply in 2023 indicated a slowdown compared with the previous years. This was caused by a projected increase in production outside of OPEC+ by 1.9 mln bbl per day, offset by a soft reduction in OPEC+ by 870 thous. bbl per day, mainly due to an expected decline in Russia.

Global oil supply, %

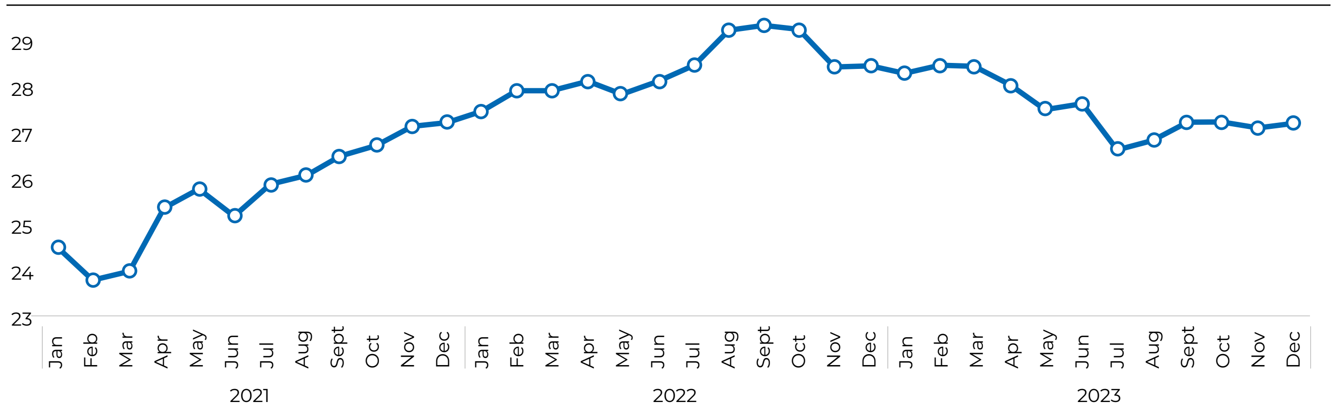


Supply and demand, mln bbl per day



Sources: IEA,

Oil production by OPEC in 2021–2023 according to the OPEC Secretariat, mln bbl per day



Sources: IEA, World Bank

The IEA expressed confidence about the current level of oil reserves held by member countries, stating that those are sufficient to stabilise oil markets if necessary. According to the IEA, there is no immediate need to increase strategic reserve requirements. The IEA member countries maintain petroleum reserves equivalent to at least 90 days of net oil imports, amounting to approximately 1.2 bln bbl in total. The IEA believes that this level is adequate for the current environment, providing relative stability in oil prices in the short term.

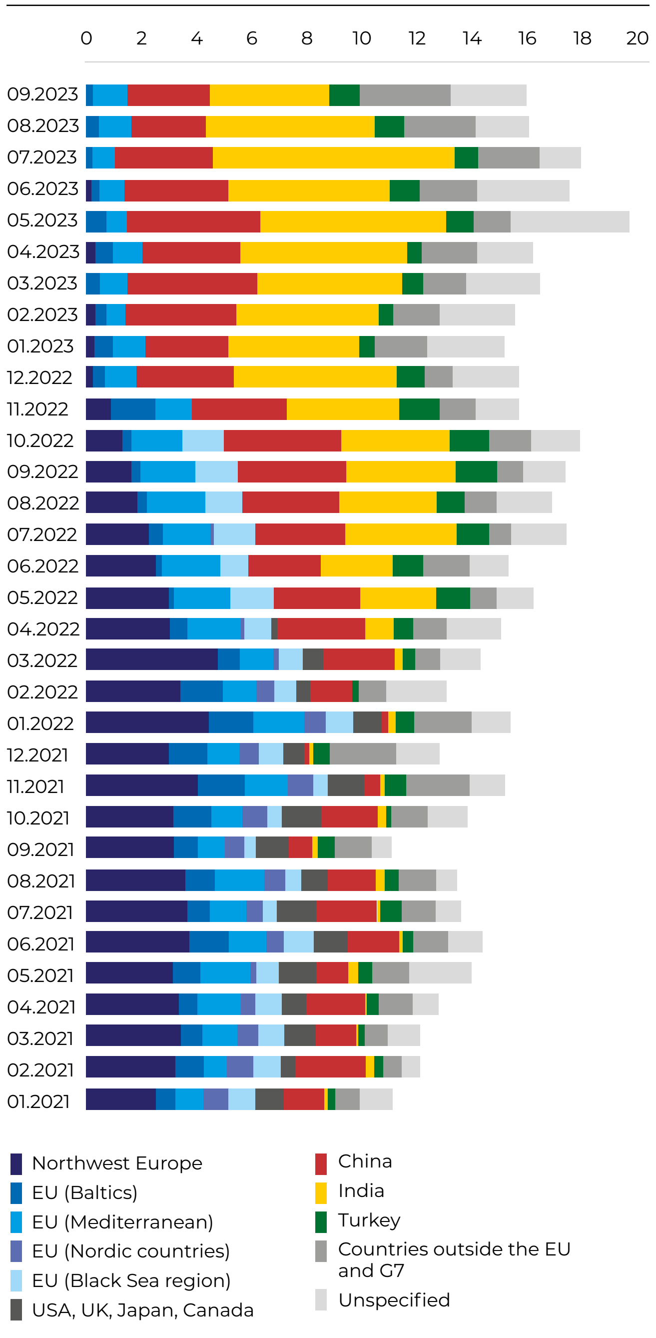
Impact on KMG

As the world energy market faces restructuring and geoeconomic fragmentation, KMG is also evolving to meet the changing landscape. Traditionally an oil and gas company, KMG maintains its core business and is venturing into new areas: petrochemicals and green projects, aiming to provide the world with oil as a foundation for stability during the energy transition.

3. Impact of the conflict in Ukraine on energy markets

Energy prices have skyrocketed and grown more volatile since the beginning of the conflict, reflecting market uncertainty and supply disruption risks. Oil, coal, and gas prices soared by around 40%, 130%, and 180% respectively in the first two weeks after the conflict began to unfold. Despite subsequent decline, prices remain higher than pre-conflict levels and fluctuate in response to conflict developments and sanctions against Russia.

Russian oil exports by destination, mln tonnes



Source: Bloomberg.

Eurozone energy markets have been particularly affected owing to heavy reliance on Russian supplies. In 2019, Russia accounted for 12% of global oil, 5% of coal, and 16% of gas supplies. The EU has been attempting to diversify energy sources and bolster reserves, but it still faces energy security and resource availability challenges.

The conflict has affected the global oil supply chain, causing transportation and refining disruptions, increased insurance and security costs for carriers, and diminished investment and research activities in the region.

Higher energy prices have raised production and consumption costs for many industries and households, leading to mass inflation and lower demand. The IEA estimates that the conflict caused the global GDP to shrink by 0.4 p.p. in 2022 and 0.3 p.p. in 2023.

The conflict also contributed to a faster transition to a more sustainable and flexible energy system. Higher fossil fuel prices drive investments in renewable energy sources and energy efficiency measures, which can reduce GHG emissions and enhance energy security. The IEA predicts that the share of renewable energy sources in global electricity generation will grow from 28% in 2020 to 30% in 2023.

KMG's adjustment

The European embargo on Russian oil led to increased demand for medium heavy oil, resulting in a decrease in the average discount on Kazakhstan's KEBCO crude oil compared to Brent by USD 8 to USD 4 per barrel in 2023 compared to 2022.

Given the geopolitical uncertainty, KMG focused on diversifying its export routes to minimise risks of supply chain disruption. In 2023, the country's oil exports increased by 10% year-on-year.

As part of the Trans-Caspian International Transport Route development, which covers oil exports via the Caspian Sea, Kazakhstan started pumping oil towards Baku in 2023 and further on through the Baku–Tbilisi–Ceyhan pipeline. KMG also began transporting oil through the Atyrau–Samara pipeline and further through Transneft's pipelines towards Germany.

4. Inflation

Many governments worldwide implemented unprecedented fiscal and monetary policies to support their economies in consequence of the COVID-19 pandemic. These measures included large-scale stimulus packages aimed at mitigating the economic downturn triggered by the pandemic. While these efforts helped prevent a deeper recession, they brought about an increase in money supply in many countries, resulting in consistently high inflation rates.

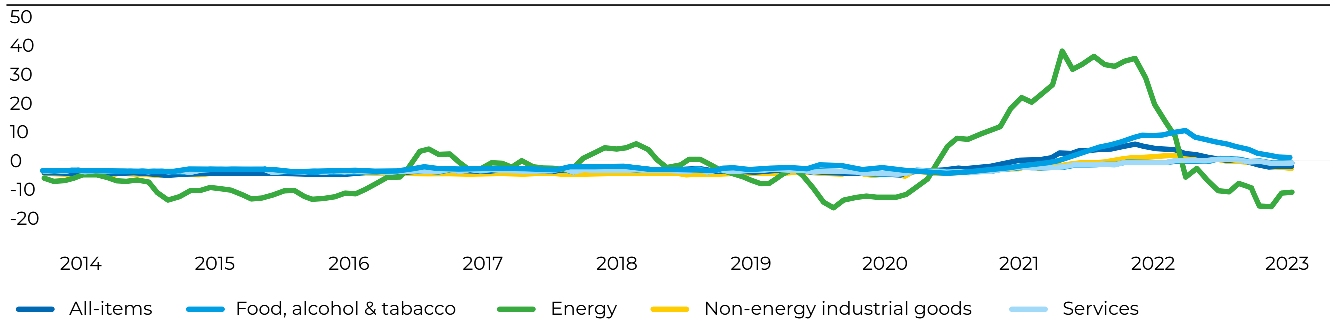
In 2023, the oil market went through considerable fluctuations resulting from various factors, including geopolitical tensions, supply restrictions, and changes in demand patterns as the global economy continued to recover from the COVID-19 pandemic. According to data from the US Energy Information Administration (EIA), the average Brent price in 2023 was USD 83 per barrel, down from USD 101 per barrel in 2022. This decline was mainly due to expectations that global oil production was to exceed consumption. Despite the persistence of global inflationary pressures, which reached 8.7% in 2022 and 6.9% in 2023, and monitoring of the situation by central banks as they tightened their monetary policies, oil prices remain significantly above pre-pandemic levels.

OPEC+ has been actively managing global oil supply in response to the turbulent economic landscape, marked by global inflation and changing demand patterns, especially in view of the easing of COVID-19 restrictions in China. In this environment, seeking to support weakened oil prices, Saudi Arabia voluntarily cut oil production by 1 mln bbl per day in July, along with a broader OPEC+ agreement to curb supplies in 2024. This decision reflects the desire of OPEC+ to stabilise the market amid inflationary pressures that have been affecting global economic growth and demand for oil. OPEC increased its forecast for global oil demand growth to 2.32 mln bbl per day (a 2.3% rise), adjusting it for a tighter market caused by strong demand from China, which is now expected to grow by 590 thous. bbl per day. This adjustment is a direct reaction to the global economic environment, where OPEC also slightly raised its forecast for 2023 from 2.5% to 2.6% despite potential risks such as geopolitical tensions and internal problems in China. By taking these steps, OPEC+ has spotlighted its critical role in attempting to balance the oil market, dealing with the complexities introduced by global inflation and its impact on demand and energy prices.

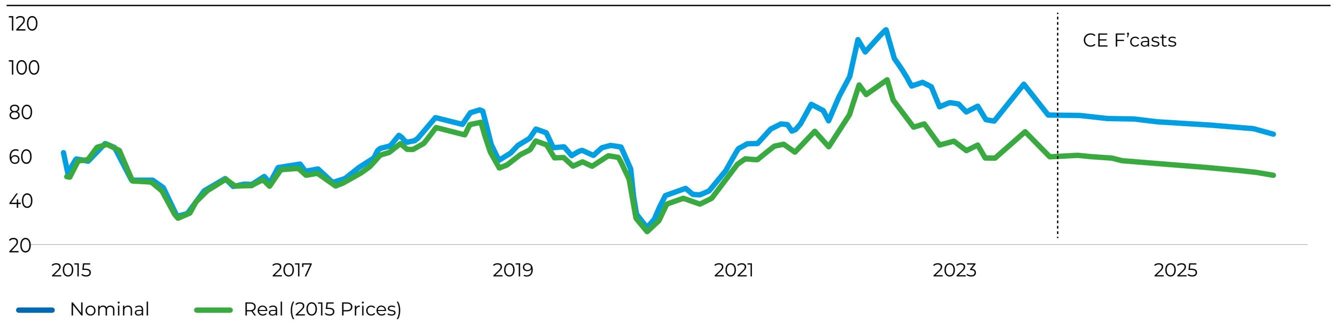
KMG strategy

Amid ongoing inflationary pressures, KMG's Development Plan addresses the risk of a significant drop in global oil prices.

Annual EUR inflation and its key drivers from January 2014 to January 2024, %



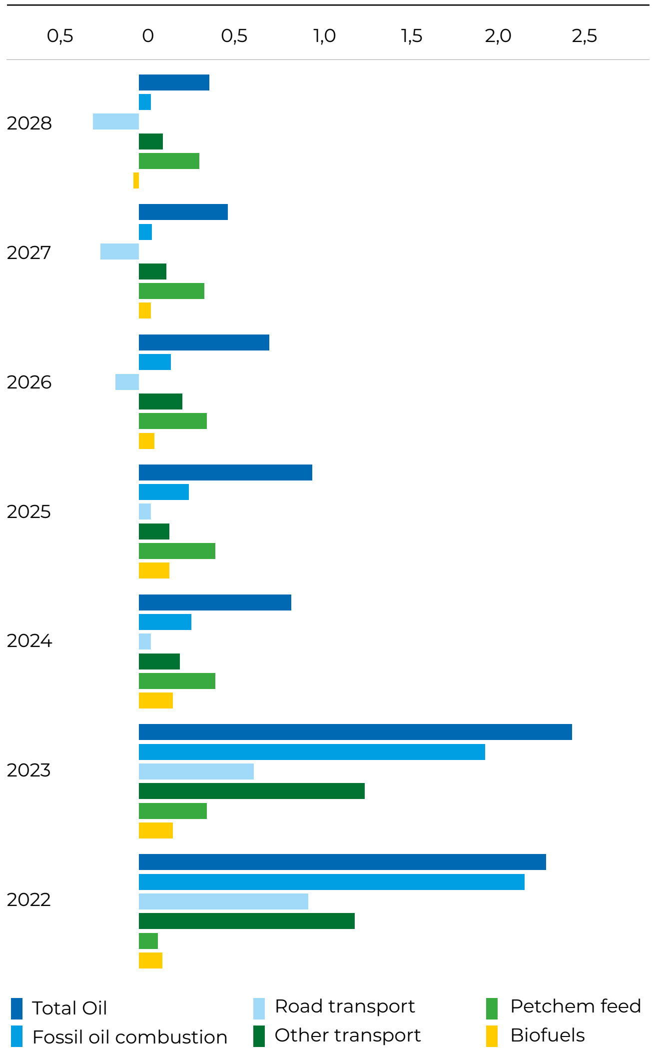
Brent price, USD



5. On track for a low-carbon future

In 2023, global clean energy investments reached a hefty amount, sustaining the swift shift towards renewable and sustainable energy sources. Funding for clean energy set a course to hit USD 1.8 tln, a USD 400 bln rise from 2022, demonstrating a robust pledge by governments, corporations, and investors to back the move from fossil fuels to greener options. The drive towards clean energy is propelled by consumer preferences, technological innovation, and policies encouraging reductions in GHG emissions. A remarkable surge in EV sales of over 35% in 2023 highlights the automotive sector's swift adaptation to electrification. These commitments represent a sizeable chunk of the energy industry investments, which totalled USD 2.8 tln for the year, revealing that a growing fraction of global energy financing is being used to fund clean energy initiatives.

Annual growth in oil demand by sectors, 2022–2028, mln bbl per day



Source: IEA

According to the World Bank, inaction could shrink Kazakhstan's economy by 1.6% by 2050, with an associated 3% rise in poverty and 2.1% drop in real wages. Failing to decarbonise may entail a long-term economic downturn of 2–2.5% per year.

Europe's Carbon Border Adjustment Mechanism (CBAM) is set to curb carbon leakage by imposing tariffs on imports based on carbon content. The CBAM may cause Kazakhstan to forfeit over USD 250 mln in annual export revenue, especially in the iron and steel sectors. Should the CBAM extend to include oil, potential losses could escalate to USD 1.5 bln. In response to global climate efforts, Kazakhstan's President has approved the Strategy for Carbon Neutrality by 2060, proposing rigorous goals for net zero carbon emissions.

In spite of the hurdles, oil exports remain central to Kazakhstan's economic stability. The hydrocarbon industry is a substantial contributor to the national GDP, accounting for about 20% in 2022 (a slight decrease from 23% in 2019).

Strategic direction

In 2021, KMG launched the 2022–2031 Low-Carbon Development Programme, affirming the carbon neutrality ambitions set for Kazakhstan by President Kassym-Jomart Tokayev in the Strategy for Carbon Neutrality by 2060. This Programme targets a 15% cut in CO_2 emissions by 2031, taking 2019 as the baseline. KMG actively pursues emissions reduction, having pledged to the Decarbonisation Charter at COP-28 and partnering with UNEP by signing a Memorandum of Understanding. The Company's efforts include slashing methane emissions, fostering hydrogen energy, producing low-carbon hydrogen and its derivatives, investing in carbon capture, usage and storage (CCUS) research, and aligning with international hydrogen storage standards. Initiatives to construct hybrid wind power plants are underway, integral to diminishing carbon footprints and advancing environmental practices in Kazakhstan.

Internal drivers and their impact on strategy implementation

1. Kazakhstan's oil and gas industry in 2023

According to the Energy Information Administration (EIA), Kazakhstan, an oil producer since 1911, has the second largest oil production after Russia among the CIS countries.

The oil and gas industry is a key sector of Kazakhstan's economy due to its significant hydrocarbon reserves. This industry, together with related sectors (transportation, construction of production facilities and geology), accounts for approximately 17% of the total gross domestic product (GDP) of Kazakhstan, according to estimates by the Kazakhstan Association of Oil, Gas and Energy Sector Organisations, KAZENERGY.

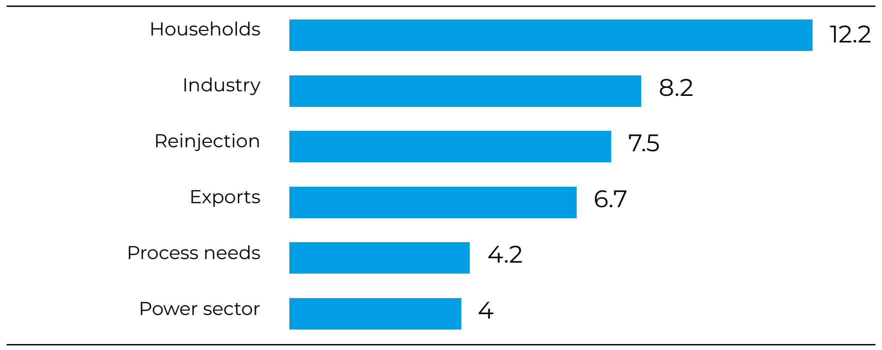
As production expanded over the past decades, Kazakhstan has significantly strengthened its position in the global hydrocarbon market. According to BP's Statistical Review of World Energy, Kazakhstan ranks 12th globally by the volume of its proved reserves.

According to the data and analysis provided by the Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan, the country produced 89.9 mln tonnes of crude oil in 2023, up 6.8% year-on-year. According to the Ministry of Energy, the country exported 70.5 mln tonnes of crude oil. Gas production in 2023 totalled 59.1 bln m^3, up 10.5% year-on-year. According to the Ministry of Energy, 29.8 billion m^3 of commercial gas was produced from the extracted gas. 19.43 and 5.6 billion m^3 of commercial gas were directed to domestic consumption and export, respectively. The remaining 4.8 billion m^3 was used for the own technological needs of subsoil users[1].

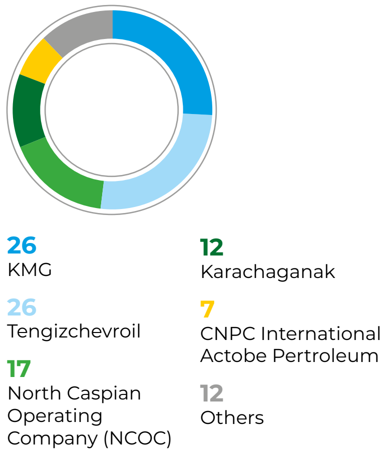
In late December 2023, Kazakhstan's Ministry of Energy expected the country's oil output in 2024 at 90.3 mln tonnes. Oil exports in 2024 are estimated at 67.5 mln tonnes.

Gas balance in Kazakhstan in 2023, bln m³

Kazakhstan's gas balance in 2023 by destination, bln m³



Oil and gas condensate production in Kazakhstan in 2023, %



Source: Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan

Oil and gas transportation

Kazakhstan has advanced and diversified oil and gas transportation, refining and processing infrastructure, which facilitates the country's access to global sales markets.

Oil refining and gas processing

According to the Information and Analytical Centre of Oil and Gas of the Ministry of Energy, the throughput at Kazakhstan refineries in 2023 was 19.6 mln tonnes, down 1.5% year-on-year. The production of all grades of petrol was at 5.3 mln tonnes (up 6.9% year-on-year), jet fuel at 624 thous. tonnes (up 42.4% year-on-year), and diesel fuel at 5.3 mln tonnes (down 1.1% year-on-year).

[1] The information of the Ministry of Energy was published in in the article of international news agency "Kazinform" www.inform.kz.

KMG's position in Kazakhstan's oil and gas industry

KMG is the national leader in Kazakhstan's oil and gas industry with a fully integrated value chain.

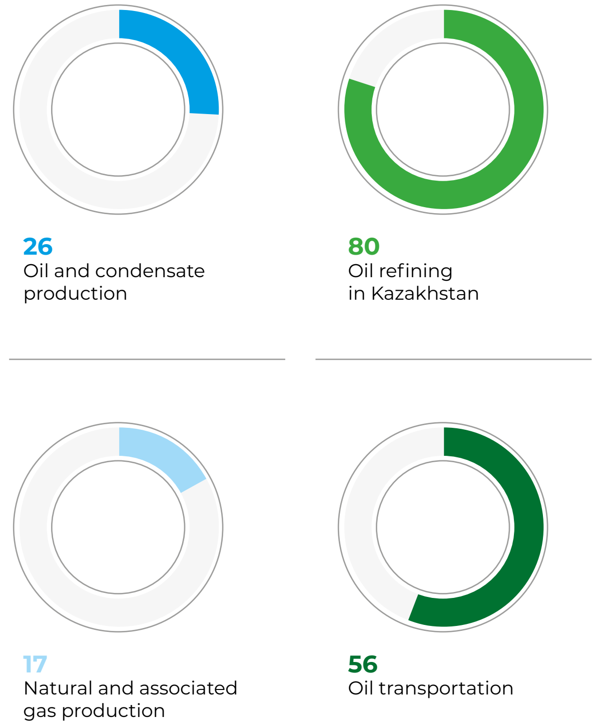
Proved (1P) oil and condensate reserves life was 16 years (based on the 2022 output), far exceeding the average of about 11 years for the global oil majors (based on the 2022 output). KMG's proved and probable (2P) oil and condensate reserves life (based on the 2022 output) was 26 years.

KMG showed the best operating results in Kazakhstan's oil and condensate production segment in 2023, according to the Company's in-house estimates. In 2023, the share of KMG in Kazakhstan's oil and condensate production was 26%, while its share in the nation's gas production came in at 17%.

The Company operates four largest refineries in Kazakhstan with the refining market share of 80% in 2023. KMG completed an ambitious investment programme to upgrade three core refineries in Kazakhstan. As a result, the Company ramped up its refining capacity and improved product quality, fully met the domestic demand for petroleum products and expanded their exports to regional markets.

The oil transportation infrastructure managed by KMG is highly diversified and has a strong transit and export potential. The Company's share in the oil transportation market, including trunk pipelines and transportation by sea, totalled 56% for 2023.

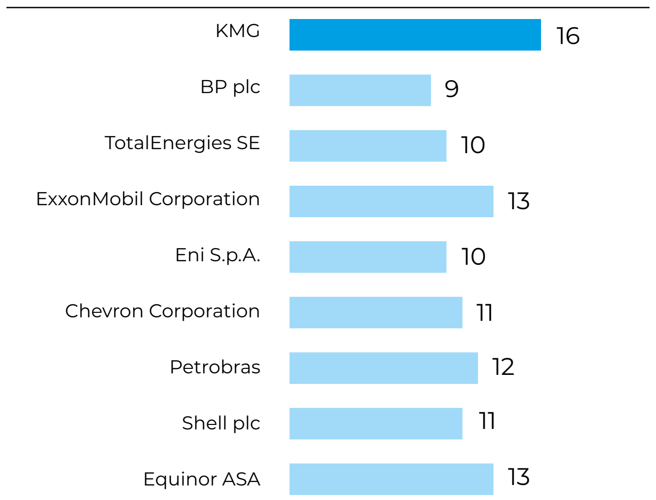
KMG's market share in Kazakhstan by segment in 2023, %



Sources: Company estimates, Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan

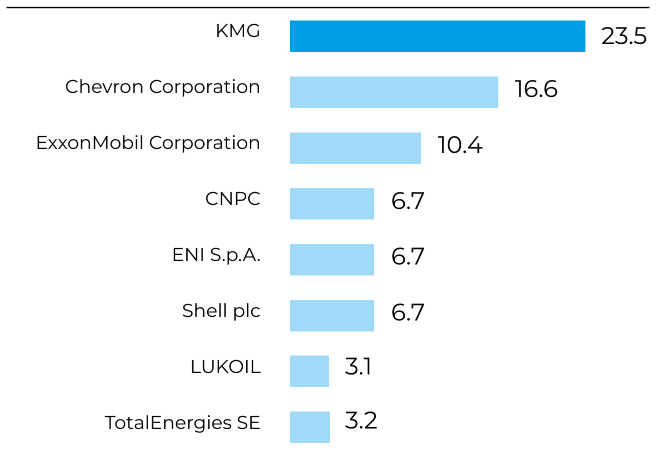
Competition analysis

1P oil and condensate reserves life in 2022, years



Source: Bloomberg

Estimated oil and condensate output in Kazakhstan in 2023, mln tonnes



Sources: Company estimates, Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan

Strategic direction
KMG focuses closely on further development of the nation's oil and gas industry, while also helping the Government to address the challenges of social and economic development in Kazakhstan. The Company acts on behalf of the government in the oil and gas industry and demonstrates strong social responsibility. Successful and sustainable business development is inextricably linked to the nation's economic competitiveness, social welfare, conservation and rational use of natural resources. KMG sees its mission in the effective and sustainable use of natural resources to ensure energy security, development and prosperity of Kazakhstan, while caring about future generations. In line with the KMG mission, we have set out four strategic goals:
1. resource base sufficient to support the Company's growth,
2. improved efficiency across the Company's value chain,
3. business diversification and product portfolio expansion,
4. sustainable development and gradual reduction in carbon intensity of production.

2. Development of Kazakhstan's petrochemical industry

Kazakhstan actively develops its petrochemical industry. Over the past ten years, the nation's petrochemical output has been growing driven by the launch of new manufacturing facilities.

In 2023, petrochemical production came in at 359[1] thous. tonnes (as compared to the target of 515 thous. tonnes), with plans to increase it to 628 thous. tonnes in 2024.

Kazakhstan's petrochemical industry relies on a number of completed landmark projects. The key of them include Atyrau Refinery (manufacturer of aromatic hydrocarbons such as benzene and paraxylene), Kazakhstan Petrochemical Industries Inc. and Kompaniya Neftekhim (polypropylene production facility), HILL Corporation, LUKOIL Lubricants Central Asia (manufacturer of lubricants), Shymkent Chemical Company (producer of petrol additives such as MTBE) and more. Their total annual production capacity is around 850 thous. tonnes.

To ensure the comprehensive development of its petrochemical industry, Kazakhstan has put in place a special economic zone – the National Industrial Petrochemical Technopark (NIPT), while also introducing tax and customs benefits and providing production facilities with infrastructure (access motor road, overpass, access rail road, railway station, water pipeline, power transmission line and substation, water treatment unit).

To address the rising demand for light oil products and to adjust Atyrau Refinery's processes for Tengiz oil, Atyrau Refinery initiated the Efficiency Improvement project. This initiative involves deploying cutting-edge technologies across several units, including the catalytic reformer LG-35–11/300–95, delayed coker unit, and EDD-ADU-2. The project's objective is to boost the output of high-quality fuels such as motor petrol, diesel, and LNG.

Progress against anchor petrochemical projects with the greatest impact on the national economy.
Pursuant to Kazakhstan's Concept for the Development of the Fuel and Energy Sector in 2022–2026, the national output of petrochemical products is expected to reach 1.2 mln tonnes by 2026.

On top of that, the Ministry of Energy of the Republic of Kazakhstan joined forces with KMG to draft legislative amendments introducing a special investment agreement to be used as a "one-stop document" for the nation's petrochemical projects as a way to drive their investment case. The amendments, which are expected to be included in Kazakhstan's Entrepreneurial and Tax Codes, offer businesses tax benefits for a period of 25 years.

The distinctive feature of investment agreements for petrochemical projects is that they allow the Government to select customised state support tools based on the results of the project's financial and economic assessment and to provide the required benefits for the entire payback period.

Strategic direction
With the support from the Government, KMG will be strongly involved in developing Kazakhstan's petrochemical industry, which is expected to significantly boost the national economy as growth in the petrochemical sector creates a multiplier effect across the entire domestic market.

3. Kazakhstan's Environmental Code

KMG Group prioritises minimising its environmental footprint. The recently adopted Environmental Code of the Republic of Kazakhstan expands the liability of facility operators and introduces stricter monitoring and control requirements. Anticipating the shift to best available techniques (BAT), BAT guidelines for oil refining and gas processing and production were drafted, setting the stage for the 50 largest polluters, including the Group's Atyrau Refinery, Pavlodar Refinery, Shymkent Refinery, and Kazakhoil Aktobe, to obtain comprehensive environmental approvals starting 2025.

The Government of Kazakhstan is also developing a new Water Code to tighten water resource management, securing water availability for the nation's both current needs and future generations. KMG actively contributes to the dialogue surrounding this prospective legislation.

In 2023, Mangistaumunaigaz and Kazakhoil Aktobe began streaming data from the automated monitoring system to the Ministry of Ecology, Geology, and Natural Resources in real time via infrastructure of National Information Technologies. The installation of the automated monitoring system at other KMG facilities is in progress.

Strategic direction
KMG's Environmental Policy was updated in 2021 to align with the recently approved Environmental Code of the Republic of Kazakhstan. KMG Group takes a zero-tolerance approach to losses and harm caused by environmental pollution. KMG has developed a draft Water Resources Management Programme with measurable targets and deadlines to curtail water use. Over the next few years, the Group plans to draft a programme to bring down pollutant emissions, a biodiversity preservation programme, and a corporate waste management standard, alongside revising existing environmental impact and water resources management corporate standards.

Environmental stewardship remains a focal point for KMG. On an annual basis, we take measures to clean oil-contaminated soils.

4. Kazakhstan's Strategy for Carbon Neutrality by 2060

Kazakhstan's Strategy for Carbon Neutrality by 2060 was developed in 2022 and approved on 2 February 2023. It identifies two scenarios for the country's economy. The used scenario-based analysis and assessment of investments needed for transition to carbon neutrality were based on the comprehensive models of potential industrial solutions, system evolution and macroeconomic effects.

The strategy is set to become a major landmark in the long-term development of Kazakhstan, as it outlines transition from a linear development model to a cyclical one (the so-called circular economy). The adoption of the strategy means the need to review the existing economic programmes, tax and budgeting policies, and business plans. For example, industrial and household waste should be used as production resources, while woodlands are to be perceived as carbon capturing assets.

To encourage the growth of businesses fit for the low-carbon economy, the government will put in place clearly defined state support tools and incentives. Furthermore, agricultural subsidies are to be granted in consideration of the ESG criteria to phase out the use of harmful chemical fertilisers. The strategy will also unlock new opportunities for environmentally clean production facilities.

Strategic direction
KMG is fully aware of the material impact its operations may have on the economy, environment, and society. That is why we areembedding sustainability principles in our key business processes as a way to align economic, environmental and social priorities with core management objectives. The Company is committed to high social responsibility standards inspired by the principles of partnership with its employees and trade unions. Sustainalytics, an international rating agency, assessed the Company's current ESG risk rating at 32.3.

5. Kazakhstan's Concept of Geological Industry Development

The nation's Concept of Geological Industry Development for 2023–2027 underscores minerals' pivotal role in economic expansion. Global patterns indicate a reduction in profitable reserves due to relentless extraction and burgeoning complexity.

Kazakhstan has implemented legal reforms to enhance subsoil use, including the adoption of the first-come-first-served licencing principle. The introduction of "smart regulation" measures and the establishment of the National Geological Service are designed to bolster exploration and mitigate investment risks. These initiatives are enhancing Kazakhstan's appeal for investments in exploration and necessitating institutional reforms.

Adopting international reporting standards is also improving the national image as a solid investment case. The Concept stresses the strategic role of the mineral resource sector for the country's economy, notably in energy and metals, advocating for the prudent use and development of resources to secure long-term industrial and economic growth.

Strategic direction
KMG will be exploring and developing new reserves in Kazakhstan, including with reliance on the subsoil exploration programme aiming to appraise prospective blocks previously unexplored with modern techniques. To speed up the reserve growth, exploration will rely on the latest technologies and methodologies, including

[1] Includes benzene, paraxylene, motor oils, industrial oils, gear oils, lubricants, MTBE and polypropylene.

new processing approaches, high-quality re-interpretation of geological and geophysical materials, and the use of next generation technologies in seismic surveys.

6. Kazakhstan's economy

In 2023, Kazakhstan's economy grew by 5.1%, marking an impressive achievement despite a slowdown in global economic growth. The country's economy proved resilient to a variety of stress factors thanks to the efficient fiscal policy of the Government and monetary policy of the National Bank of Kazakhstan. Nevertheless, the disruption of existing logistics chains, strong domestic demand and the migration flow to Kazakhstan drove inflation up to 9.8% in 2023. Food prices grew by 8.5%, while the cost of non-food products and services rose by 9.1% and 12.4% respectively.

In the medium term, inflation is expected to slow down due to a number of external factors such as waning global demand for goods and services, and tighter monetary policies pursued by central banks across the world. Even so, food prices are predicted to remain fairly high. One of the key risks is the ongoing conflict in Ukraine.

The Ministry of National Economy projects that inflation will likely settle between 6% and 8% in 2024. Currently, there's a global shift towards disinflation. Factors that help curb domestic inflation include high commodity prices, the strengthening of the tenge against the currencies of Kazakhstan's key trading partners, and the country's impressive trade surplus.

Strategic direction

We remain committed to pursuing Kazakhstan's core strategic interests within the oil and gas sector, adhering to the nation's strategic directives and implementing measures that support economic growth and the Republic's social endeavours.

KMG development strategy

Context

In its Development Strategy, KMG continues to prioritise embedding sustainable development into its core business processes, as the Company is aware of its considerable impact on the economy, environment, and society. KMG's growth over the next ten years will be driven by expanding the resource base, enhancing production efficiency, extending the value chain, adopting advanced technologies, and minimising the carbon footprint.

The Company carefully selects and prioritises investment opportunities, considering only highly effective strategic projects for investments. KMG is committed to prudent capital allocation and focuses on maximising benefits for the shareholders and respecting the interests of the government in the oil and gas industry. The Company seeks to adhere to a conservative financial policy maintaining a balanced debt profile and securing a strong liquidity position.

KMG has a competitive edge in terms of a resilient production cycle from upstream to downstream that generates cash flows sufficient to deliver against the Company's strategic targets. The Company exercises its priority right to assets onshore and offshore of the Caspian Sea to grow its resource base.

With cheap feedstock readily available, KMG sees petrochemicals as its natural point of growth to rely on in expanding and improving the Company's value chain.

KMG's successful growth story is underpinned by sustained cash flow generation on the back of increased production and a sustainable development strategy. Given the long-term trends in the energy transition, KMG is building its portfolio of low-carbon projects to remain financially successful in a future zero-emissions world.

VISION

Vertically integrated national oil and gas company that meets the highest standards of safety, is committed to sustainability principles, and strives to maximise its financial performance.

MISSION

We are effective and sustainable in our use of natural resources to ensure energy security, development and prosperity of Kazakhstan while also caring about future generations.

Reflecting its Mission, KMG has outlined two strategic directions of activity and set four strategic goals.

1. **Value creation. Goals:**
   - resource base sufficient to support the Company's growth,
   - improved efficiency across the Company's value chain,
   - business diversification and product portfolio expansion.
2. **Energy transition. Goal:**
   - sustainable development and gradual reduction in carbon intensity of production.

STRATEGIC FOCUSES

Value creation

Strategic goals

Resource base sufficient to support the Company's growth

Targets – 2031
- New reserves coming from onshore and offshore projects
- Reserves quickly put on stream
- Subsoil exploration for prospective blocks

Improved efficiency across the Company's value chain

- Total oil output 240 mln tonnes
- Uninterrupted operation of oil refineries
- Meeting Kazakhstan's domestic demand for oil products
- Production of petrochemicals (benzene and paraxylene)
- Increased utilisation of existing transportation capacity
- Development of additional oil export routes

Business diversification and product portfolio expansion

Petrochemical projects to make:
- polyethylene
- polypropylene
- polyethylene terephthalate
- terephthalic acid

Energy transition

Sustainable development and gradual reduction in carbon intensity of production

Targets – 2031

15% CO_2 emissions reduction from the 2019 level

Implementation of renewable energy projects with total installed capacity of at least 300 **MW attributable to KMG**

At least 10% reduction in carbon intensity and energy intensity of production

Gradual improvements in ESG risk rating

All lines of activity

- Optimised operating costs
- Optimised asset structure
- Efficient procurement
- Digitalisation and technology development
- Project management

Strategic goal #1

Resource base sufficient to support the Company's growth

To ensure stable production levels over the next decade, KMG has exploration projects – onshore and offshore in the Caspian Sea.

As part of this strategic goal, KMG plans to grow organically and inorganically to add new reserves sufficient both for conventional operations and new promising areas of activity.

KMG will be exploring and developing new reserves in Kazakhstan, among other things in strategic partnerships with global oil and gas majors.

In 2023, we moved to the active stage for our offshore projects Abay and onshore projects Turgai Palaeozoic, Karaton Subsalt, and Taisoigan.

The Karaton Subsalt project represents a high-potential exploration endeavour targeting deep subsalt deposits, which are similar to those of the adjacent Tengiz and Korolevskoye fields. In June 2023, KMG secured a subsoil use contract for Karaton Subsalt. In September 2023, a subsidiary – Karaton Operating – was incorporated and the parent company transferred the subsoil use rights to it.

The Taisoigan exploration block falls within the operational scope of Embamunaigas, KMG's fully-owned entity. The Company won exploration and production contracts for Taisoigan-1 and Taisoigan-2 in 2022. In May 2023, the subsoil use rights under these contracts were assigned to Embamunaigas to continue exploration. Contingent on successful exploration results, this initiative is set to uphold Embamunaigas's production stability, compensating for the depletion of existing reserves.

In 2023, KMG and LUKOIL signed a number of agreements as part of the Kalamkas-Sea–Khazar–Auezov project in Kazakhstan's part of the Caspian Sea. The Kalamkas-Sea, Khazar, and Auezov fields are located in Kazakhstan's part of the Caspian Sea, with a water depth of approximately 8 m.

86 mln tonnes

recoverable reserves of oil

22 bln m

recoverable reserves of ga

Plans for 2024

Plans for 2024 include the drilling of an inaugural prospecting well within the Turgai Palaeozoic block to a depth of 5,500 m.

Obtaining a contract for the Karazhar exploration block. The geological resources (P50) stand at 32 mln tonnes.

In 2024, we plan to drill and test the first prospecting well at the Abay offshore block to a depth of 2,500 m.

In 2024, the drilling of the first 5,500 m prospecting well is planned for the Karaton Subsalt block, funded by a strategic partner, with testing expected to be completed in 2025.

Design work for the Kalamkas-Sea–Khazar–Auezov block is also on the agenda for 2024.

Also, based on the analysis of historical geological and geophysical data and basin modelling, five new promising blocks were identified for inclusion in the National Acreage Management Programme for further consideration of obtaining subsoil use contracts. A total of 17 prospecting and appraisal wells will be drilled in 2024.

Activities/developments of 2023 as part of the strategic goal

- **On 18 May 2023**, KMG and SINOPEC formalised an Agreement on Cooperation in Geological Study of the Subsurface of the Republic of Kazakhstan. The document contemplates a joint study of 17 exploration blocks located within the main and underexplored sedimentary basins. Upon confirmation of the block prospects, the parties will consider the possibility of receiving a hydrocarbons exploration and production contract.
- **On 9 February 2023**, KMG and LUKOIL concluded a number of agreements on the development project for the Kalamkas-Sea–Khazar–Auezov subsoil block in Kazakhstan's part of the Caspian Sea. These included a Parties' Agreement, Sale and Purchase Agreement for a 50% interest in Kalamkas — Khazar Operating LLP, and Financing Agreement for the Operator's Activities.
- **On 16 October 2023**, in Beijing, KMG and China National Offshore Oil Corporation (CNOOC) signed a Memorandum of Understanding. The memorandum seeks to foster joint geological research on high-potential exploration projects, broaden collaboration in existing fields, and promote joint efforts in oilfield services.

Strategic goal #2

Improved efficiency across the Company's value chain

Activities/developments of 2023 as part of the strategic goal

- **On 20 March 2023**, the first Tengiz oil was shipped towards Baku, proceeding from Ceyhan starting April. In 2023, the Port of Aktau dispatched a total of 1,057 thous. tonnes.
- **On 10 May 2023**, gas production commenced at the South Aksay gas condensate field in the Kyzylorda Region.
- **On 20 June 2023**, KMG and Rosneft Deutschland signed an agreement for the monthly supply of 100 thous. tonnes of crude oil from the Karachaganak field to PCK Raffinerie in Schwedt, set to continue until the end of the year.
- **On 22 June 2023**, in Baku, a memorandum of strategic cooperation was signed with SOCAR to facilitate the transit of Kazakhstan's oil through Azerbaijan. The memorandum outlines overarching terms and principles for collaboration to ramp up transit capacities necessary for Kazakhstan's oil to go through the Baku–Tbilisi–Ceyhan pipeline.
- **On 9 October 2023**, KMG entered into an SPA with TotalEnergies EP Danmark A/S for a 100% stake in Total E&P Dunga GmbH, finalising the transaction on 20 November 2023.
- **On 25 July 2023**, Atyrau Refinery started producing AI-92 petrol compliant with the K5 environmental standard, equivalent to Euro 5.
- **On 17 October 2023**, a project to boost the Aktau Bitumen Plant's (Caspi Bitum) processing capacity from 1 mln to 1.5 mln tonnes of oil annually was formalised by an agreement signed in Beijing. The project entails upgrading the existing primary oil refining unit (EDD-AVDU), with the timeline spanning 2023–2024.
- **On 25 November 2023**, a ceremonial event in Aktau marked the commissioning of two oil tankers, Taraz and Liwa, added to Kazakhstan's naval fleet. The tankers were purchased in furtherance of the directive of the Republic of Kazakhstan's President Kassym-Jomart Tokayev to develop alternative oil export routes.
- A roadmap committing to Pavlodar Refinery's capacity increase to 12 mln tonnes per annum was signed **on 29 November 2023**.
- **On 2 December 2023** in Dubai, KMG and AD Ports Group solidified Heads of Terms for ship building and repair facility in Kazakhstan.
- **On 4 December 2023**, KMG put the East Urikhtau field into commercial operation.
- **On 21 December 2023**, Ural Oil and Gas LLP, in which KMG holds a 50% stake, successfully put the Rozhkovskoye gas condensate field in the West Kazakhstan Region into commercial operation.

KMG focuses on its core operations seeking to maximise benefits from production, refining, transportation, and marketing of oil and to improve operations across all key segments.

To make up for the natural decline in production at its operating assets, the Company continues working to increase oil recovery ratios and the time between repairs as well as engage in other measures to improve efficiency with a view to maximising well productivity.

At its large Tengiz, Karachaganak and Kashagan fields, the Company focuses on successful implementation of expansion projects and projects to maintain and extend production plateau.

In 2023, KMG put the East Urikhtau field into commercial operation. Urikhtau Operating was one of the first in Kazakhstan to switch to commercial development of fields under the improved model contract. As part of the ongoing development of the East Urikhtau field, there are plans to drill an additional nine production wells. This is expected to increase oil production to 200 thous. tonnes per year, while also boosting associated gas production to 100 mln m^3 per year. The launch of East Urikhtau is a major step towards the full-fledged development of the Central Urikhtau field. Central Urikhtau, identified as a gas condensate field, holds substantial reserves of natural gas. The projected annual output for this block is set at 1 bln m^3 of gas.

The Company is also committed to effectively leveraging the existing oil transportation infrastructure to enhance its exports and transit businesses. In response to external factors and geopolitical challenges, KMG continues developing additional routes to export Kazakhstan's oil. The Company is in talks with partners to open the Southern Corridor and ramp up supplies to China.

Starting from 2023, as per the agreements between KMG and SOCAR, Kazakhstan's oil will be transported via the Aktau–Baku–Ceyhan route at a rate of 1.5 mln tonnes annually. With our Azerbaijani partners, we are working on a plan to step up the transit of Kazakhstan's oil via Azerbaijan's territory. As oil production figures go up, KMG is looking into potentially increasing the volumes of transportation via the Baku–Tbilisi–Ceyhan pipeline. The viability of amplifying throughput will depend on the route's economic benefits. In 2023, KMG also initiated oil shipments through the Atyrau–Samara pipeline, reaching onward to Germany via the Druzhba pipeline, culminating in the delivery of 993 thous. tonnes to Germany for the year.

In January 2023, to refine maritime operations technology-wise, KMG established a joint venture with Abu Dhabi Ports (ADP) from the UAE and bought two tankers, Taraz and Liwa. The vessels are now actively engaged in transporting Kazakhstan's oil in the Caspian Sea. Furthermore, from mid-2023, KMG/ADP's combined tanker fleet embarked on its first joint venture of carrying Tengiz oil in the open sea, following a deal with Tengizchevroil. These tankers initiate their journey from the port of Novorossiysk, delivering oil globally. Previously, this has only been handled by Chevron Tankers.

A major priority for KMG is to ensure uninterrupted operation of oil refineries and meet domestic demand for oil products. Today, having upgraded refineries across Kazakhstan, the Company delivers on this strategic goal for the nation while also exporting part of the oil products.

The Company is engaged in ongoing efforts to optimise its operating costs and make the supply chain more effective.

Strategic goal #3

Business diversification and product portfolio expansion

KMG is strongly involved in developing national petrochemical industry with support from the government of the Republic of Kazakhstan, which is expected to significantly boost the national economy as growth in the petrochemical sector will have a multiplier effect on the entire domestic market.

Petrochemicals are progressively becoming the principal catalyst for global oil demand. The Company will rely on existing and new hydrocarbon resources to run petrochemical projects and make new products amid global shifts in oil demand in the long run.

In 2023, KMG drafted a Concept for Petrochemical Business Development to be approved in 2024.

For more details, see the Performance under Investment Projects section

Activities/developments of 2023 as part of the strategic goal

- **On 1 June 2023**, KMG PetroChem and Tengizchevroil formalised the Heads of Agreement for the gas separation unit project.
- **On 8 June 2023**, Pavlodar Refinery and Air Liquide Munay Tech Gases signed an agreement for building a hydrogen unit designed to yield up to 160 thous. tonnes of winter diesel fuel annually.
- **On 17 October 2023**, equity agreements for a stake in a planned polyethylene project were signed between KMG, SIBUR, and SINOPEC in Beijing.
- **In 2023**, KPI Inc. commenced the production of new polypropylene grades: PP H031 BF/7, PP H270 FF/7, and PP H036 BF/7.

Strategic goal #4

Sustainable development and gradual reduction in carbon intensity of production

KMG recognises the importance of its economic, environmental and social impact and will continue embedding sustainability principles into the key business processes in order to ensure the alignment of the Company's economic, environmental and social priorities and corporate governance targets. The Company integrates its ESG goals within the framework for management performance evaluation on an ongoing basis.

In November 2023, KMG received an updated ESG Risk Rating score for 2022–32.3. The Company received a "strong" score for its ESG risk management from Sustainalytics. By 2031, KMG aims to solidify its standing as a company with medium ESG risks.

The Company seeks to improve its ESG metrics and integrates ESG goals into corporate and functional key performance indicators (KPIs). We are committed to the high standards of social responsibility inspired by the principles of partnership with our employees and trade unions.

The Company is equally devoted to enhancing the management of staff health and elevating our employees' quality of life. To introduce unified approaches and improve occupational health performance, KMG Group developed the Employee Health Management Programme.

With the climate agenda now a matter of strategic importance, the Company runs the 2022–2031 Low-Carbon Development Programme, setting out KMG's climate ambitions and key approaches and measures for carbon footprint reduction.

In its commitment to limit carbon footprint, the Company pursues a balanced approach, targeting a 15% reduction in greenhouse gas emissions by 2031 from the 2019 level.

On top of that, we plan to implement joint renewable energy projects with KMG's share of the total capacity of at least 300 MW.

On 18 January 2024 in Rome (Italy), KMG and Eni signed the Joint Confirmation Agreement on the initiation of the Zhanaozen hybrid power plant construction project. The initiative provides for the construction of a wind power plant (77 MW) and a solar power plant (50 MW) in collaboration with Eni's subsidiary Plenitude, as well as a 120 MW gas power plant in Zhanaozen to ensure a stable electricity supply to KMG's industrial facilities in the region.

Additionally, the 1 GW Mirny wind power plant project with a 300 MW/600 MWh electricity storage system undertaken by KMG in collaboration with Samruk-Kazyna and Total Eren, was initiated in the summer of 2023. The Mirny project aims to establish major electricity generation capacities in the southern region of the Republic of Kazakhstan, while simultaneously reducing CO_2 emissions and generating offset credits as part of KMG's Low-Carbon Development Programme.

Activities/developments of 2023 as part of the strategic goal

- **On 1 November 2023**, as part of French President Emmanuel Macron's official visit to Kazakhstan, a Joint Venture Agreement was finalised with Total Eren for a 1 GW wind power plant. The JV comprises Total Eren (60%), Samruk-Kazyna (20%), and KMG (20%). This initiative builds on the Term Sheet entered into by Samruk-Kazyna, KMG, and Total Eren in November 2022.
- **On 3 December 2023**, KMG signed a Memorandum of Understanding with UNEP and joined the OGMP 2.0 (the Oil & Gas Methane Partnership) initiative spearheaded by UNEP and the International Methane Emissions Observatory (IMEO).
- **On 13 December 2023** Astrakhan–Mangyshlak, the upgraded and expanded main water pipeline in the Atyrau Region, was brought on-stream in a ceremony event.
- **On 18 January 2024** in Rome, KMG and Eni signed the Joint Confirmation Agreement on the initiation of the Zhanaozen hybrid power plant construction project.

By delivering on its four strategic goals, KMG will contribute to diversifying the national economy and reducing Kazakhstan's carbon footprint, which will help grow the Company, promote the well-being of people in Kazakhstan, and preserve the environment for generations to come. Whenever there are attractive M&A opportunities and the market environment is favourable, KMG searches for and acquiring new assets.

The Company's Development Strategy, along with its strategic goals and objectives, is disclosed for all stakeholders on its corporate website (https://www.kmg.kz). Furthermore, KMG Group consistently holds annual strategic meetings to tackle systemic and forward-looking challenges that influence the Company's operations.

Corporate key performance indicators

To advance our strategic goals and initiatives, corporate key performance indicators (KPIs) are set annually for KMG's management. These KPIs are developed taking into account the Company's priority objectives and a need to strike a balance between production, financial, and sustainability metrics. The list of KPIs includes mandatory indicators related to industrial and occupational safety. At the end of each year, the assessment of performance against these KPIs is used to determine the remuneration of KMG employees who are subject to the performance evaluation.

The 2023 corporate KPIs and functional KPIs of the Management Board members were aimed at successfully implementing investment projects, achieving planned production and financial targets, and fulfilling our ESG goals.

Improved efficiency across the Company's value chain	
Performance under priority investment projects	**80% (2022: 54.02%)** Scheduled project activities were completed as part of four out of five projects: - Upgrade and expansion of the Astrakhan–Mangyshlak water pipeline - Construction of a desalination plant in Kenderly with a daily capacity of 50,000 m^3 - Integrated gas chemical complex construction (Phase 2 – polyethylene production) - Construction of a new gas processing plant in Zhanaozen See the Performance under Investment Projects section
Oil and gas condensate production	**23,490[1] thous. tonnes (2022: 22,012 thous. tonnes)** This indicator measures oil and gas condensate production from operating assets and major oil and gas assets attributable to the Company. See the Upstream section
EBITDA margin, excluding trading	**40% (2022: 29.3%)** This indicator measures the Company's profitability and shows the percentage of revenue retained by the Company before taxes, interest on loans, and depreciation and amortisation. See the Financial Review section
Total shareholder return (TSR)	**43.1% (indicator introduced in 2023)** This indicator measures return on invested capital. 43.1% = (Closing share price at the end of 2023 (29 December 2023) of KZT 11,541 – Initial share price (at IPO on 8 December 2022) of KZT 8,406 + Dividends of KZT 491.71 per share) / Initial share price (at IPO on 8 December 2022) of KZT 8,406 * 100% See the Shareholder and Investor Relations section
Sustainable development and gradual reduction in carbon intensity of production	
Comprehensive OHS indicator	**Lost Time Incident Rate (LTIR): 0.30 (2022: 0.36%)** Identification and reporting of unsafe condition / unsafe behaviour / unsafe action / hazardous event / hazardous factor: **12,240 Qorgau cards** completed in KMG's subsidiaries and associates (indicator introduced in 2023). This indicator consists of two components Lost Time Incident Rate (LTIR) and Qorgau OHS card completion See the Health, Safety and Environment section

Estimated KPI achievement rates. The final approval by KMG's Board of Directors of the actual values for 2023 is expected in July 2024.

[1] In accordance with the asset list included in the calculation of target KPIs. KMG's total oil and gas condensate production was 23,532 thous. tonnes.

Performance under investment projects

Corporate Project Management System

In 2023, to implement investment projects more efficiently, KMG continued to build its Corporate Project Management System (CPMS).

As part of these efforts, we drafted 34 template documents to facilitate decision-making in various PM areas and set detailed requirements for relevant processes.

The Company adopted a CPMS handbook describing tools and methods to manage capital projects.

In 2023, KMG Group hosted the first project management conference bringing together 150 experts in major projects from the Company and its subsidiaries and associates. Conference participants took part in an open dialogue on challenges in the planning and implementation of capital projects, looked at the key aspects of design, construction and coordination processes, reviewed lessons learned, and presented best PM practices.

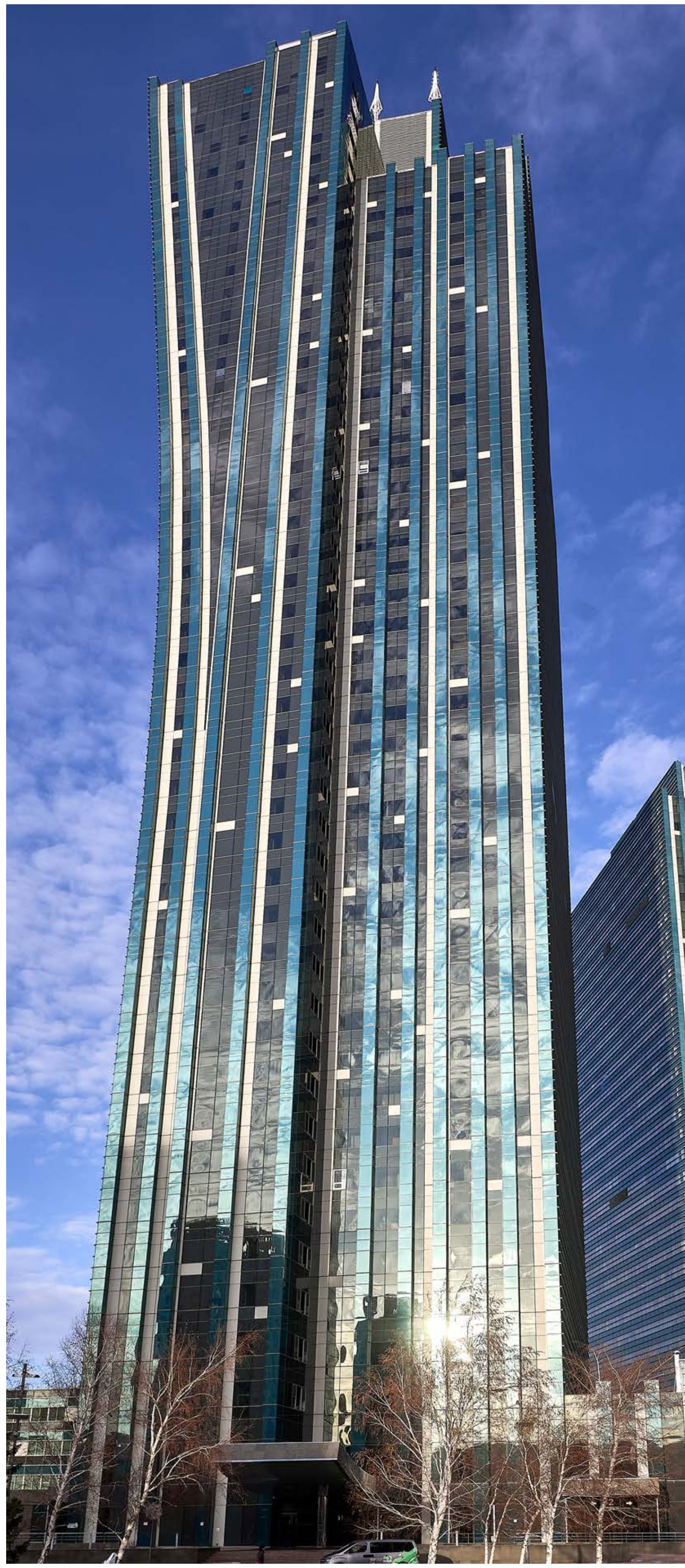
KMG together with its subsidiaries and associates takes a lot of effort to continuously improve employees' PM competences.

The reporting period saw eight internal and external training courses in various project management domains, with over 300 employees taking part, 46 certified under IPMA standards, and 17 certified under Green Project Management standards.

An in-house certification system is in place to evaluate KMG project management staff, with managers of capital projects to be tested for compliance with CPMS requirements starting from 2024.

The Company liaised with government authorities to streamline project design, approval and budgeting processes.

The next year will see further efforts to enhance procedures and tools for project assessment, decision-making and create a pool of project leaders from among KMG Group employees.



Investment portfolio overview

Today, KMG's investment portfolio includes projects across all areas of operations aimed at increasing the resource base, boosting efficiency across the value chain, diversifying business activities, and expanding the product offering. In line with the KMG Development Strategy for 2022–2031, the Company's investment portfolio encompasses projects both in conventional areas (exploration, transportation and refining of oil) and new realms (petrochemicals, alternative energy, and carbon footprint reduction at KMG's existing operating assets). Sources of project financing are determined on a case-by-case basis, with the Company relying insofar as possible on its own funds and raising debt solely for certain new projects. To improve investment and financial discipline, KMG seeks to raise financing mostly at the project level with the lowest recourse to the Company.

In 2023, the investment portfolio totalled KZT 50.461 bln, including KZT 18.636 bln attributable to KMG.

Project type	Total investment portfolio, KZT bln		Share of investment portfolio attributable to KMG, KZT bln	
	2022	2023	2022	2023
Oil and gas exploration and production	44.448	41.857	14.609	12.713
ESG projects	237	965	219	420
Service projects	182	178	182	178
Oil transportation	424	419	163	155
Refining and marketing of oil products	314	797	265	732
Petrochemicals	5.581	6.131	2.960	4.329
Other	125	114	119	109
Total	**51.312**	**50.461**	**18.516**	**18.636**

Oil and gas exploration and production

In 2022, in order to strengthen the investment case for the oil and gas industry, the Government of Kazakhstan together with foreign investors and KMG developed Enhance Contract Model offering a number of regulatory and fiscal benefits for complex projects that require additional support (new complex onshore, offshore and gas projects). In December 2022, the President of Kazakhstan signed a relevant set of amendments to the national Code on Subsoil and Subsoil Use and Tax Code. These amendments impact several KMG's projects, helping intensify work both on the Caspian Sea shelf and on a number of complex and gas projects onshore.

In 2023, thanks to the introduction of the Enhance Contract Model, significant progress was made in advancing complex and capital-intensive projects such as Kalamkas-Sea–Khazar, Karaton Subsalt, and Urikhtau, with respective contracts signed.

In 2022, the Company obtained subsoil exploration licences for five blocks: Mugodzhary, Berezovsky, Zharkyn, Bolashak, and Northern Ozen. In 2023, we conducted pro-active seismic surveying as part of the subsoil exploration programme, carrying it out ahead of schedule. Field seismic surveying was completed at three blocks in the Mangistau and West Kazakhstan regions and is underway at the Mugodzhary block in the Aktobe Region. Reprocessing and reinterpretation of historical data for the Bolashak block, as well processing and interpretation of seismic data for the Northern Ozen, Zharkyn, and Berezovsky blocks are nearing completion. In 2024 and 2025, pro-active seismic surveying is planned to be finalised, followed by processing and interpretation of results to reduce geological risks and obtain input data for geological evaluation and feasibility study.

In 2023, contracts were secured for the Karaton Subsalt and Kalamkas-Sea–Khazar blocks, with operator companies established and strategic partners engaged for each project. In 2024, the drilling of the first 5,500 m prospecting well is planned for the Karaton Subsalt block, funded by a strategic partner, with testing expected to be completed in 2025.

In 2023, KMG and LUKOIL signed a number of agreements as part of the Kalamkas-Sea–Khazar–Auezov project in Kazakhstan's part of the Caspian Sea. The water depth is approximately 8 m. Their recoverable reserves include 86 mln tonnes of oil and 22 bln m^3 of gas. In 2024, plans are underway to conduct design work for the development of these fields.

On 4 December 2023, the East Urikhtau project commenced its production operations. The launch of this field is of utmost importance in terms of enhancing the nation's energy security by expanding its hydrocarbon resources. As part of the ongoing development of the East Urikhtau field, there are plans to additionally drill nine production wells. This is expected to increase oil production to 200 thous. tonnes per year, while also boosting associated gas production to 100 mln m^3 per year.

On 21 December 2023, Ural Oil and Gas LLP, in which KMG holds a 50% stake, successfully put the Rozhkovskoye gas condensate field in the West Kazakhstan Region into commercial operation. The field is anticipated to achieve a peak production level of around 1 bln m^3 of gas and over 500 thous. tonnes of condensate, as well as over 150 thous. tonnes of liquefied petroleum gas annually. The extracted raw gas will be transported to gas processing facilities, and the resulting marketable gas will be supplied to domestic market consumers.

In 2023, a decision was made to discontinue further exploration at the Zhenis block. The drilling of a prospecting and exploration well at the Zhenis structure confirmed the absence of hydrocarbons in the trap. The exploration was funded by a strategic partner, so the latter bore the risks of non-discovery.

Tengiz, Kashagan and Karachaganak megaprojects

KMG partners with strategic investors in projects at large fields: Tengiz (20%), Kashagan (16.87%) and Karachaganak (10%).

- The implementation of the Future Growth Project (FGP) and the Wellhead Pressure Management Project (WPMP) at the Tengiz field is nearing completion. By now, the mechanical works have been fully completed, with system preparation and pre-commissioning efforts currently underway. As at the end of 2023, the total cost of FGP–WPMP was USD 45.6 bln, with the overall project progress at 99.3%. Under the updated 2023 schedule, the launch of the WPMP and FGP facilities is slated for 2Q 2024 and 2Q 2025 respectively. The projects are expected to boost oil production from the Tengiz field by 12 mln tonnes per year.
- Projects to maintain production plateau at the Karachaganak field are ongoing. In 2023, a concept was developed for the construction of a gas processing plant with a capacity to produce 4 bln m3 of marketable gas per year. This project will provide the Karachaganak field with opportunities to monetise its raw gas and its by-products. The installation of the 5th injection compressor (5ICP) project is scheduled for completion in 2024. The 6th injection compressor project is now in the active construction phase (with completion progress at 43%).
- Oil production at the Kashagan field is currently underway as part of Phase 1 development. Currently, projects are being considered for Phase 2 development aimed at increasing crude oil and condensate output by a total of ca. 710 thous. bbl per day (ca. 89.5 thous. tonnes per day) over the next ten years. Phase 2A involves increasing oil production at Kashagan to 63 thous. tonnes per day (with the overall production at the field reaching 500 thous. bbl per day) by supplying raw gas to the projected own gas processing plant (GPP) with a capacity of 2.5 bln m^3 per year. The GPP construction project is currently at the pre-FEED stage. Phase 2B involves increasing oil production to 710 thous. bbl per day by supplying 6 bln m^3 of associated gas per year. The Operator has completed a pre-FEED for the option implying the supply of raw gas to a third party plant. Due to uncertainties regarding the raw gas recipient, the FEED stage was postponed.

Oil transportation

As part of the debottlenecking project, the CPC oil pipeline system geared up to transport up to 81.5 mln tonnes of oil per year, including up to 72.5 mln tonnes of oil per year in Kazakhstan.

Additionally, in 2023, a joint project between Kazmortransflot and International Maritime Investments Ltd was completed, involving the acquisition of two 8,000-tonne deadweight oil tankers. The vessels were constructed at the shipyard of the Dutch shipbuilder Damen. The tankers have a length of 140 m, a width of 16.7 m, a draft of 4.2 m, and a speed of 10 knots. They are fitted with state-of-the-art control systems and advanced equipment with superior technical characteristics, ensuring their reliability and efficiency in compliance with international safety and environmental standards. This project was carried out in furtherance of the directive of the Republic of Kazakhstan's President to develop alternative oil export routes. The tankers, named Taraz and Liwa, will fully cover the Kazakh party's commitment to transporting 750 thous. tonnes of oil annually via the Aktau–Baku route. Oil shipments via the Aktau–Baku–Tbilisi–Ceyhan route began in March 2023. In 2023, a total of 1,057 thous. tonnes of oil was shipped from the Port of Aktau.

Refining and marketing of oil products

One of KMG's key objectives in the coming years is to ensure the supply of locally refined oil products to Kazakhstan's domestic market to meet the expected consumption growth, which necessitates the expansion of refining capacities. To achieve this, comprehensive measures need to be taken to improve equipment reliability, allowing the refineries to operate without interruption for three years. In pursuit of this objective, KMG has initiated projects to increase the time between repairs at its Atyrau, Pavlodar, and Shymkent refineries to three years.

To boost the production of light oil products, an efficiency enhancement project is planned to be implemented at Atyrau Refinery. The project includes eight sub-projects to remove bottlenecks and boost light oil product output. In 2025, the Tengiz Oil Refining sub-project is planned for implementation. Upon its completion, Atyrau Refinery will have the capacity to process up to 1 mln tonnes of Tengiz oil, with the surplus capacity utilised for refining semi-finished products acquired from the market. The refining of semi-finished products such as naphtha and kerosene / gas oil fraction presents the opportunity to increase the production of light oil products.

To ensure energy security of Kazakhstan's northern and eastern regions, KMG implements projects at Pavlodar Refinery to remove sulphur compounds from liquefied petroleum gas and make winter diesel fuel. The project units are scheduled for launch in 2024 and 2025, respectively.

Currently, we are exploring options to expand Caspi Bitum's oil refining capacity from 1 mln tonnes to 1.5 mln tonnes per year, along with the production of 750 thous. tonnes of road bitumen annually. This project will ensure continuous supply of bitumen for the country's road industry (including as part of construction and installation for the project), enable import substitution, and bolster the country's export potential. This is to be achieved through the upgrade of the existing EDD-AVDU-3 primary oil refining unit. The project timeframe is 2023–2024.

In 2023, as part of our oil marketing efforts, KMG's investment portfolio was expanded to include projects implemented by the Company's subsidiary, KazMunayGas-Aero, operating in the country's jet fuel supply market since mid-2014. Since 2018, KazMunayGas-Aero, in collaboration with international partners, has been conducting assessments of the fuel infrastructure's condition and operational readiness, as well as the fulfilment of requirements for a successful transition to Jet A1 fuel. Agreements have been signed with prominent global industry players, entailing joint activities to prepare domestic airports. The projects involve investments in the construction and/or upgrade of refuelling facilities at the country's key airports, enabling the Jet A-1 and RT/ TS-1 storage and refuelling, directly serving domestic and international airlines without intermediaries.

Petrochemicals

In 2023, KMG actively worked to complete Phase 1 (polypropylene production) of the Atyrau petrochemical complex, engage strategic partners, and source financing for petrochemical projects. Since its launch, the facility has produced over 210 thous. tonnes of polypropylene, catering to both the domestic market and global consumers in Europe, China, Russia, and Turkey. In 2023, the Company successfully dealt with the scarcity of five most popular polypropylene grades in the domestic polymer industry, with the launch of two new grades anticipated in February 2024.

On 8 November 2022, we launched a polypropylene plant with a capacity of 500 thous. tonnes per year. On 7 November 2022, Samruk-Kazyna, KMG, and SIBUR signed binding documents providing for SIBUR's joining the polypropylene plant and polyethylene projects. In 2022, 32.3 thous. tonnes of polypropylene was manufactured. Currently, KPI Inc. together with the contractor, CNCEC, and the licensor, Lummus Technology, conducts comprehensive testing of process equipment/units to bring the whole Complex to stable process parameters and identify bottlenecks in the operation of process units, as well as carries out performance guarantee tests to verify that the design parameters have been reached. A petrochemical cluster is expected to be established in Kazakhstan to manufacture petrochemical products using feedstock from the Tengiz field, including export-oriented products with high added value. The project is planned to be commissioned after the completion of performance guarantee tests in 2024.

KMG is also implementing a project to build a polyethylene (PE) plant with a capacity of 1,250 thous. tonnes per year. To date, we have completed a feasibility study. The project to produce polyethylene and sell petrochemicals is run in strategic partnership with SIBUR Holding and SINOPEC. The estimated cost of the polyethylene project is USD 7.7 bln. By the end of 2023 the project's ownership structure involves KMG with a 49.9% stake, SIBUR with 40%, and KMG PetroChem with 10.1%. The target ownership structure aims for KMG to hold 29.9%, SIBUR and SINOPEC each 30%, and KMG PetroChem 10.1%. The pattern of the PE project financing is under development and involves a combination of borrowings and the Company's own funds. Design work is underway, and KMG is simultaneously progressing with the construction of a gas separation unit for ethane and propane trunklines to secure the required resources and infrastructure for the polyethylene plant. The polyethylene project and related infrastructure projects are scheduled to be completed in 2028.

Sustainable development projects

As a national company, KMG runs projects that are aimed at:

- addressing water supply issues in the country's western regions, such as an upgrade and expansion of the Astrakhan–Mangyshlak water pipeline, construction of a water pipeline for a gas treatment unit at the Kashagan field, and construction of a desalination plant in Kenderly with a daily capacity of 50,000 m³.
  The project to upgrade and expand the Astrakhan–Mangyshlak water pipeline was completed in December 2023, one year ahead of schedule. It involved enhancing the pipeline's throughput capacity and modernising the equipment to ensure a reliable water supply for the population, agricultural producers, oil and gas companies, and other industrial consumers.
  On 13 December 2023, an inauguration ceremony was held in the Atyrau Region to mark the launch of the project. With a workforce of over 500 people involved in the construction, the project successfully increased the pipeline's daily throughput capacity from 110 thous. m³ to 170 thous. m³. The construction of a water pipeline at the Kashagan field in the Atyrau Region was carried out to ensure stable water supply for the associated gas processing plant at the field. The pipeline has a throughput capacity of 3,408 m³ per day, or 815,000 m³ per year, and spans a total length of 25.15 km. Following the construction and installation completion, the facility was officially commissioned on 31 August 2023. The Kenderly project to build a desalination plant with a daily capacity of 50,000 m³ saw the design and estimate documentation for its infrastructure successfully completed and approved in December 2023.
  The infrastructure construction and installation works have commenced. Surveys are being conducted, and the design of the water intake plant and auxiliary facilities is underway. The expected completion date for the desalination plant's design and estimate documentation is March 2024.
- at reducing the carbon footprint through the generation of environmentally friendly electricity:
  A project to construct a 120 MW hybrid renewable energy power plant was initiated in the spring of 2023 in collaboration with Eni S.p.A. as a strategic partner. It aims to provide stable electricity supply to Ozenmunaigas and KazGPZ, while also reducing the carbon footprint of the Republic of Kazakhstan. The project seeks to ensure electricity generation by harnessing renewable energy sources such as wind and sunlight, along with a gas power station. At this stage, wind and solar potential assessments, project site selection, and a feasibility study have been completed. Construction of the project facilities is scheduled to commence in 2024, with full-fledged commissioning expected in 2025. The project cost is estimated at ca. USD 306 mln, with 49%, or USD 105 mln, attributable to KMG. Additionally, the 1 GW Mirny wind power plant project with a 300 MW/600 MWh electricity storage system undertaken by KMG in collaboration with Samruk-Kazyna and Total Eren, was initiated in the summer of 2023. The plant will be located near the village of Mirny (Moiynkum District, Zhambyl Region). The Mirny project aims to establish major electricity generation capacities in the southern region of the Republic of Kazakhstan, while simultaneously reducing CO_2 emissions and generating offset credits as part of KMG's Low-Carbon Development Programme. Currently, the feasibility study preparation is underway, including an assessment of wind potential in the region and the identification of the site for the wind power plant. The project cost is estimated at ca. USD 1,173 mln, with 20%, or USD 235 mln, attributable to KMG.
  It is expected to be implemented in two phases, with an initial capacity of 300 MW followed by an additional 700 MW. To mitigate the intermittent nature of wind generation and ensure network stability, the wind power plant will feature an electricity storage system.
- addressing the issues of wastewater treatment from oil products at Atyrau Refinery. Phase 2 of the closed-loop mechanical treatment plants upgrade is currently underway as part of the Tazalyq project. This phase involves the construction of equalisation tanks, pump stations, self-cleaning filter installations, and flotation units. The commissioning activities are scheduled to begin in early 2024. Upon completion of Phase 1, the revamped facilities have been treating an average of 12 thous. m³ of oil sludge every month. In 2023, the efficiency of wastewater treatment from oil products reached 83%. Additionally, the efficiency of suspended solids removal improved by 20%. Thanks to the consistent treatment of oil sludge, an average of 3,280 tonnes of oil is being forwarded for further processing each month. As a result, a total of 38,994 tonnes of commercial oil products was successfully recovered and sent for processing in 2023. Under the Tazalyq project, Atyrau Refinery is also undertaking the reclamation of evaporation fields and the reconstruction of an open-type channel for wastewater treated to standard quality. As of today, the refinery has completed the laying of discharge pipelines to the main sewage pumping station and the sewage treatment plant, as well as reclamation works for sectors 1–2 of the evaporation fields. Works on draining and reclaiming sectors 3–4 will commence once the permits for the discharge of wastewater from Atyrau Refinery via the sewage treatment plant in Atyrau are obtained.

Reserves

According to the reserves audit report prepared by the international independent firm DeGolyer and MacNaughton in line with the PRMS international standard, KMG's proved and probable hydrocarbon reserves (2P) were 733 mln toe (5,680 mln boe) as of 31 December 2023. 2P reserves increased by 3.7% year-on-year. The increase was due to our efforts to ramp up well interventions, drilling of wells and changes in development plans aimed at replenishing production at operating assets, as well as the refinement of development plans for the Kashagan and Karachaganak fields.

The annual assessment of reserves under the PRMS shows that the planned and actual measures to maintain the Company's (KMG's) reserve levels are monitored on a continuous basis. The proved reserves (1P) life is 16 years, exceeding the average for global oil majors (about 11 years). The reserves life in the 2P category (proved + probable) is 25 years.

92%

1P reserve replacement ratio

110%

2P reserve replacement ratio

Net reserves[1] under PRMS (as of 31 December 2023)

Reserves	Hydrocarbon reserves, mln boe			Hydrocarbon reserves, mln toe		
	2021	2022	2023	2021	2022	2023
Proved (1P)	3,694	3,775	3,943	477	486	507
Proved plus Probable (2P)	4,983	5,478	5,680	645	708	733
Proved plus Probable plus Possible (3P)	5,869	6,294	6,502	761	816	842

Exploration

KMG pursues its Development Strategy until 2031 approved in 2021. The Development Strategy provides for the strategic goal of the Resource base sufficient to support the Company's growth that envisages exploration at seven offshore and seven onshore projects, as well as further exploration at the key existing fields. The exploration is expected to increase the Company's recoverable ABC1 reserves by 253 mln tonnes by 2031. It is planed to keep a reserve replacement ratio of 105% through organic growth by 2031.

In the medium term, KMG will continue to ramp up its investments in exploration reaching more than USD 426 mln between 2024 and 2028. The planned exploration programme includes 2D and 3D seismic surveys of about 5,000 linear km and more than 1,300 km2, respectively.

During this period, we expect 30 exploration and appraisal wells to be drilled, including first prospecting wells at the Karaton Subsalt, Turgai Palaeozoic, Taisoigan, and Abay exploration blocks with further drilling of related appraisal wells. Also, there are plans continued further exploration and reserve replenishment at existing fields, with more than 20 appraisal wells to be drilled.

We expect to secure two contracts (Bolashak and Karazhar) and potentially four new contracts based on the results of subsoil exploration.

253 mln tonnes

expected recoverable reserves by 2031 through organic growth (ABC1)

[1] Net Reserves are defined as the portion of gross reserves attributable to (1) the interest held by KMG after deducting all interests held by others, and (2) interests that are not held, but controlled by KMG.

Exploration highlights in 2023

In 2023, an estimated USD 135 mln was invested in exploration (KMG's share accounts for USD 52 mln, the rest came from partners as carry financing):

- 400 km² of 3D and 1,613 linear km of 2D field seismic surveys were carried out, over 3,200 linear km and over 440 km² of seismic data were reprocessed.
- 17 exploration and appraisal wells were drilled and tested.
- Recoverable reserves of liquid hydrocarbons are expected to increase by about 34.8 mln tonnes, including organic growth (1.9 mln tonnes), inorganic growth (33.8 mln tonnes), return of unprofitable Embamunaigas fields (Dossor, Sagiz, Tanatar) to the government (-0.9 mln tonnes) and the completion of the evaluation period for the Urikhtau field (KT-2 and Devon deposits), which represents 148% of the ABC1 reserve replacement ratio with an annual production of 23.5 mln tonnes.
- In January 2023, drilling of an exploration well was completed at the Zhenis offshore exploration block as part of a project implemented jointly with LUKOIL, our strategic partner. The drilling and surveys did not find any oil or gas deposits, meaning that the geological risk was realised.
- In 2023, a subsoil use contract was obtained for the Karaton Subsalt block (353 mln tonnes of geological resources (P50)) jointly with Tatneft, our strategic partner. The partner made a commitment to provide 100% of financing for the exploration phase. The subsoil use was transferred to Karaton Operating, the operator established for the project. Work continues to agree design documents for the project and the operator's organisational arrangements. Drilling of a 5,500 m prospecting well is scheduled to begin in 2024.
- In 2023, a contract was also obtained for the Kalamkas-Sea / Khazar block jointly with LUKOIL, a strategic partner. The subsoil use was transferred to Kalamkas-Khazar Operating, a partnership established for the purpose. The reprocessing and reinterpretation of historical seismic data are underway.
- In 2022, the analysis and modelling of main sedimentary basins identified five most prospective blocks that require further exploration (Zharkyn, Bolashak, Northern Ozen, Berezovsky, Mugodzhary). In 2023, KMG Barlau, the Company's 100% subsidiary, completed field seismic surveying at three blocks (Zharkyn, Northern Ozen, Berezovsky), with processing and interpretation of seismic data currently underway. Field work continues at one promising block. The reprocessing and reinterpretation of historical seismic data for the single remaining block were completed, which resulted in adjustments to the plans for the upcoming field work. Following seismic data processing and interpretation as well as geological and technical evaluation, a decision will be made in 2025 whether to obtain subsoil use contracts. Work is in progress under subsoil exploration licences obtained in 2022.

USD **135** mln

exploration investments came in at USD 135 mln, including USD 52 mln attributable to KMG.

ABC1 reserve replacement ratio was

148%

with annual production standing at 23.5 mln tonnes in 2023.

Plans for 2024

In 2024, a total of about USD 191 mln is planned to be invested in exploration, with USD79 mln of the costs attributable to KMG.

What we plan for 2024:

- Start drilling of the first prospecting well at the Turgai Palaeozoic block with a depth of 5,500 m at KMG's own expense. Its geological resources (P50) amount to 399 mln tonnes.
- Drill and test the first prospecting well at the Abay offshore block with a depth of 2,500 m. Financing at the exploration stage is provided by Eni, our strategic partner.
- Obtain a contract for the Karazhar exploration block. Geological resources (P50) at the block total 32 mln tonnes.
- Obtain a contract for the Bolashak exploration block jointly with a strategic partner. Geological resources (P50) at the block total 344 mln tonnes.

Also, based on the analysis of historical geological and geophysical data and basin modelling, five new promising blocks were identified for inclusion in the National Acreage Management Programme for further consideration of obtaining subsoil use contracts.

A total of

17 prospecting and appraisal wells

will be drilled in 2024.

Well with a depth

of **5,500** m

drilling of a more than 5 km deep prospecting well is scheduled to begin in 2024.

New exploration projects and cooperation in exploration

In 2023, the Company continued to strongly focus on expanding its cooperation in exploration with international oil and gas companies: To attract investments and to share risks in exploration, KMG takes active steps to team up with strategic partners. To this end, memoranda of understanding were signed with and access to data provided to CNOOC, CNPC, SINOPEC, Shell, Total, SOCAR, JOGMEC, Petrovietnam, SOVICO Group, and Caspian Explorer. KMG operates a virtual data room providing access to geological and technical data on KMG's prospective and existing assets for potential partners, where they can view historical data on prospective blocks and make decisions on strategic partnerships. On top of attracting investment, following data room sessions companies provide their views on prospective sites, and leading international and domestic experts share their experience and expertise.

The Company held an open tender to select a strategic partner for the Bolashak block with the subsoil contract expected to be obtained in 2024. The strategic partner finances 100% of the exploration stage.

Also, based on the analysis of historical geological and geophysical data and basin modelling, three new promising blocks were identified for inclusion in the National Acreage Management Programme for further consideration of obtaining subsoil use contracts.

In 2023, we continued to investigate the prospects of poorly explored sedimentary basins. Reconnaissance work was carried out in the North Turgai sedimentary basin to plan the parameters of field seismic surveys and associated costs. Based on the results, decisions will be made as to exploration plans for the poorly explored sedimentary basins.

Kalamkas-Sea / Khazar

Kalamkas-Sea, Khazar, and Auezov are strategic subsoil blocks located 60 km from Aktau in Kazakhstan's part of the Caspian Sea (Article 43 of the Code on Subsoil). The blocks are included in the National Acreage Management Programme's list of territories of subsoil blocks for exploration and production or production of hydrocarbons for granting subsoil use to the national hydrocarbon company (Order of the Minister of Industry and Infrastructure Development No. 478 dated 28 June 2018). The blocks have a total area of 1,707.17 km.

The Kalamkas-Sea, Khazar, and Auezov fields were discovered in 2002, 2007, and 2008 respectively. Productive horizons occur at a level of 1,500–2,000 m below the seabed.

Commercial production and reserves:
Commercial production of first oil from the Kalamkas-Sea and Khazar fields is scheduled for 2028–2029. Total recoverable reserves are estimated at 48.5 mln tonnes of oil and 19 bln m3 of gas, with a production volume of about 4 mln tonnes / year (80 thous. bbl per day) and a production plateau of at least five years.

Project investments:
KMG estimates project investments at about USD 6.4 bln (class 4).

Work performed in 2023:
Kalamkas-Khazar Operating (“KKO”) was established for the purposes of KMG's project (7 February 2023).

Project agreements (Sale and Purchase Agreement, Parties' Agreement, Financing Agreement) were signed in connection with LUKOIL's entry into the project (9 February 2023).

A 45-year Production Contract was signed between Kazakhstan’s Ministry of Energy and KMG (27 February 2023).

KMG and KKO signed an Agreement on Assignment (Transfer) of 100% of subsoil use rights under the Production Contract (30 March 2023).

Addendum No. 1 to the Production Contract was signed in connection with the transfer of subsoil use rights to KKO (subsoil user) (11 April 2023).

Following public consultations, a positive opinion was received from the Environmental Department on the impact assessments for the Field Development Project and the Technical Project for Engineering and Geological Surveys (19 July 2023).

Procedures were completed with respect to the sale of 50% of interest in KKO to LUKOIL (KMG Board of Directors Minutes No. 16/2023 dated 26 July 2023).

A constituent meeting of the General Meeting of Members No. 1 was held with the participation of the new member, LUKOIL (4 September 2023).

KKO was reincorporated, with its members being KMG (50%) and LUKOIL (50%) (11 September 2023).

The Field Development Project (FDP) was approved by the Central Commission for Exploration and Development of Mineral Reserves of Kazakhstan (Minutes No. 43/11 dated 29 September 2023).

Approval was received from KMG’s Investment Committee to move from Phase 2 (Pre-FEED Concept Selection) to Phase 3 (Definition) and Phase 3 budget (10 November 2023).

KKO’s Supervisory Board approved the structure, budget for 2024, and a number of project agreements and documents (secondment agreements between KMG, KKO, and LUKOIL, remuneration rules, salary grid for employees, limits on business trips) (4 December 2023).

Work in progress:
With the aim of accelerating the project completion, work was being carried out within KKO’s budget during 2023 ahead of schedule (as approved by the Steering Committee of KMG and LUKOIL), including:
- offshore and onshore engineering and geological surveys;
- production and environmental monitoring;
- reprocessing of 3D seismic data interpretations.

The project is now at the Design stage.

Plans for 2024:
As part of Phase 3 and following the contractor selection, it is planned to implement the FEED Engineering to be completed by the end of 2024.

The final investment decision (FID) on the Project is expected in 2025.

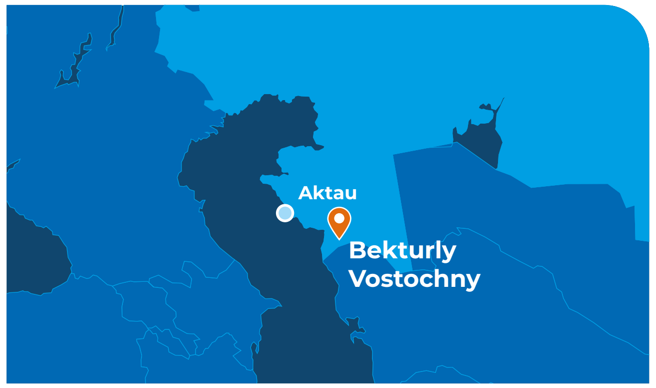
Al-Farabi project

Subsoil user under the contract is Al-Farabi Operating with the following ownership structure:

- KMG – 50.01% in the authorised capital of Al-Farabi Operating;
- LUKOIL – 49.99% in the authorised capital of Al-Farabi Operating.

During the period stretching from the commencement of exploration until approval of the field development project, the funding is provided by LUKOIL covering 100% of project costs on the basis of carry-financing under the Financing Agreement dated 11 November 2021 between KMG and LUKOIL.

Bekturly Vostochny project



Project participants:

- KMG – 50% of subsoil use rights;
- Kokel Munay – 50% of subsoil use rights.

The project operator is Bekturly Energy Operating.

During the period of exploration, the funding is provided by Kokel Munay covering 100% of project costs on the basis of carry-financing.

Appraisal of a discovered hydrocarbon field is currently underway.

Abay project

Project participants:

- KMG – 50% of subsoil use rights ;
- Eni Isatay – 50% of subsoil use rights.

The project operator is Isatay Operating Company.

During the period stretching from the commencement of exploration until approval of the field development project, the funding is provided by Eni Isatay covering 100% of project costs on the basis of carry-financing under the Financing Agreement between KMG and Eni Isatay.

Preparations are currently underway for the construction of a prospecting well.

Turgai Palaeozoic project

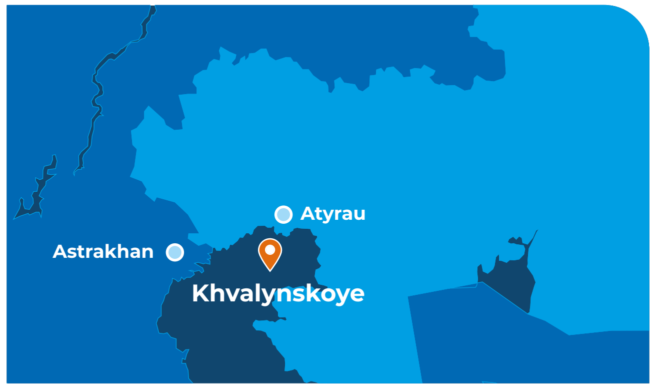
Project participants:

- KMG – 100%.

The Turgai Palaeozoic project is implemented by KMG on its own and at its own expense.

Preparations are currently underway for the construction of a prospecting well.

Khvalynskoye project



In 2005, authorised entities from Kazakhstan and Russia, KMG and LUKOIL respectively, established a 50/50 joint venture, Caspian Oil and Gas Company, which will be the authorised subsoil user under the Khvalynskoye project once the Production Sharing Agreement (PSA) is executed.

- LUKOIL-Nizhnevolzhskneft is the licence holder until the PSA is executed.

The project funding is provided by KMG and LUKOIL in the form of loans at an interest on a parity basis.

Tsentralnaya project

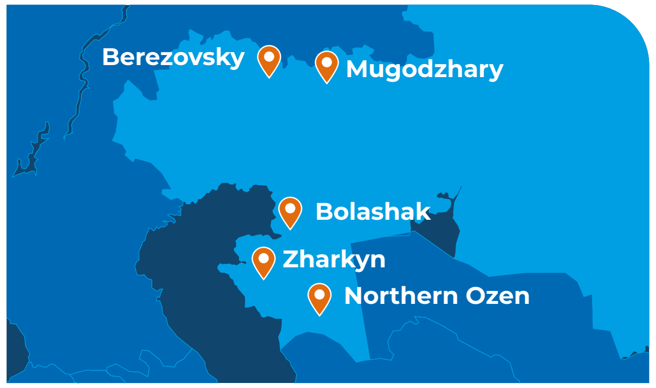
Project participants:

- KMG – 50%.
- Tsentrcaspneftegaz (a 50/50 joint venture of LUKOIL and Gazprom) – 50%.

The operator and subsoil user is Tsentralnaya Oil and Gas Company incorporated in the Russian Federation.

During the period of exploration, the funding is provided by Tsentrcaspneftegaz covering 100% of project costs on the basis of carry-financing.

Subsoil exploration project



Five subsoil exploration licences are held by KMG Barlau (KMG's 100% subsidiary).

- Implementation period: 2022–2025.
- The project funding is provided by KMG at its own expense.

To date, field seismic surveying has been completed at four blocks, and processing/interpretation of the acquired data is underway.

Kurmangazy project

Project participants:

KazMunayTeniz – 50% share in the PSA;

RN-Exploration (wholly-owned subsidiary of Rosneft) – 50% share in the PSA.

The project operator is Kurmangazy Petroleum, a wholly-owned subsidiary of KMG.

The project funding is provided by KMG and RN-Exploration on a parity basis – 50% of costs each.

Karaton Subsalt project

Karaton Operating (KMG's 100% subsidiary) is the subsoil user under the contract.

- Karaton Operating (KMG's 100% subsidiary) is the subsoil user under the contract.
- On 21 February 2024, Tatneft (Republic of Tatarstan, Russian Federation) officially acquired 50% in Karaton Operating.

The production is scheduled to start in 2028 and is forecast at 2.5 mln tonnes per year.

During the period stretching from the commencement of exploration until approval of the field development project, the funding will be provided by Tatneft covering 100% of project costs on the basis of carry-financing.

Achievements in five years

- In 2019–2023, about KZT 178.5 bln was invested in exploration, including KMG's costs of around KZT 89.5 bln. During this period, the West Karasor and Bekturly Vostochny fields were discovered. Based on the outcome of high-resolution 3D seismic survey and drilling and testing of a prospecting well in the Bekturly Vostochny block, the prospects of non-structural traps were proved.
- In 2019, an extensive high-resolution 3D seismic survey was carried out at Taisoigan-1 and Taisoigan-2 blocks, resulting in the identification of 26 prospects with total potential geological resources of 328 mln tonnes (P50). In 2022, exploration and production contracts were obtained and transferred to Embamunaigas to continue exploration.
- New subsoil use contracts were signed for the Al-Farabi, Karaton Subsalt, Kalamkas-Sea / Khazar / Auezov blocks together with strategic partners. Exploration activities are carried out using carry financing provided by a strategic partner.
- A subsoil use contract was concluded for the Turgai Palaeozoic block in the Kyzylorda Region. Drilling of a 5,500 m prospecting well is scheduled for 2024.
- We achieved an impressive growth of oil reserves at the Uzen (+39.9 mln tonnes) and Kalamkas fields (+32.6 mln tonnes). Re-appraisal of the fields' reserves resulted from comprehensive efforts, including high-resolution 3D seismic surveys, adjustment of the fields' geological concept, drilling of new wells, laboratory analysis of core samples and re-interpretation of geophysical well logs for the entire well stock.
- A subsoil exploration project was initiated with respect to five prospective blocks in the Aktobe, Mangistau, West Kazakhstan, and Atyrau regions. 2D and 3D regional field seismic surveys were carried out in 2023, with data processing and interpretation underway. Following their completion, decisions will be made whether to obtain subsoil use contracts for detailed exploration.
- The total organic growth in recoverable oil reserves in 2019–2023 attributable to KMG was 115 mln tonnes (A+B+C1) under the system of Kazakhstan's State Commission on Mineral Reserves.

Sanctions risks of Russian partners

The sanctions imposed on Russian companies and banks narrow down the range of contractors which provide services in the Caspian Sea, and therefore increase the cost of work. Thus, we conducted an analysis of the potential use of suppliers and service companies that are not subject to sanctions. We continue to gather information. KMG also included clauses stipulating withdrawal from projects and joint ventures, if US, EU, and UK sanctions are imposed on Russian partners, in the documents on joint activities with them.

Deploying new technologies, optimising exploration, and improving performance

In 2023, for the first time in its history, KMG conducted pilot seismic operations using unique arrangement of field equipment to study the subsurface geology of the Caspian sedimentary basin, covering depths of up to 20 km.

In 2024, the Company plans to test wireless sensor technology in seismic surveys for further roll-out in areas planned for subsoil exploration. This technology optimises the timing of seismic surveys and covers large areas with seismic exploration.

Also in 2024, we plan to test pulse source technology for seismic surveying in environmentally sensitive transit areas of the Caspian Sea. This technology minimises environmental impact and acquires cutoff-grade seismic data in the transit areas in an eco-friendly manner.

Improved model contract

In 2023, to improve competitiveness and attract additional investment in geological exploration of complex projects, as well as replenish hydrocarbon reserves, as instructed by the President of the Republic of Kazakhstan, the Government drafted amendments and modifications to relevant legislative acts (Code on Subsoil and Subsoil Use and Code on Taxes and Other Mandatory Payments to the National Budget, and other laws), providing for the introduction of a new mechanism – the improved model contract.

The resulting package of amendments related to the improved model contract includes a number of regulatory and fiscal preferences that help increase the profitability of exploration in complex projects:

- with high hydrogen sulphide concentration (3.5% or more);
- subsalt deposits with a salt thickness of at least 100 m;
- non-structural traps and deep deposits with the top at depths below 4,500 m;
- deposits with abnormally high reservoir pressures (anomaly ratio of 1.5 or more);
- new offshore projects (all exploration blocks or fields in Kazakhstan's part of the Caspian Sea and the Aral Sea);
- gas projects (gas or gas condensate fields where the share of oil saturated part of reservoirs is less than 0.25 in the total volume of hydrocarbons of all deposits of the field).

Thanks to improved model contract preferences, it became possible to obtain subsoil use contracts for the Kalamkas-Sea / Khazar / Auezov and Karaton Subsalt blocks on more favourable terms. Subsequently, it will be possible to explore and develop more complex projects with reliance on preferences of improved model contracts and better project economics.

Geography of KMG'S exploration projects

Upstream

KMG's key strategic objectives in terms of production are as follows:

- stabilisation of production at existing operating assets;
- commencement of production at new fields;
- gas production ramp-up;
- successful implementation of projects to expand and extend production plateau at major oil and gas projects.

Oil and gas are produced by KMG's operating assets and megaprojects where KMG has non-operating interests.

KMG participates in three major oil and condensate production projects in Kazakhstan, with interests of 20%, 16.88% and 10% in Tengiz, Kashagan, and Karachaganak, respectively.

The Company partners with the world's oil giants to deliver on its megaprojects. These include Chevron, ExxonMobil, Shell, Eni, Total, INPEX, CNPC, and LUKOIL.

Production assets[1]

OPERATING ASSETS

- 100% OMG
- 100% EMG
- 100% KTM
- 100% UO
- 60% Dunga
- 50% MMG
- 50% KBM
- 50% KGM
- 50% KOA
- 50% UOG
- 33% PKI

NON-OPERATING ASSETS (MEGAPROJECTS)

- 20% TCO
- 16,88% NCOC
- 10% KPO

Oil production

In 2023, KMG's total output was 23.5 mln tonnes or 486 thous. bbl per day, up 6.9% year-on-year. The share of operating projects and megaprojects in its total oil and condensate production was 58% (13.56 mln tonnes) and 42% (9.97 mln tonnes), respectively.

One of the main drivers behind a 6.9% increase in oil and condensate production in 2023 was a 121.8% production growth at Kashagan following the expansion of KMG's share in the project from 8.44% to 16.88%. The suspension of production in the summer of 2022 and completion of overhaul and repair works at the offshore and onshore facilities also supported the subsequent production growth in 2023. The reporting year also saw a 5.5% rise in production at Embamunaigas following the launch of operations at the eastern flank of the S. Nurzhanov and North Uaz fields, while also witnessing an increase in production at the Karachaganak field as a result of higher raw gas intake by Orenburg GPP. The increase in total production was offset by a decline at one of our operating assets, Ozenmunaigas, and some other fields mainly as a result of power outages and capacity limitations imposed by Mangistau Nuclear Power Plant (an external supplier) from July to October 2023, as well as a decline in production at mature fields.

[1] KMG's stake.

Oil and gas condensate production, thous. tonnes

Indicator	2021	2022	2023
Oil and gas condensate production	**21,651**	**22,012**	**23,532**
Operating assets	**13,963**	**13,761**	**13,559**
Ozenmunaigas	5,332	5,096	4,877
Embamunaigas	2,522	2,581	2,722
Mangistaumunaigaz	2,944	3,049	3,075
Kazgermunai	727	651	594
Karazhanbasmunai	1,048	1,071	1,027
PetroKazakhstan	600	554	515
Kazakhoil Aktobe	298	281	253
Kazakhturkmunay	434	436	436
Amangeldy Gas (KTG)	11	—	—
Urikhtau Operating	47	43	20
Dunga			40
Ural Oil and Gas			1
Megaprojects	**7,688**	**8,251**	**9,973**
Tengizchevroil	5,311	5,836	5,779
KMG Kashagan[1]	1,344	1,402	3,108
KMG Karachaganak	1,034	1,013	1,086

Oil and gas condensate production, thous. bbl per day

Indicator	2021	2022	2023
Oil and gas condensate production[2]	**444**	**456**	**486**
Operating assets	**277**	**273**	**269**
Ozenmunaigas	106	101	97
Embamunaigas	50	52	54
Mangistaumunaigaz	58	60	61
Kazgermunai	15	13	12
Karazhanbasmunai	19	20	19
PetroKazakhstan	16	12	11
Kazakhoil Aktobe	6	6	5
Kazakhturkmunay	9	9	9
Urikhtau Operating	1	1	0.4
Dunga			1
Ural Oil and Gas			0.03
Megaprojects	**168**	**183**	**217**
Tengizchevroil	116	128	126
KMG Kashagan	29	34	68
KMG Karachaganak	22	22	23

[1] 16.88% – KMG's interest after 15 September 2022.
[2] Assuming indicative individual average weighted bbl/tonne conversion rates used for each asset.

Parameters of KMG production assets

Assets	Porosity	API gravity	Sulphur content, %	Number of fields	Average flow rate of new wells, tonnes/day	Average flow rate of current producing well stock, tonnes/day	Oil barrelisation ratio, bbl/tonne
OMG	0.19	36.51	0.14	2	6.8	4.0	7.23
EMG	0.27	32.03	0.62	31	13.4	3.7	7.30
KBM	7–35	19.81	1–2.5	1	2.317	2.09	6.68
KGM	0.26	39.95	0.14	5	16.4	15.6	7.24
PKI	0.09–0.30	51.25	0.03–0.08	19	11–18.2	5.6	7.75
MMG	0.14	30.77	0.2	15	9.8	4.9	7.23
KOA	0.085	38.89	1.12	2	–	13.6	7.52
KTM	0.14	36.12	3.17	6	0	43.1	7.21
UO	0.1	41.7	0.7	1	0	70.7	7.72
UOG	6.7	55	0.11	1	290	–	8.27

The technical characteristics of KMG's oil differ from region to region. The heaviest oil is produced by Karazhanbasmunai (bbl/tonne conversion rate of 6.68), the lightest one – by PetroKazakhstan (bbl/tonne conversion rate of 7.75).

There are two main parameters of high-quality crude oil: high API gravity and low sulphur content. The sulphur content of the CPC Blend brand (KMG's main megaprojects) is 0.56%, API gravity – 45.3, which makes it one of the world's highest quality oils.

Crude oil brand	API gravity	Sulphur content, %
CPC Blend (Kazakhstan, Novorossiysk)	45.3	0.56
West Texas Intermediate (USA, Cushing)	40.0	0.42
Arab Extra Light (Saudi Arabia)	39.4	1.09
Brent (UK)	37.5	0.40
Urals/KEBCO (Russia, Novorossiysk)	31.3	1.36

S&P Global Platts' publicly available data.

Megaprojects

KMG develops world class projects through partnerships with international oil and gas companies.

Tengiz

The agreement on Tengizchevroil was signed between the Republic of Kazakhstan and Chevron Corporation on 2 April 1993, with a 40-year hydrocarbon exploration and production licence granted to Tengizchevroil in 1993. Tengizchevroil focuses on the exploration, production and sales of hydrocarbons from the Tengiz and Korolevskoye fields in the Atyrau Region.

The largest gem in Kazakhstan's oil and gas industry, a unique supergiant oil field.

Key indicators

Oil production in 2023 (total)

28,893 thous. tonnes
(632 thous. bbl per day)[1]

Oil production (attributable to KMG) (20%)

5,779 thous. tonnes
(126 ths bbl per day)[1]

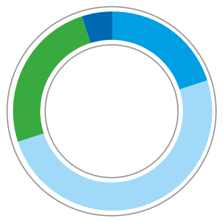
Associated gas production (total)

16.01 bln m³
Associated gas production (total), including gas consumed in own operations and gas reinjection

2P oil reserves life

Over 20 years

Interests



20 % KMG
50 % Chevron
25 % ExxonMobil
5 % Lukoil International GmbH

Outlook

As part of production capacity expansion, TCO is implementing the Future Growth Project (FGP) and the Wellhead Pressure Management Project (WPMP), which are designed to boost oil production from the Tengiz field by 12 mln tonnes per year

Operator: Tengizchevroil

Tengizchevroil (TCO) operates a licence that includes the unique supergiant Tengiz field and the adjacent Korolevskoye field with significant reserves. The Tengiz oil field was discovered in 1979. It is one of the world's largest oil fields.

Currently, oil is produced and processed by highly reliable modern operating facilities, including complex technology lines (CTL), Second-Generation Plant (SGP) and sour gas injection unit (SGI).

In 2023, oil output declined by 1% year-on-year to 28,893 thous. tonnes (including KMG's share of 5,779 thous. tonnes), while gas output also went down by an insignificant 0.9% year-on-year to 16.01 bln m3 (including KMG's share of 3.2 bln m³). The decrease in production was caused by the suspension of oil intake by the CPC system during scheduled maintenance of the oil pipeline and temporary closure of the sea terminal in 4Q 2023 due to unfavourable weather conditions. The production of associated gas declined by 0.9% to 3,202 mln m³.

Progress on the Future Growth Project and the Wellhead Pressure Management Project

TCO is finishing the implementation of the Future Growth Project (FGP) and the Wellhead Pressure Management Project (WPMP), which are designed to boost oil production by 12 mln tonnes per year. By now, the mechanical works have been fully completed, with system preparation and pre-commissioning efforts currently underway.

In September 2023, TCO announced a projected increase in total project costs and shifting of the project completion dates. Key reasons behind the project's rescheduling are weak construction and pre-commissioning performance and a significant amount of unforeseen extra work (gap elimination).

Projected launch dates for the facilities are as follows: 2Q 2024 for the WPMP and 2Q 2025 for the FGP. The costs are estimated at USD 48.9 bln.

At the end of 2023, the total cost of FGP–WPMP was USD 45.6 bln, with the overall project progress at 99.3%.

TCO has spent over USD 19 bln on the procurement of domestic products, works, and services since the start of FGP–WPMP.

Tengizchevroil's operational highlights

Oil production, thous. tonnes

'23	28,893
'22	29,178
'21	26,553
'20	26,457

Associated gas production, mln m³

'23	16,009
'22	16,146
'21	14,767
'20	14,748

Dry gas production, mln m³

'23	9,403
'22	9,537
'21	8,717
'20	8,674

Liquefied petroleum gas (LPG) production, thous. tonnes

'23	1,255
'22	1,193
'21	1,450
'20	1,482

Sulphur production, thous. tonnes

'23	2,573
'22	2,590
'21	2,493
'20	2,451

Gas injection, mln m³

'23	3 641
'22	3 589
'21	2 982
'20	3 069

[1] 1 tonne = 7.98 bbl

Kashagan

The Production Sharing Agreement in respect of the North Caspian Sea (NCSPSA) was signed by the Republic of Kazakhstan and an international consortium in November 1997. North Caspian Operating Company is the project operator, acting on behalf of the project contractors.

The huge Kashagan field is the largest discovery in recent four decades. Kashagan is one of the most complex projects in the industry globally.

Key indicators

Oil and condensate production in 2023 (total)

18.8 mln tonnes
(408 thous. bbl per day)[1]

Oil and condensate production (attributable to KMG) (16.88%)

3.1 mln tonnes
(68 thous. bbl per day)

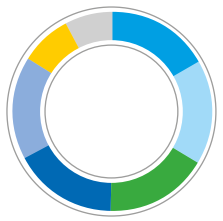
Gas production (total)

11.9 bln m^3

2P oil and condensate reserves life

Over 97 years

Interests



16.88 % KMG Kashagan
16.81 % Eni S.p.A.
16.81 % ExxonMobil
16.81 % Shell
16.81 % Total S.A.
8.33 % CNPC
7.56 % INPEX North Caspian Sea

Operator: North Caspian Operating Company

The North Caspian project is the first major offshore oil and gas project in Kazakhstan. It includes three fields: Kashagan, Kairan, and Aktoty. The Kashagan South-West field is currently being returned to the government.

The Kashagan field lies in an offshore location 75 km from Atyrau, at water depths of 3 to 4 m. The field reservoir lies at a depth of over 4 km and is characterised by high pressures (over 700 bar) and high hydrogen sulphide (H2S) concentration. At the same time, sour gas reinjection at high pressure improves oil recovery.

Kashagan is one of the most challenging industry projects globally due to harsh environmental conditions at sea and significant design, logistics, and safety challenges. Located in the subarctic climate, the North Caspian Sea is covered with ice for about five months a year, requiring innovative technical solutions. KMG, together with international partners, is successfully implementing the project, having achieved sustainable production rates with further growth potential.

The Kashagan field infrastructure comprises onshore and offshore facilities. Onshore facilities include the Bolashak Onshore Processing Facility (an integrated oil and gas treatment plant), while the offshore facilities comprise a range of manmade structures including an operations and process complex on Island D, Island A, and early production islands EPC-2, EPC-3, and EPC-4. A total of 40 wells were drilled at the Kashagan field, including six injection wells, 33 production wells, and one monitoring well.

Currently, KMG (through Cooperative KazMunayGaz[2]) owns KMG Kashagan, which, in turn, has a 16.88% interest in the North Caspian project. As a result, KMG indirectly owns 16.88% of the project.

In 2023, oil production in the North Caspian project went up by 121.8% to 18.8 mln tonnes, while gas output increased by 123.8% to 11.9 bln m^3. The spike in production came following the increase in KMG's share from 8.44% to 16.88% on 15 September 2022, but also thanks to stable production uninterrupted by any major accidents or setbacks as opposed to scheduled mid-year overhauls at the offshore and onshore facilities in 2022 and repairs after the discovery of a gas leak at the preliminary gas separation unit (slug catcher) in August 2022. Moreover, completion of the Package 1 project (upgrade of injection compressors) at the end of 2022 increased annual production to above 117 mln tonnes per year.

Under the terms of the PSA, all oil produced at the Kashagan field is exported, including KMG's share of the oil. The produced oil is mostly exported to Europe, East Asia and India via Novorossiysk, where the oil is delivered by the CPC pipeline.

NCOC's operational highlights

Oil production, thous. tonnes

'23	18,774
'22	12,682
'21	16,236
'20	15,141

Natural and associated gas production, mln m^3

'23	11,857
'22	7,878
'21	9,878
'20	9,152

Sulphur production, thous. tonnes

'23	1,486
'22	983
'21	1,372
'20	1,228

Gas injection, mln m^3

'23	5,829
'22	3,917
'21	4,315
'20	3,807

[2] 1 tonne = 7.9272 bbl
[3] A wholly-owned subsidiary of KMG, with the direct ownership of 99.7440256% and indirect ownership via KMG Kumkol of 0.2559744%.

Arbitration dispute
Pursuant to the Production Sharing Agreement in respect of the North Caspian Sea dated 18 November 1997 (NCSPSA), the Republic of Kazakhstan and the Contracting Companies have a dispute regarding the reimbursement of costs incurred by the Consortium (Contracting Companies). This dispute is subject to arbitration and/or expert settlement in accordance with the NCSPSA. An Arbitration Tribunal has been set up, with the schedule for hearings currently discussed. Once the schedule is approved, the parties will begin to exchange claims and objections.

The Contracting Companies believe that they are acting in accordance with the NCSPSA, the laws of the Republic of Kazakhstan, applicable standards, and best practices.

Environmental audits
The Environment Department of the Atyrau Region under the Committee for Environmental Regulation and Control of Kazakhstan's Ministry of Ecology, Geology and Natural Resources (the "Environment Department") inspected the onshore facilities of North Caspian Operating Company acting as the operator under the Production Sharing Agreement in respect of the NCSPSA (the "Operator"). Following the inspection, the Operator was served a prescription to rectify the identified breaches, including those regarding sulphur placement.

The Operator disagreed with the audit findings and filed an administrative lawsuit challenging the said prescription. On 14 June 2023, the Specialised Interdistrict Administrative Court of Astana ruled in favour of the Operator in the sulphur placement case. On 27 February 2024, after considering the appeal of the Environment Department, the Specialised Interdistrict Administrative Court of Astana ruled against the Operator. The ruling will be appealed to the Supreme Court. If the Operator is held liable for administrative offences, the amount of the fine will be determined in accordance with the Administrative Procedure Code of the Republic of Kazakhstan.

Projects in progress:

Supply of 1 bln m³ of raw gas per year to QazaqGaz gas processing plant
- The aim is to increase oil production at Kashagan to the projected level of 57 thous. tonnes per day (450 thous. bbl per day) by way of supplying raw gas to the gas processing plant of QazaqGaz.
- The increase in oil production over the remaining life of the PSA will amount to 18 mln tonnes (with ~3 mln tonnes attributable to KMG Kashagan).
- The overall progress of NCOC against the project is 72.5% (as compared to the target of 68%). The installation of the gas pipeline is currently underway.
- The manufacturing of pipeline materials is over, with the materials delivered to Kazakhstan. The installation of the gas pipeline is ongoing (with roughly 8 km completed so far). Manufacturing of the fiscal metering unit is over.
- The completion of the project is slated for 2Q 2026, with a delay on the side of QazaqGaz due to the rescheduling of the gas processing plant commissioning.
- The costs for NCOC amount to USD 160.3 mln.

New wastewater treatment unit:
- The project is not considered an investment project (that is to say it does not imply economic benefits) as it was initiated to ensure compliance with environmental standards and concentration limits for applicable pollutants.
- Concentrations of pollutant substances (H2S, iron, oil, methanol, insoluble impurities) are within permissible limits.
- The overall progress against the project is 99.7% (as compared to the target of 100%). Drafting of the final report is underway.
- The units have been commissioned.
- The project completion report is expected in 1Q 2024.
- The project's cost is USD 216.6 mln.

Outlook for Kashagan
There is a need to build a new slug catcher to replace the temporary configuration of the existing one. The new slug catcher project is currently at the pre-FEED stage.

- The project aims to replace the existing temporary slug catcher unit with a new one boasting improved material characteristics (anti-corrosion layer) to ensure long-term production safety and reliability.
- The FID and award of the EPC contract are currently under planning.
- The FEED stage is completed. Materials with long lead times have been ordered, with the manufacturing ongoing.
- The preliminary replacement deadline is 4Q 2024.
- The budget is estimated at USD 307 mln.

Projects under consideration

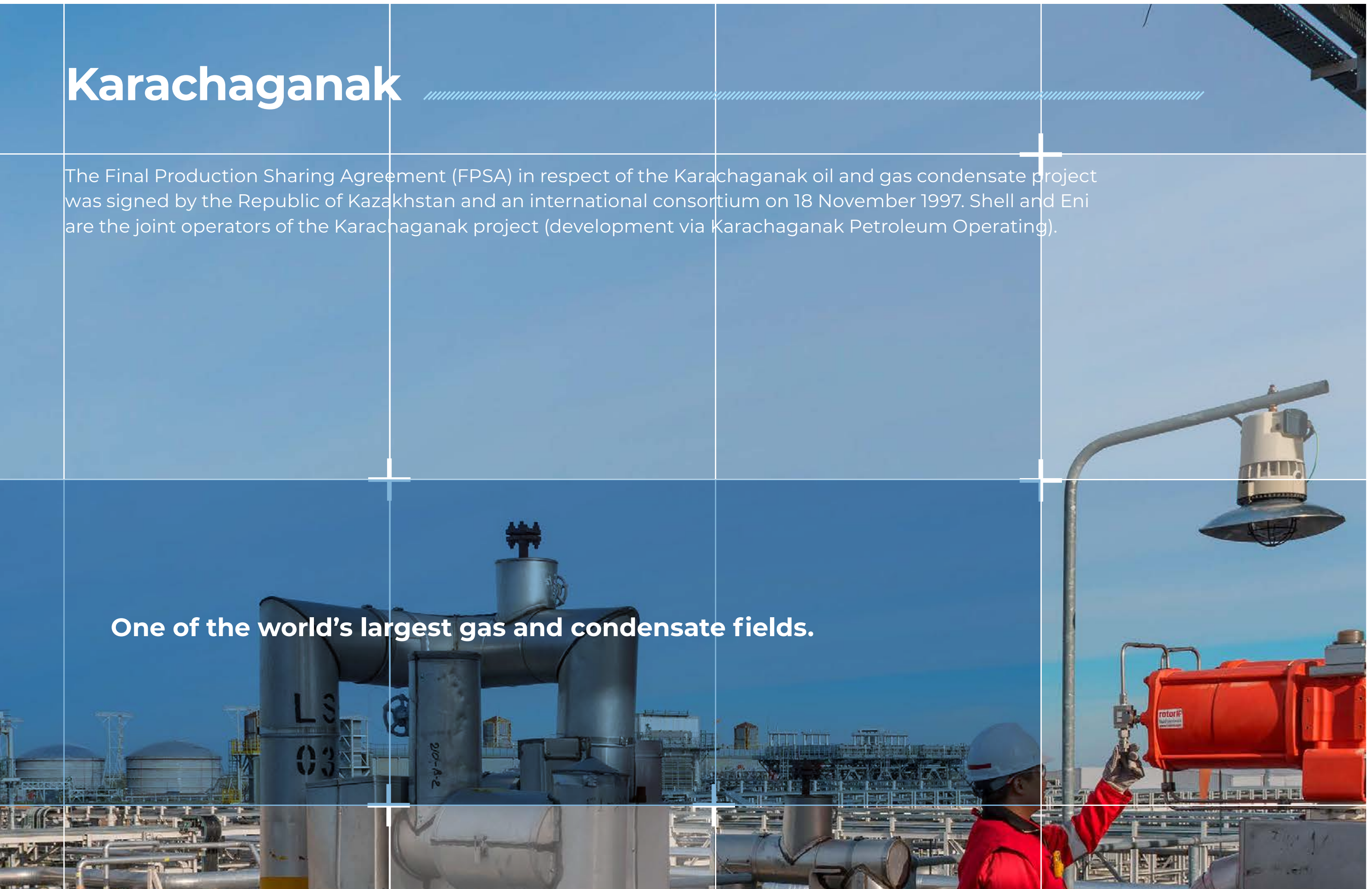
Phase 2A
- Seeks to increase oil production at Kashagan to 63 thous. tonnes per day (500 thous. bbl per day) by supplying raw gas to the projected own gas processing plant with a capacity of 2.5 bln m³ per year.
- The increase in oil production over the remaining life of the PSA is estimated at 36 mln tonnes (with ~6 mln tonnes attributable to KMG Kashagan).
- The GPP construction project is currently at the pre-FEED stage.
- According to the preliminary estimates, commissioning is expected in 2029–2030.
- Total cost is to be determined.

Phase 2B
- Seeks to increase oil production by 26.5 thous. tonnes per day (210 thous. bbl per day) to the total production of 89 thous. tonnes per day (710 thous. bbl per day) through extraction of 6 bln m3 of associated gas per year.
- The increase in oil production is yet to be determined due to implementation deadline uncertainties.
- Synergies with the the Tengiz field are under consideration. The Operator and KMG Kashagan have developed assumptions on input parameters to discuss them with the engineering contractor (TKJV).
- The Operator has completed a pre-FEED for the option implying the supply of raw gas to a third party plant. Due to uncertainties regarding the raw gas recipient, the FEED stage was postponed.
- The commissioning deadline and total costs are to be determined going forward.

Liquefied petroleum gas (LPG) marketing
The project seeks to commercialise LPG through its fractionation at a third-party plant for further propane and butane exports. Commercial evaluation of third-party bids for the construction of an LPG fractionation plant is in progress. It will be possible to make a FID on the project once its economic feasibility is confirmed and approved.

Karachaganak

The Final Production Sharing Agreement (FPSA) in respect of the Karachaganak oil and gas condensate project was signed by the Republic of Kazakhstan and an international consortium on 18 November 1997. Shell and Eni are the joint operators of the Karachaganak project (development via Karachaganak Petroleum Operating).



One of the world's largest gas and condensate fields.

Key indicators

Production of liquid hydrocarbons (stable[1]) (total)

10.9 mln tonnes
(234 thous. bbl per day)[2]

Production of liquid hydrocarbons (stable) (attributable to KMG) (10%)

1,086 thous. tonnes
(23 thous. bbl per day)

Gas production (total)

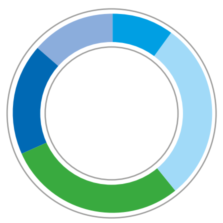
22.4 bln m^3

2P oil and condensate reserves life

Over 23 years

Operator: Shell and Eni are the joint operators of the Karachaganak field (Karachaganak Petroleum Operating)

Interests, %



10 % KMG
29.25 % Eni S.p.A.
29.25 % Shell
18.0 % Chevron
13.5 % LUKOIL

Outlook

The implementation of investment projects to maintain the achieved liquid hydrocarbon production plateau levels

[1] A conversion factor of 0.9 is applied to total oil and condensate production to estimate stable liquid hydrocarbons.
[2] 1 tonne = 7.86 bbl

Karachaganak oil and condensate field is one of the largest oil and condensate fields in the world, located in the West Kazakhstan Region and covering an area of over 280 sq km. The field was discovered in 1979, with pilot development started in 1984.

The Karachaganak project has three core process facilities, comprising a single system of interrelated and interdependent process units within the production process:

- KPC – the Karachaganak Processing Complex, located in the northwestern part of the field and processing liquid hydrocarbons coming from wells as well as feedstock transported from Unit 2 and 3, while also partially preparing gas for export, injection, and internal production needs;
- Unit 2 – a gas treatment unit located in the southeastern part of the field, which separates and reinjects raw gas at high pressure and feeds liquid hydrocarbons to the KPC for stabilisation before shipment for export;
- Unit 3 – a gas treatment unit located in the northeastern part of the field, which separates and partially stabilises liquid hydrocarbons and gas before shipment for export.

In 2023, the field's operating well stock was 160 production wells and 20 injection wells.

In 2023, liquid hydrocarbon production from Karachaganak increased by 7.1% year-on-year to 10.858 thous. tonnes, including KMG's share of 1.086 thous. tonnes. Gas production grew by 15.1% year-on-year to 22.385 mln m^3 in total, with KMG's share of 2.239 mln m^3. Higher raw gas intake by Orenburg GPP had a positive impact on the operational results of the Karachaganak field in 2023, as it led to an increase in oil and condensate production. In 2022, Orenburg GPP reduced its intake of raw gas due to the scheduled preventive maintenance of its facilities.

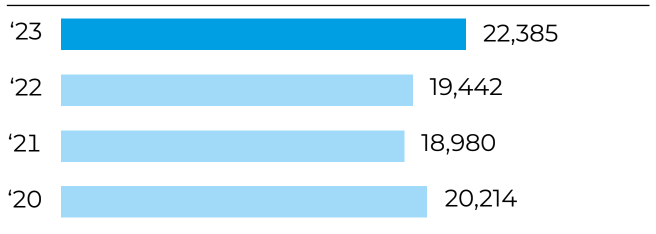
Arbitration dispute

Pursuant to the Final Production Sharing Agreement (FPSA) in respect of the contracted plot at the Karachaganak oil and gas condensate field dated 18 November 1997, the Republic of Kazakhstan and the Contracting Companies have a number of disputes regarding the application of certain FPSA provisions that are subject to arbitration. The Contracting Companies believe that they are acting in accordance with the FPSA, the laws of the Republic of Kazakhstan, applicable standards, and best practices.

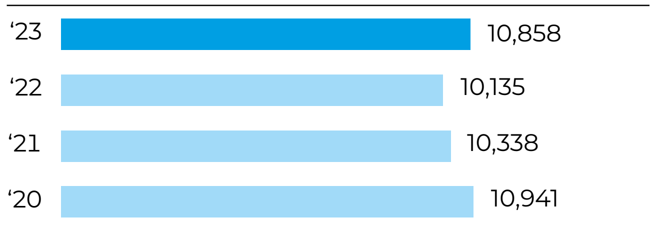
An Arbitration Tribunal has been set up. The schedule for hearings is currently being discussed. Once the schedule is approved, the parties will begin to exchange claims and objections.

Karachaganak Petroleum Operating B.V.'s operational highlights

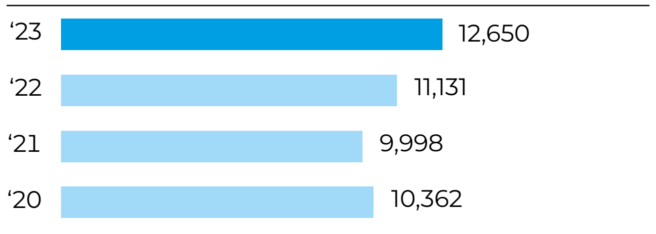
Gas production, mln m^3



Liquid hydrocarbon production, thous. tonnes



Gas injection, mln m^3



Pursuant to the notification served on the Operator on 13 April 2023, KMG Karachaganak was fully excluded from the negotiation process due to a conflict of interests in accordance with the Joint Venture Agreement (JVA).

Outlook for Karachaganak

KEP1 A, 5th injection compressor:
The first stage of the Karachaganak Expansion Project (KEP1) focuses on the 5th injection compressor facility, including construction of the gas injection compressor and other related units. KEP1 A envisages the use of dehydration units installed as part of the KPC gas debottlenecking project at the Karachaganak Processing Complex to increase gas injection capacities, as well as integration of the facilities to be constructed as part of the project with the existing systems, utility

networks, and production units. This approach will unlock integration-driven synergies and reduce capital expenditures.

Construction, installation, and pre-commissioning are currently underway. No deviations or digressions from the target indicators have been identified.

As of 1 January 2023, actual costs amounted to USD 685.7 mln (as compared to the target of USD 638.9 mln). Progress against the Execute-stage scope of works is 93.33% (as compared to the P50 target of 94.4%). The commissioning is slated for 4Q 2024. The cost forecast for the project completion date is USD 809.6 mln.

KEP1 B, 6th injection compressor:
The second stage of KEP1 focuses on the 6th injection compressor facility, including the gas injection compressor, gas dehydration unit, expansion of the system for gathering well products, and other related units. The 5th and 6th injection compressors are designed to boost liquid hydrocarbon production by maximising the utilisation efficiency of the existing units.

Planned installation and construction works are ongoing.

As of 1 January 2023, actual costs amounted to USD 178.4 mln (as compared to the target of USD 162.8 mln). Progress against the Execute-stage scope of works is 35.3% (as compared to the P50 target of 12.9%). The commissioning is slated for 4Q 2026. The cost forecast for the project completion date is USD 585.8 mln.

Gas commercialisation:
The project aims to create economic value by:
- monetising the extracted gas and its derivatives (LPG);
- increasing condensate production;
- contributing to the energy independence of Kazakhstan.

The project envisages production of around 3.8 bln m3 of commercial gas per year, including 0.6 bln m3 per year in the form of purified gas for the production needs of Karachaganak Petroleum Operating. Approximately 3.2 bln m3 of commercial gas per year is expected to be transported via the existing Karachaganak–Uralsk pipeline to QazaqGaz, which will be responsible for its subsequent distribution.

The project is currently at the Selection stage of its lifecycle, with the FEED+EPC tender for GPP construction in progress. By the end of 2024, the following key tasks are planned to be addressed:
- ensuring economically viable project parameters that would be acceptable to the Partners;
- agreeing and finalising commercial agreements for gas sales;
- negotiating logistic routes and entering into commercial agreements with potential LPG buyers;
- introducing and approving amendments to the design documents (Field Development Project, Environmental Impact Assessment).

The preliminary construction cost estimate for a GPP with an annual capacity of 4.5 bln m^3 is USD 3.2 bln. The commissioning is scheduled for 2028.

Oil production at operating assets

With a legacy of more than one hundred years in the oil and gas industry, KMG has a portfolio of producing assets that mainly consists of mature fields. In this regard, the Company's key priority is to improve production efficiency. The Company is committed to energy saving across operations while also maintaining a strong focus on continuous production process optimisations and improvements and driving higher oil recovery rates.

Today about 85% of total oil production at the Company's operating assets comes from seven key fields: Uzen and Karamandybas (Ozenmunaigas), Kalamkas and Zhetybai (Mangistaumunaigaz), S. Nurzhanov and East Moldabek (Embamunaigas), and Karazhanbas (Karazhanbasmunai).

Oil and condensate production across KMG's operating assets went down by 1.5% to 13,559 thous. tonnes (269 thous. bbl per day). Emergency power cuts and capacity limitations imposed by Mangistau Nuclear Power Plant in July–September 2023 had a significant impact on the performance of Ozenmunaigas and some other fields, leading to a decrease in production. There is also a natural production decline at some mature fields. That said, the decline was partly offset by oil production increases at Embamunaigas, which successfully completed well interventions at mature fields and launched operations at the eastern flank of the S. Nurzhanov and North Uaz fields.

Dunga

In November 2023, KMG completed the acquisition of a 100% stake in Total E&P Dunga (holder of subsoil use rights in the Dunga project) from TotalEnergies EP Danmark, a subsidiary of TotalEnergies, with KMG's interest in the Dunga project now standing at 60%. In accordance with the deal terms, it was decided to change the company's name to Dunga Operating.

The Dunga project is implemented under the Production Sharing Agreement dated 1 May 1994 (PSA) signed by Oman Oil Company and the Government of Kazakhstan.

Key indicators
- The Dunga field is located in the Mangistau Region 50 km away from the city of Aktau.
- Recoverable oil reserves include 24,662 thous. tonnes in the B+C1 category and 3,028 thous. tonnes in the C2 category.
- Recoverable gas reserves include 1,601 mln m3 in the C1 category and 1,039 mln m3 in the C2 category.

Production highlights
- In 2023, actual oil and condensate production came in at 546.9 thous. tonnes, with 39.9 thous. tonnes (including the share of KMG) produced since KMG joined the project on 20 November 2023. The volume of gas produced since KMG joined the project was 2,701 thous. m3 (including the share of KMG).

Development stages:
- Stage 1 (2000–2012): 26 wells.
- Stage 2 (2012–2015): +170 wells drilled, 109 wells started production.
- Stage 3 (2015–2024): extension of the surface infrastructure + start of production at the 61 remaining wells.

The key objective of Stage 3 is to enhance the field's potential and to extend the period of peak production.

Stage 3 envisages:
- connection of the 61 wells drilled in the Aptian deposits to 6 trunk pipelines;
- installation of new primary and fuel gas compressor packages;
- conversion of up to 45 injectors;
- replacement of the pipeline for seawater coming from SWIS (the Seawater Injection System) to increase capacity to 20,000 bbl per day;
- replacement of the export oil pipeline with an 8-inch pipeline;
- expansion of the utility and support systems.

Reclamation project at the Uzen and Karamandybas fields (Ozenmunaigas)

2023 saw the launch of a project to reclaim the Uzen and Karamandybas fields.

- Ozenmunaigas set up a project management team (PMT) comprising experienced production professionals from Ozenmunaigas and R&D experts from KMG Engineering.
- The first year of the project implementation was funded at the expense of KMG.
- On 26 February 2024, the Ministry of National Economy of Kazakhstan, as part of the Republican Budget Commission meeting, submitted a proposal for the Government of Kazakhstan to adopt a resolution On the Application of Preferential MET Rates to Ozenmunaigas in 2024–2036.

The project's objectives include:
- cumulative production increase of 19 mln tonnes in 2024–2036;
- annual reinvestment of capital released as a result of tax incentives into drilling new wells, applying new reservoir recovery enhancement technologies, and upgrading surface infrastructure at the Uzen and Karamandybas fields;
- keeping jobs for more than 10,000 people and increasing tax revenues for the state budget.

Progress against the reclamation project at the Uzen and Karamandybas fields (Ozenmunaigas) in 2023:
- 23 new production wells drilled;
- hydraulic fracturing completed at 15 wells;
- electric submersible pumps (ESP) from Kudu Industries Kazakhstan (a subsidiary of Schlumberger) installed in 83 wells, resulting in a production increase of over 100 tonnes per day;
- contracts signed with Weatherford Oilfield Services and Kudu Industries Kazakhstan for the supply of sucker-rod screw pumps in 2024;
- design and estimate documentation developed for the project to upgrade the underground equipment diagnostics and repair section.

Plans for 2024
The project has a comprehensive range of initiatives planned for 2024, with oil production expected at 135 thous. tonnes:
- drilling of 31 wells and well intervention activities;
- implementation of new technologies to enhance oil recovery (radial drilling, thermochemical and gas treatment of bottomhole zones, etc.);
- polymer flooding tests at one pilot site for increasing ultimate oil recovery rates;

- injection of volumetric polymer solutions into injection wells using the conformance control techniques to regulate the growing water cut;
- initiatives to increase the time between repairs for production wells (running ESPs into up to 200 wells, installation of tubing with protective coating and wear-resistant rods, installation of sucker-rod screw pumps);
- reconstruction of two modular cluster pumping stations and modernisation of surface infrastructure;
- initiatives to replace seawater used for process purposes and to maintain reservoir pressure with Albian-Cenomanian water (drilling of water supply wells, etc.).

There are plans to start using state-of-the-art geonavigation technologies in 2025 for drilling complex horizontal wells at a pilot site of the Uzen field.

Power supply issues at KMG facilities

Persistent emergency power outages caused by the power generation and distribution organisations lead to significant oil losses at the production facilities and, consequently, irrecoverable economic losses. In the reporting year, large-scale power outages and capacity limitations imposed by external suppliers – Mangistau Nuclear Power Plant and Mangistau Regional Electricity Network Company – had a significant negative impact on KMG's operations. Emergency power outages were the cause of equipment downtime at the sites of four oil producing KMG companies (Ozenmunaigas, Mangistaumunaigaz, Karazhanbasmunai, and Embamunaigas). In 2023, we saw an overall negative trend towards a higher number and larger scale of power outages, which cumulatively led to oil losses.

The majority of daily power outages and capacity limitations was recorded in the second half of the year, including:

- from 3 to 24 July;
- from 4 to 25 August;
- from 23 to 29 September;
- from 13 to 31 October.

2023 saw a total of 347 power cuts. The total number of idle wells exceeded 330 thousand, resulting in oil losses of over 511 thous. tonnes.

In order to ensure energy security and uninterrupted power supply to oilfield facilities, KMG's subsidiaries and associates are pursuing the following initiatives:

- construction of a hybrid power plant leveraging renewable energy sources (solar + wind) and gas-fired energy;
- implementation of the project titled "Strengthening the Power Grid in the Western Zone of the Unified Power System of Kazakhstan. Construction of Power Grid Facilities" to enhance the reliability of power supply to consumers in the western zone of KEGOC;
- allocation of KZT 4.9 bln by the Government of Kazakhstan to finance the refurbishment of Mangistau Nuclear Power Plant;
- commissioning of a backup gas turbine unit (GTU) from Siemens in line with the plan envisaging simultaneous operation of GTU 1 and GTU 2 (2x45 MW Gas Turbine Power Plant) at the Kalamkas field as a way to ensure emergency power supply to the Kalamkas and Zhetybai facilities.

Construction of a hybrid power plant in the Mangistau Region

On 1 June 2023, the joint Steering Committee of KMG and Eni approved the Project's feasibility study. Based on the feasibility study:

- a construction site for the Project was identified;
- a preliminary site layout was developed for the solar, wind, and gas-fired power plants;
- a land plot was reserved for the Project;
- the point of connection to the existing power grid was determined.

On 27 March 2023, the Project was included in the KMG investment portfolio and approved for further implementation by the Company's Investment Committee.

On 8 June 2023, KMG and Eni signed an Agreement on the Principles of Joint Project Implementation at a meeting attended by Kazakhstan's President Kassym-Jomart Tokayev.

In October 2023, the wind measurement campaign was completed. The FEED stage is over, with the preparation of the full FEED documentation package ongoing.

Subsidiaries and associates	Total	
	Total number of outages	Total oil losses, thous. tonnes
Mangistaumunaigaz	87	97.120
Ozenmunaigas	86	294.067
Karazhanbasmunai	81	105.897
Embamunaigas	93	14.438
Total	347	511.522

A Power Distribution Circuit (PDC) was developed for the Project. It is currently being approved by the System Operator (KEGOC). Following the approval, we expect to receive the terms of reference from Mangistau Regional Electricity Network Company.

KMG and Eni are jointly considering potential commercial options. There are legislative initiatives for designating power generation and power supply organisations (PGO/PSO) as balance providers for renewable energy and a single sales point for renewables with an ambition to expand the customer pool and roll out the Project to Mangistaumunaigaz and Karazhanbasmunai.

On 15 December 2023, the Investment Committee held a meeting to adopt KMG's Final Investment Decision (FID) on the Project.

The Project tenders are nearing completion. The plan is to set up two joint ventures and commence the Project in 1Q 2024.

Indicative commissioning schedule: solar power plant – 1Q 2025, wind power plant – 3Q 2025, gas-fired power plant – 3Q 2025. The Project is expected to reach full capacity in October 2025.

The hybrid power plant's capacity: solar power plant – 50 MW, wind power plant – 77 MW, gas-fired power plant – 120 MW.

Well stock

In 2023, the total well stock in operation was 17,540 wells, of which 13,160 wells were classified as the current declining well stock. Most of oil and condensate production comes from the current declining well stock.

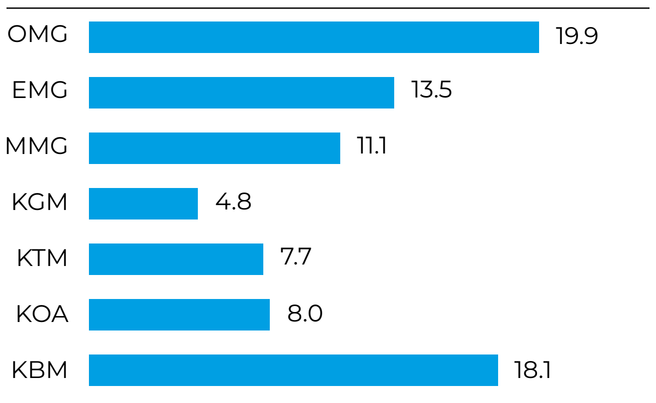
48

Number of drilling rigs involved

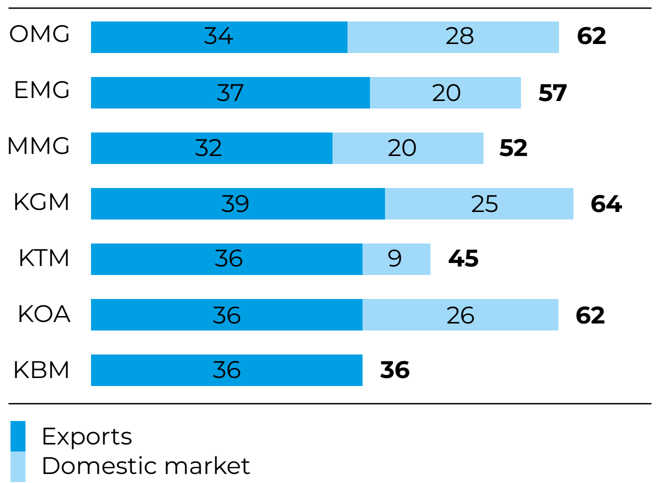
Number of wells at KMG-operated assets

Indicator	2021	2022	2023
New wells	475	523	575
Current declining well stock, including idle wells	11,206	12,696	13,160
	781	649	771
Injection wells	3,400	3,485	3,805
			341
Total for KMG-operated assets	**15,081**	**16,704**	**17 540**

Lifting costs (indicative estimates), USD per bbl



Netbacks (indicative estimates), USD per bbl



Gas production

Natural and associated gas production increased by 14.8% to 9,459 mln m3 in 2023. Operating assets produced 2,055 mln m^3 (22% of the total), while 7,403 mln m^3 (78%) came from megaprojects,

Gas production values are the actual volume of gas produced, including injected gas and own gas needs. Gas injection is used to maintain reservoir pressure, which is essential for sustaining high oil production rates.

Commercial gas production in 2023 was 5,130 mln m^3, of which 1,711 mln m^3 came from operating assets and 3,419 mln m^3 from megaprojects. Year-on-year, KMG's commercial gas production increased by 601 mln m^3, or 13% cumulatively.

Natural and associated gas production, mln m^3

Indicator	2021	2022	2023
Natural and associated gas production by asset (attributable to KMG)	**8,081**	**8,241**	**9,459**
Operating assets	**2,411**	**2,190**	**2,055**
Ozenmunaigas	665	623	596
Embamunaigas	202	213	217
Mangistaumunaigaz	376	431	427
Kazgermunai	185	115	129
Karazhanbasmunai	31	33	33
PetroKazakhstan	125	127	112
Kazakhoil Aktobe	412	430	402
Kazakhturkmunay	167	197	127
Amangeldy Gas	224	-	-
Urikhtau Operating	24	21	9
Dunga			3
Ural Oil and Gas			2
Megaprojects	**5,669**	**6,051**	**7,403**
Tengizchevroil	2,953	3,229	3,202
KMG Kashagan	818	877	1,963
KMG Karachaganak	1,898	1,944	2,239

Commercial gas production from KMG-operated assets, mln m^3

Indicator	2021	2022	2023
Ozenmunaigas + KazGPZ[1]	636	496	689
Mangistaumunaigaz (PD Zhetybaimunaigaz)	172	156	239
Kazgermunai	303	182	203
Kazakhoil Aktobe	383	374	338
Embamunaigas	145	164	171
Kazakhturkmunay	121	144	71
PetroKazakhstan	0	0	0
Total for operating assets	**1,760**	**1,516**	**1,711**

[1] Raw gas from Ozenmunaigas and Mangistaumunaigaz's PD Zhetybaimunaigaz is supplied to the KazGPZ plant.

Commercial gas production from megaprojects (attributable to KMG), mln m^3

Indicator	2021	2022	2023
Tengiz	1,743	1,907	1,881
Karachaganak[2]	818	745	881
Kashagan	304	263	657
Total for megaprojects	**2,865**	**3,013**	**3,419**

Kazakh Gas Processing Plant

Kazakh Gas Processing Plant (KazGPZ) produces commercial gas using feedstock supplied by KMG's other operating assets and subsoil users that do not produce commercial gas themselves.

KazGPZ is the first gas processing plant built in Kazakhstan and the only plant in the Mangistau Region. The first stage of the plant was commissioned in 1973, followed by the second stage in 1976, which brought the plant's gas processing capacity to 1.5 bln m3 per year. The assembly and commissioning of all process units envisaged by the project were completed in 1980. The sulphur removal unit and the 95% ethane fraction production unit were constructed in 1978–1979.

In 2022, the project "Construction of a Compressor Unit at the Compressor Shop of KazGPZ" helped replace outdated and technically worn-out gas-powered compressors with new modern Ariel KBK4 reciprocating compressors driven by Waukesha L7044GSI S5 gas engines for the intake of associated petroleum and natural gas. The construction project boosted the volume of processed raw gas and increased the output of finished products.

KazGPZ receives and processes associated petroleum and natural gas from the fields of Ozenmunaigas, Mangistaumunaigaz, Tasbulat Oil Corporation, and Tenge Oil and Gas, while also processing gas condensate from the gas condensate fields of Ozenmunaigas and natural gas liquids from the fields of Karakudukmunai and Ken-Sary by purchasing relevant feedstock from the above subsoil users.

Today, KazGPZ plays an important role in the industrial agglomeration of the Mangistau Region by providing the region's inhabitants and production facilities with liquefied gas, commercial dry gas, and household heating oil.

Construction of a new gas processing plant in Zhanaozen

The construction of a gas processing plant in Zhanaozen aims to fully replace the existing gas processing plant commissioned in 1973. The new plant will process associated petroleum and natural gas coming from the fields of the Mangistau Region to provide the region's inhabitants and production facilities with industrial and socially significant gas processing products such as liquefied petroleum gas, dry (commercial) gas, and pentane-hexane fraction.

The planned installed capacity is 900 mln m3 per year for associated petroleum and natural gas, whereas the nominal intake capacities for natural gas liquids and gas condensate are 40 thous. tonnes and 5 thous. tonnes per year, respectively. The commissioning is expected in 2026.

[2] Raw gas supplies to the Orenburg Gas Processing Plant.

Development of the gas segment

On 1 September 2023, the President of Kazakhstan in his address to the nation urged relevant stakeholders to ramp up the construction of new gas processing plants, fully utilise existing processing capacities, and attract investments in the exploration and development of new gas fields.

Gasification of the country and domestic gas consumption growth over the past few years have been among key drivers behind economic expansion, which emphasises the need to keep increasing the availability of gas resources. Considering this, enhancing gas availability is currently a top priority for KMG, which is why the Company created a new business unit responsible for gas projects.

The Company has outlined key parameters of its Gas Strategy (KMG's Gas Strategy) with respect to the existing associated and natural gas producing fields, as well as new oil and gas, gas, and gas condensate fields. Those include:

- as-is analysis of technical and economic parameters in the gas production, transportation, and processing operations of the Company's subsidiaries and associates;
- gas savings and energy efficiency improvements;
- gas production increases and higher output of finished products (commercial gas, liquefied petroleum gas);
- promising areas for gas monetisation (manufacturing of products with high added value).

The development of KMG's Gas Strategy requires detailed consideration of each key parameter to determine measures that need to be taken to improve technical, production, and economic performance.

Additionally, the Company will consider proposals on further processing of gas into products with high added value.

Launch of production at new gas fields

On 10 May 2023, Kazgermunai, a subsidiary of KMG, began supplying gas from the South Aksay field to consumers in the Kyzylorda Region. The production and supply of commercial gas by Kazgermunai is expected to increase from the current 200 mln m3 to 300 mln m3 per year. The field is being developed by Kazgermunai, a 50% subsidiary of KMG.

On 4 December 2023, Urikhtau Operating, a 100% subsidiary of KMG, put the East Urikhtau field into commercial operation. This was the first project in Kazakhstan where the improved model contract was applied. In 2023, oil and gas production amounted to 19.7 thous. tonnes and 9.2 mln m3, respectively. VU-5 and VU-6 wells are expected to be completed and put into operation by September 2024.

On 21 December 2023, Ural Oil and Gas, a 50% subsidiary of KMG, successfully put the Rozhkovskoye gas condensate field in the West Kazakhstan Region into commercial operation. In 2023, gas and condensate production attributable to KMG (50%) amounted to 1.6 mln m^3 and 1.2 thous. tonnes, respectively.

Once the field reaches peak production, the annual output of gas, condensate, and liquefied petroleum gas will be around 1 bln m3, over 500 thous. tonnes and more than 150 thous. tonnes, respectively. The extracted raw gas will be transported to the gas processing facilities of Zhaikmunai, and the resulting marketable gas will be supplied to domestic market consumers.

The development project of the Rozhkovskoye field is divided into two phases.

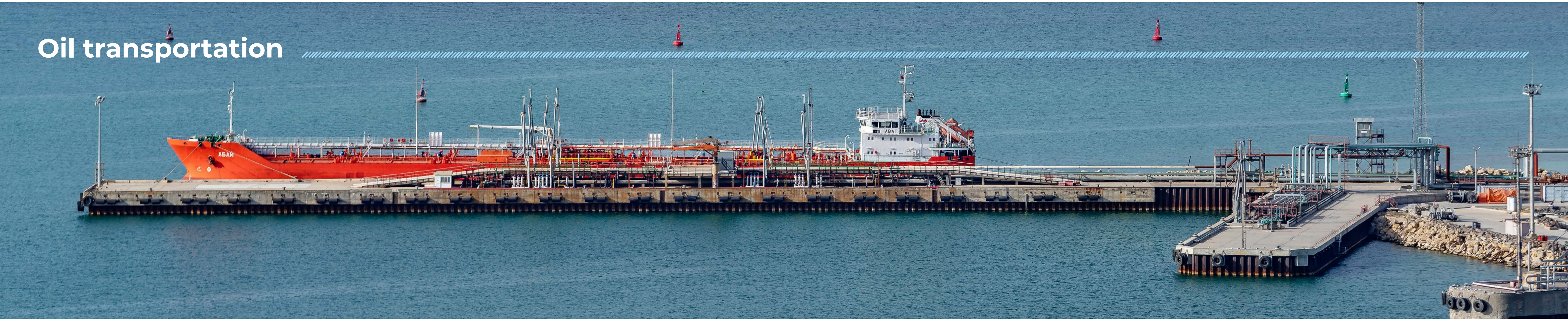
Phase 1 (A, B) involves the launch of five wells (U-10, U-12, U-21, U-23, and U-26), while Phase 2 envisages the launch of four suspended wells.

Phase 1 (A, B) progress: U-21 well has been put into operation. Phase 1 (B) progress: the sequential development of the remaining four wells (on a rolling progress basis) is expected by 3Q 2024, with approximate dates as follows:

1. 1) U-10 well by 10 June 2024
2. 2) U-12 well by 12 June 2024
3. 3) U-23 well by 20 July 2024
4. 4) U-26 well by 19 August 2024

A detailed schedule has been drafted for the Phase 2 development and launch of four suspended wells, with the start of operations expected in 2027.

Oil transportation



KMG completed the expansion of its oil transportation infrastructure to supply hydrocarbons to export markets. Medium-term priorities:

- increase existing capacity utilisation by making KMG's oil transportation systems more attractive and competitive;
- develop additional export routes;
- improve operating-cost control.

The two oil transportation modes at KMG are trunklines and the marine fleet.

Indicator	Trunkline transportation				Marine fleet transportation
Management company	KazTransOil	Kazakhstan–China Pipeline	MunaiTas	Caspian Pipeline Consortium	Kazmortransflot
Interest, %	KMG: 90%[1]	KazTransOil: 50%	KazTransOil: 51%	KMG: 20.75%	KMG: 100%
Key destinations	Exports to Europe and China, domestic market	Exports to China, domestic market	Exports to China, domestic market	Exports to Europe	Exports to Europe
Key routes	▪ Kazakhstan's refineries ▪ Uzen–Atyrau–Samara ▪ Oil transshipment to the CPC and Atasu–Alashankou pipelines, oil transshipment in the Port of Aktau	Atasu–Alashankou Kenkiyak–Kumkol	Kenkiyak–Atyrau	Tengiz–Novorossiysk	▪ Black Sea ▪ Mediterranean Sea ▪ Caspian Sea
Total length, km	5,373	1,759	449	1,510	n/a
Capacity, mln tonnes p.a.	17.5[2] 5.2[3]	20	6	81.5	n/a

Pipeline infrastructure

Kazakhstan's pipeline infrastructure is owned by KazTransOil – the national oil pipeline operator, its two joint ventures (Kazakhstan–China Pipeline and MunaiTas North-West Pipeline Company), and Caspian Pipeline Consortium. The existing pipeline infrastructure in Kazakhstan has adequate potential to support increased oil transportation volumes from promising projects.

KazTransOil (KTO) is the national oil pipeline operator of the Republic of Kazakhstan. The company owns an extensive network of oil trunklines with a total length of 5,373 km, to which virtually all oil fields in Kazakhstan are connected. The company transports oil to Kazakhstan's four major refineries, pumps oil for export via the Atyrau–Samara pipeline, transships oil to the CPC and Atasu–Alashankou export pipelines, and ships oil to tankers in the Port of Aktau and by rail. Oil transportation via trunklines is supported by 36 oil pumping stations, 67 heaters, and a tank farm for oil storage with a total capacity of 1.4 mln m3. KazTransOil also provides operation and maintenance services for the trunklines of Kazakhstan–China Pipeline, MunaiTas North-West Pipeline Company, Karachaganak Petroleum Operating, Caspian Pipeline Consortium-K, and Turgai Petroleum, as well as for the trunk water line of Main Waterline.

Kazakhstan–China Pipeline is the owner of the Atasu–Alashankou (965 km) and Kenkiyak–Kumkol (794 km) oil pipelines. The company transports Kazakhstan's oil and transit Russian oil to China and to the domestic market.

MunaiTas North-West Pipeline Company (MT) is the owner of the 455 km Kenkiyak–Atyrau oil trunkline. In 2018, the company started implementing the trunkline reverse project to support supplies of West Kazakhstan's oil to domestic refineries and to compensate production declines in the Aktobe and Kyzylorda Regions, as well as to support exports to China. From mid-2021, reverse transportation of up to 6 mln tonnes per year of West Kazakhstan's oil was enabled at the Aman oil pumping station.

Caspian Pipeline Consortium (CPC) is an international oil transportation project involving Russia, Kazakhstan and the world's leading industry players. It was established for the construction and operation of a 1,510 km trunkline (452 km are within Kazakhstan). The CPC oil pipeline is a priority export route for Kazakhstan's oil supplies, connecting Kazakhstan's Tengiz oil field with the Yuzhnaya Ozereyevka oil terminal on the Black Sea (near the Port of Novorossiysk). Oil transportation via the CPC pipeline is supported by 15 oil pumping stations, an oil storage tank farm with a total capacity of 1 mln m^3 and three single-point moorings at the marine terminal.

In 2019, in view of the increases in oil production from Tengiz and Kashagan, CPC shareholders resolved to launch a debottlenecking project for the pipeline system. Starting 2023, pumping capacity is on track to increase to 81.5 mln tonnes per year (including up to 72.5 mln tonnes per year in Kazakhstan).

[1] 10% of shares are owned by minority shareholders who acquired them under the People's IPO programme.
[2] Capacity of the Atyrau–Samara section.
[3] Capacity of the Port of Aktau (large-capacity vessel berths, oil loading).

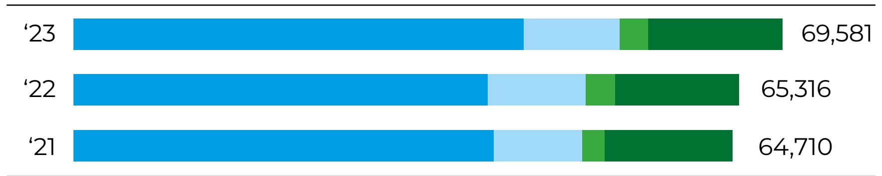

To the ports of Ust-Luga and Primorsk
Atyrau–Pavlodar Refinery
1 mln tonnes p.a.
Samara
Adamowo-Zastawa
Transit from Russia to China
10 mln tonnes p.a.
PAVLODAR REFINERY
Astana
KAZAKHSTAN
Atyrau–Samara
17.5 mln tonnes p.a.
KPO KARACHAGANAK
Atyrau–Kenkiyak
6 mln tonnes p.a.
ATASU HEAD OIL PUMPING STATION
Atasu–Alashankou
20 mln tonnes p.a.
Kenkiyak–Kumkol
10 mln tonnes p.a.
KAZAKHTURKMUNAY
TURGAI PETROLEUM
ATYRAU REFINERY
KAZAKHOIL AKTOBE
Alashankou
NCOC KASHAGAN
KAZGERMUNAI
China
Caspian Pipeline Consortium
81.5 mln tonnes p.a.
EMBAMUNAIGAS
TENGIZCHEVROIL (TCO)
PETROKAZAKHSTAN KUMKOL RESOURCES
Midia Constantza
Port of Yuzhnaya Ozereyevka
KARAZHANBASMUNAI
Port of Novorossiysk
MANGISTAUMUNAIGAZ
CASPIBITUM
Port of Aktau
OZENMUNAIGAS
Supsa
SHYMKENT REFINERY (PKOP)
Istanbul
Port of Baku
BTC
60 mln tonnes p.a.
Ceyhan
MunaiTas North-West Pipeline Company
Kazakhstan-China Pipeline
Caspian Pipeline Consortium
KazTransOil
Baku–Tbilisi–Ceyhan Pipeline
Sea routes
Oil pumping station
Production assets
Head oil pumping station
Refineries

Trunkline oil transportation

Volume of oil transportation[1], thous. tonnes

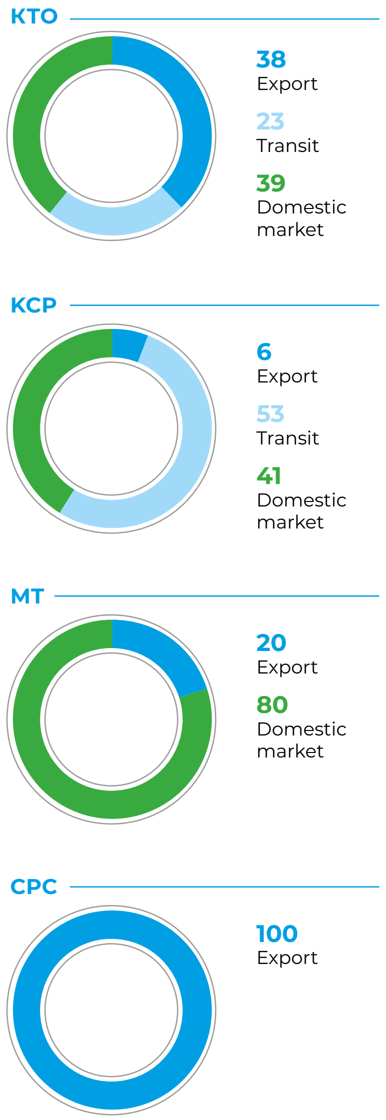
Company	2021	2022	2023
KazTransOil (100%)	**41,224**	**40,656**	**44,188**
export	14,296	12,762	16,618
transit	9,989	9,989	10,143
domestic market	16,939	17,905	17,426
Kazakhstan–China Pipeline (100%)	**17,412**	**19,236**	**18,806**
export	967	1,290	1,209
transit	9,979	9,980	9,979
domestic market	6,465	7,966	7,618
MunaiTas (100%)	**4,273**	**5,606**	**5,527**
export	1,572	1,188	1,114
domestic market	2,701	4,418	4,413
Caspian Pipeline Consortium (100%), export	**60,728**	**58,711**	**63,474**

Volume of oil transportation (net to KMG)[2], thous. tonnes

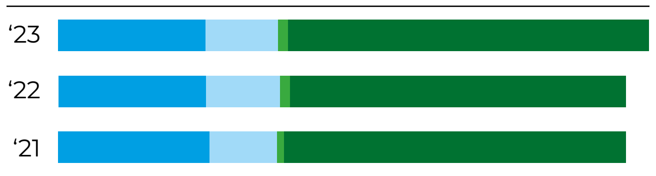


Company	2021	2022	2023
KazTransOil (100%)[3]	41,224	40,656	44,188
Kazakhstan–China Pipeline (50%)	8,706	9,618	9,403
MunaiTas (51%)	2,179	2,859	2,819
Caspian Pipeline Consortium (20.75%)	12,601	12,183	13,171
Total	**64,710**	**65,316**	**69,581**

Structure of oil transportation by destination in 2023, %

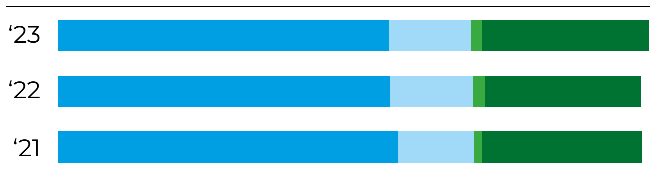


Oil transportation turnover, mln tonnes × km



Company	2021	2022	2023
KazTransOil (100%)	35,162	34,261	34,208
Kazakhstan–China Pipeline (100%)	15,592	17,314	16,872
MunaiTas (100%)	1,725	2,265	2,236
Caspian Pipeline Consortium (100%)	79,446	78,154	83,959

Oil transportation turnover (net to KMG), mln tonnes × km



Company	2021	2022	2023
KazTransOil (100%)	35,162	34,261	34,208
Kazakhstan–China Pipeline (50%)	7,796	8,657	8,436
MunaiTas (51%)	879	1,155	1,141
Caspian Pipeline Consortium (20.75%)	16,485	16,217	17,422

In 2023, KMG's share in the consolidated volume of trunkline oil transportation was up by 6.5% to 69,581 thous. tonnes. This growth can be attributed to an uptick in oil exports via the KazTransOil network to Germany, increased shipments from the Port of Aktau towards the Baku–Tbilisi–Ceyhan pipeline, and a surge in oil delivery from the Kashagan field to the CPC network.

Oil transportation using KazTransOil trunklines grew by 3,533 thous. tonnes year-on-year to 44,188 thous. tonnes, with exports being the key contributor. Domestic oil transportation to Kazakhstan's refineries diminished year-on-year as a result of scheduled repairs at both Shymkent Refinery in March 2023 and Pavlodar Refinery mid-summer.

The Caspian Pipeline Consortium (CPC) saw a 8.1% rise in transportation volumes in the reporting year predominantly credited to higher oil throughput from the Kashagan field. In 2023, the CPC faced shipment restrictions due to adverse weather impacting operations at the marine terminal.

[1] Consolidated volume of oil transported includes the volume of each individual pipeline company, including the operating share of KMG (excluding KTO). Part of the oil volumes can be transported by two or three pipeline companies, and these volumes are accordingly counted more than once in the consolidated volume of oil transportation.
[2] Consolidated volume of oil transported includes the volume of each individual pipeline company, including the operating share of KMG (excluding KTO). Part of the oil volumes can be transported by two or three pipeline companies, and these volumes are accordingly counted more than once in the consolidated volume of oil transportation.
[3] Since KTO is fully operated by KMG, transportation volumes are reported as 100%.

Tariffs for trunkline oil transportation

The tariffs for crude oil transportation to Kazakhstan's domestic market are regulated by the Government.

According to Law of the Republic of Kazakhstan No. 204-VI on Natural Monopolies dated 27 December 2018, oil transportation services to support transit via the Republic of Kazakhstan and exports outside the Republic of Kazakhstan are beyond the scope of natural monopolies.

Tariffs for oil transportation to the domestic market, KZT per tonne per 1,000 km

Company	2021	2022	2023
KazTransOil	4,356 (4,328 from 1 December 2021)	4,356	4,602
Kazakhstan–China Pipeline	4,323.7	4,359	4,359
MunaiTas	5,912	5,912	5,912

Weighted average tariffs for oil transportation for export

Company	2021	2022	2023
KazTransOil, KZT per tonne per 1,000 km	7,359	8,831	9,490
Kazakhstan–China Pipeline, KZT per tonne per 1,000 km	6,799	6,799	6,799
MunaiTas, KZT per tonne per 1,000 km	5,912	5,912	5,912
Caspian Pipeline Consortium, USD per tonne	36	36	36

Tariffs for transit to China, USD per tonne

Company	2021	2022	2023
KazTransOil	4.23	4.23	4.23
Kazakhstan–China Pipeline	10.77	10.77	10.77

In 2023, the Company implemented the following key energy efficiency initiatives:

1. Replaced TM power transformers with energy efficient ones of TMG type: Pavlodar Oil Pipeline Department. Priirtyshsk pipeline maintenance depot – 2;
2. Pavlodar–Shymkent trunkline: upgraded linear control and monitoring stations and cathodic protection means, reconstructed electricity supply systems at the trunkline (1,499.9–1,572.1 km);
3. Upgraded a booster pumping station at Zhetybai oil pumping station. The equipment was supplied in 2023 and the upgrade is slated for completion in 2024.

In 2024, the Company plans to implement the following initiatives:

1. Mangystau Oil Pipeline Department, Zhetybai oil pumping station: upgrading a booster pumping station. Implementation / completion;
2. Replacing booster pump NGPNA 3600–120 with ANTsN-E 1600–100–1. Pavlodar Oil Pipeline Department. Pavlodar head oil pumping station;
3. Completing a scheduled energy audit at KazTransOil.

Diversification of oil transportation routes

KMG consistently takes steps to develop alternative export routes for Kazakhstan's oil.

Oil exports to Azerbaijan through the Port of Aktau

In November 2022, KMG and Azerbaijan's SOCAR inked a general agreement on crude transit providing for the transportation of 1.5 mln tonnes of Kazakhstan's oil per year through the Port of Aktau and further on via the Baku–Tbilisi–Ceyhan pipeline. An important step for both Kazakhstan and Azerbaijan, the agreement is set to strengthen partnership between the nations, diversify export routes for Kazakhstan's oil, and expand the country's oil infrastructure.

Tengiz oil shipments towards Baku commenced from the Port of Aktau in March and from the Port of Ceyhan in April 2023. In 2023, the Port of Aktau dispatched a total of 1,057 thous. tonnes.

Oil supplies to Germany

The first shipments to the refinery in Schwedt via the Druzhba pipeline commenced in February 2023. In 2023, oil transportation from KPO resources totalled 993 thous. tonnes. The German partners are keen on amplifying oil imports from Kazakhstan to 200 thous. tonnes per month (2.4 mln tonnes per year). In December 2023, the existing contract for KPO resources was extended for six months, spanning January to June 2024 at a rate of 100 thous. tonnes per month, potentially extendible until the year-end. Efforts to find additional oil volumes are underway.

Kazakhstan–China oil pipeline expansion

In May 2023, KMG and CNPC agreed to conduct a preliminary research to expand the Kenkiyak–Atyrau and Kenkiyak–Kumkol oil pipelines, an initiative anchored in the Agreement on Expanding Strategic Cooperation in the oil and gas industry. To bring this Agreement to life, KMG held working sessions with CNPC, alongside participants from KazTransOil, Kazakhstan–China Pipeline, and MunaiTas North-West Pipeline Company. In conjunction with the Ministry of Energy, KMG took steps to identify the resource base needed for the Kazakhstan–China oil pipeline. In view of the long-term equilibrium of oil production and distribution, the Ministry established a fundamental long-term supply model for oil supplies to PKOP. This entails plans to expand the Atyrau–Kenkiyak pipeline's capacity to 15 mln tonnes per year and the Kenkiyak–Kumkol pipeline to 20 mln tonnes per year. Currently, the stakeholders are contemplating a feasibility study for these expansions.

Oil transportation by sea

Transportation assets

NMSC Kazmortransflot (KMTF) is the National Sea Carrier

Engaged in:
- oil transportation in the Caspian Sea and open seas;
- dry and container cargo transportation;
- provision of fleet support services for offshore operations.

The main routes for oil transportation by sea go across:
- Caspian Sea;
- Black Sea and Mediterranean Sea.

Its assets include:
- oil transportation fleet: Alatau and Altai Aframax oil tankers, each with a deadweight of 115,000 tonnes, Astana, Almaty, and Aktau oil tankers, each with a deadweight of 12,000 tonnes, Taraz and Liwa oil tankers, each with a deadweight of 8,000 tonnes;
- container fleet: Barys, Sunkar, and Berkut with a capacity of 350 TEUs each,
- dry cargo fleet: Beket Ata and Turkestan vessels, each with a deadweight of 5,000 tonnes;
- towing fleet: Talas, Emba, and Irgiz.

Collaborating with the Abu Dhabi Ports Group (ADP), KMTF created a combined tanker fleet for open-seas navigation, specifically in the Black Sea and the Mediterranean Sea. The project seeks to optimise oil transportation costs, create new opportunities for KMG to export oil, and solidify cooperation between KMG and AD Ports Group. The fleet includes four Aframax tankers, with ownership split evenly (2/2) between KMTF and ADP. KMG is currently in negotiations with Chevron Tankers over a long-term contract for open-sea oil transportation initiating from the ports of Novorossiysk and Ceyhan. Should these negotiations be successful, the fleet will add one or two more Aframax tankers. This cooperation is important for KMG's growing export potential.

Performance highlights

In 2023, total sea transportation rose by 1,435 thous. tonnes year-on-year to 10,778 thous. tonnes. The surge in transportation volumes predominantly stemmed from higher exports of Kazakhstan's oil routing from the Port of Aktau to the Port of Baku, and then through the Baku–Tbilisi–Ceyhan pipeline.

Marine fleet transportation, thous. tonnes

Sea	2021	2022	2023
Black Sea and Mediterranean Sea	9,318	8,733	10,045
Caspian Sea	537	610	733
Total	**9,855**	**9,343**	**10,778**

Activities completed in 2023

In 2023, NMSC Kazmortransflot made significant progress in implementing its investment projects set to develop additional routes for Kazakhstan's oil exports, reinforce investment ties with international partners, and expand the naval merchant fleet of the Republic of Kazakhstan.

KMTF's key achievements of 2023

1. A joint venture with Abu Dhabi Ports Group (ADP):
   - In January 2023, KMG and ADP signed a strategic partnership agreement.
   - In February 2023, the parties set up Caspian Integrated Maritime Solutions Ltd. (CIMS), a joint venture headquartered in the Astana International Financial Centre, with KMTF and ADP ownership split of 49% and 51% respectively.

2. Acquisition of two oil tankers:
   - In April 2023, CIMS acquired two oil tankers each with a deadweight of 8,000 tonnes.
   - Taraz and Liwa tankers reached the Caspian Sea in November 2023 and commenced operations in December 2023.

3. Kazakhstan's oil transportation via the Aktau–Baku route:
   - KMTF was designated as a maritime transport operator for Kazakhstan.

4. Signing a freight contract to transport Tengizchevroil's oil:
   - In May 2023, KMTF signed a freight contract with Chevron Tankers.

Activities planned for 2024

In 2024, NMSC Kazmortransflot is set to continue developing alternative transport routes and implementing initiatives for fleet modernisation and business diversification. KMTF is weighing the following prospective projects:

- building three oil tankers, each with a deadweight of 12,000 tonnes;
- building two multifunctional ferries;
- establishing a ship building and repair facility in Kazakhstan.

These projects are set to boost KMTF's competitive edge in the global maritime transport market and make a sizeable contribution to advancing Kazakhstan's economy.

Downstream

The Company has completed a number of major modernisation projects across its oil refineries in Kazakhstan and Romania, successfully achieving higher refining depths. KMG's 2022–2031 Development Strategy sets the following goals:

- improving the refining depth at Kazakhstan refineries to at least 89%;
- increasing the output of high-margin petrochemicals at Kazakhstan refineries;
- ramping up vertical integration at KMGI by adding more filling stations across its footprint to boost margins.

Oil and condensate marketing

In 2023, sales of own oil and gas condensate to meet domestic demand amounted to 8,311 thous. tonnes, including 4,980 thous. tonnes of crude oil supplied from operating assets (Ozenmunaigas, Embamunaigas, Kazakhturkmunay, Urikhtau Operating) to Atyrau, Pavlodar and Shymkent refineries for further refining and oil product sales.

Sales of KMG-produced oil and condensate, thous. tonnes

Assets	2021			2022			2023		
	Exports	Domestic market	Total	Exports	Domestic market	Total	Exports	Domestic market	Total
Operating assets[1]	6,126	7,916	14,042	5,472	8,412	13,884	5,406	8,302	13,708
including subsidiaries and associates[2]	3,805	4,458	8,262	3,173	4,907	8,080	2,955	4,980	7,935
Megaprojects[3]	7,619	0	7,619	8,240	3	8,243	9,978	9	9,987
Total	**13,745**	**7,916**	**21,661**	**13,712**	**8,415**	**22,126**	**15,384**	**8,311**	**23,695**

[1] Ozenmunaigas, Embamunaigas, Karazhanbasmunai, Kazgermunai, PetroKazakhstan Inc., Kazakhturkmunay, Kazakhoil Aktobe, Mangistaumunaigaz, Amangeldy Gas, Urikhtau Operating, Dunga

[2] Ozenmunaigas, Embamunaigas, Kazakhturkmunay, Urikhtau Operating, Dunga

[3] KMG Kashagan, KMG Karachaganak, Tengizchevroil

Oil and condensate exports

In 2023, KEBCO consistently demonstrated a positive trend. A market difference (premium) for KEBCO (Platts) to premium Brent grew from negative at the beginning of the year to positive in the second half and kept increasing till the year-end.

The year-on-year decrease in Brent prices in the reporting period was due to the current geopolitical and economic environment.

Oil and condensate sales to domestic buyers

Pursuant to the President's commission to adopt the so-called combined scheme at oil refineries and further commissions from the Government of the Republic of Kazakhstan, KMG worked to introduce this scheme at its refineries, taking into account the amendments being made to the Law of the Republic of Kazakhstan On State Regulation of Production and Sales of Certain Oil Products with respect to oil supplies to local refineries.

The combined scheme and amendments mentioned above provide for a subsoil user's affiliate to be recognised as an oil supplier subject to at least one of the following conditions:

- the oil supplier owns at least 50% of shares in the subsoil user;
- the subsoil user owns at least 50% of shares in the oil supplier;
- the oil supplier and subsoil user are controlled by one or more persons owning, directly or indirectly, a total of at least 50% of shares in the oil supplier and subsoil user.

Ozenmunaigas, Embamunaigas, Kazakhturkmunay and Urikhtau Operating supply Atyrau, Pavlodar and Shymkent refineries with KMG's own crude oil, and the resulting refined products are subsequently sold wholesale domestically or for export.

KMG refining assets

Within KMG's asset mix, four refineries in Kazakhstan and two in Romania are responsible for processing liquid hydrocarbons (primarily oil).

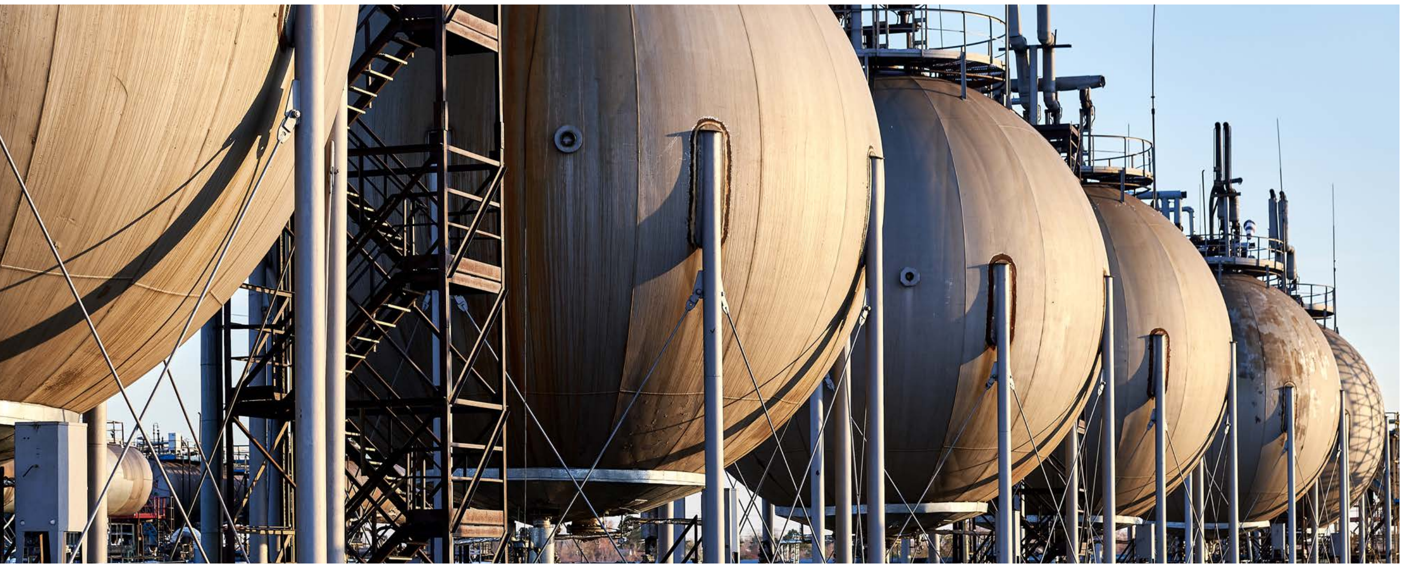
KMG refineries

Indicator	Kazakhstan refineries				Romania refineries	
	Atyrau Refinery	Pavlodar Refinery	Shymkent Refinery	Caspi Bitum	Petromidia Refinery	Vega Refinery
Location	Atyrau	Pavlodar	Shymkent	Aktau	Năvodari	Ploiești
Commissioning date	1945	1978	1985	2013	1979	1905
Design refining capacity, mln tonnes	5.5	6.0	6.0	1.0	6.0[1]	0.5
Hydrocarbon refining volumes in 2023, mln tonnes	5.5	5.4	5.7	0.85	5.0[2]	0.4
Refinery utilisation rate in 2023, %	99	91	95	85	84[3]	75
KMG interest, %	99.53	100	49.72	50	54.63	54.63
Nelson Index	13.9	10.5	8.2		10.5	
Light product yield in 2023, %	67	72	77		84	
Refinery co-owners			CNPC	CITIC	Romanian Government	Romanian Government

Consolidated hydrocarbon refining volumes	2021	2022	2023
Kazakhstan refineries			
Atyrau Refinery	5,473	5,224	5,475
Pavlodar Refinery	5,407	5,480	5,434
Shymkent Refinery (50%)	2,582	3,103	2,870
Caspi Bitum (50%)	464	461	427
Total for Kazakhstan refineries	13,927	14,269	14,206
Romania refineries			
Petromidia Refinery	4,586	5,258	5,012
Vega Refinery	321	373	374
Total for Romania refineries	4,907	5,631	5,387
Total	**18,833**	**19,900**	**19,593**

Consolidated oil product output	2021	2022	2023
Kazakhstan refineries			
Atyrau Refinery	4,867	4,647	4,858
Pavlodar Refinery	4,935	5,168	5,034
Shymkent Refinery (50%)	2,352	2,857	2,638
Caspi Bitum (50%)	460	456	421
Total for Kazakhstan refineries	12,614	13,128	12,951
Romania refineries			
Petromidia Refinery	4,831	5,512	4,848
Vega Refinery	320	370	373
Total for Romania refineries	4,790	5,142	5,221
Total	**17,445**	**18,639**	**18,172**

[1] Design capacity includes refining 5 mln tonnes of crude oil and 1 mln tonnes of other hydrocarbons per year.
[2] Total refining volume of 4.86 mln tonnes includes 4.35 mln tonnes of crude oil and 0.67 mln tonnes of other and alternative feedstocks.
[3] Petromidia Refinery utilisation rate is 97.5% based on Solomon Associates' methodology.



Refining volumes at Kazakhstan refineries

Hydrocarbon refining volumes at Kazakhstan refineries decreased by 0.4% to 14,206 thous. tonnes, primarily at PetroKazakhstan Oil Products, due to a lower utilisation in the middle of the reporting year resulting from unscheduled repairs of a heat exchanger at the catalytic reforming and recovery unit. An increase in refining at Atyrau Refinery in the reporting year partially offset lower PKOP volumes.

Refinery development plans

Initiatives have been planned to boost the output of high-margin products at Kazakhstan refineries, improving their operational efficiency.
- Technical audit for repairs to be performed once in every three years.
- Implementation of the Action Plan with Energy and Resource Efficiency and Atmospheric Emission Reduction Targets for the Period until 2031.

Atyrau Refinery
- Engineering and survey activities (restoring the reformer's operability, ramping up the capacity of the Prime D hydrotreatment and dewaxing unit, and building a gas turbine power plant, unloading rack for straight-run naphtha and kerosene / gas oil fraction, and new pumping station to enable complete transition to automatic on-spot loading).
- Feasibility study (upgrading the delayed coker unit and building a de-asphalting unit).
- Installation of an oil metering station and floating roofs for tanks intended to store Tengiz oil before refining.
- Tazalyq project: upgrade of mechanical treatment plants (stage 1) is completed, reclamation of sectors 1 and 2 at evaporation fields is completed, reclamation of sectors 3 and 4 is to be completed after the akimat of the Atyrau Region approves redirection of wastewater to new facilities at Atyrau's sewage treatment plants.

Pavlodar Refinery
- Reconstruction of the diesel hydrotreating plant including a dewaxing unit: the EPC contractor is to develop a project design and order equipment with a long lead time.
- Construction of an LPG treatment facility: the EPC contractor fully supplied equipment and materials, construction and installation are underway.

Shymkent Refinery
- Expansion of Shymkent Refinery's production capacities to 12 mln tonnes per year: the reporting year saw the PreFS for the project completed, with adjustments to be made to take into account the requirements of CNPC, the second shareholder, after updates on crude oil composition. Work continues to draft an agreement between Kazakhstan and China Governments on the expansion project providing for government support and commitments of the parties.

Caspi Bitum
- Expanding Caspi Bitum's oil refining capacity to 1.5 mln tonnes per year by upgrading the existing EDD-AVDU unit: technical audit is completed, and detailed project design is ongoing.

Prospective projects and innovations

Atyrau Refinery
To meet the growing demand for light oil products and get the facility ready to receive Tengiz oil, a project was initiated to increase its performance.

The project's objectives include:
- increasing the output of light oil products;
- eliminating bottlenecks at existing units;
- getting the facility ready to receive Tengiz oil;

Benefits:
- the project includes eight sub-projects to remove bottlenecks and boost light oil product output, namely:
- refining of Tengiz oil;
- increasing LPG output;
- upgrade of an LG-35–11/300–95 catalytic reformer;
- installation of an extra compressor at Prime D (higher output of diesel fuel);
- reconstruction of the delayed coker unit;
- EDD-ADU-2 upgrade to boost the yield of light oil product and improve fuel oil quality;
- construction of a new pumping station to utilise the existing automatic on-spot loading facilities;
- construction of infrastructure for straight-run naphtha and kerosene / gas oil fraction.

Light oil products include motor gasoline, diesel fuel, jet fuel, benzene, paraxylene, and liquefied gas. Motor gasoline, diesel fuel, jet fuel, and liquefied gas are valuable because of their social importance, while benzene and paraxylene serve as feedstock for the petrochemical industry.

Under this plan, Atyrau Refinery works to reduce direct and indirect emissions by at least 12% by 2031 vs 2019.

The project is scheduled for 2023–2027.

Pavlodar Refinery
- Reconstruction of the diesel hydrotreating plant including a dewaxing unit. This initiative seeks to achieve a winter diesel fuel output of 155 thous. tonnes per year.
- Construction of an LPG treatment facility.

This initiative seeks to achieve a marketable LPG throughput of 100 thous. tonnes per year.
- Action Plan with Energy and Resource Efficiency and Atmospheric Emission Reduction Targets for the Period until 2031.

Under this plan, Pavlodar Refinery works to reduce direct and indirect emissions by at least 15% by 2031 vs 2019.

Shymkent Refinery
- Action Plan with Energy and Resource Efficiency and Atmospheric Emission Reduction Targets for the Period until 2031.

Under this plan, Shymkent Refinery works to reduce direct and indirect emissions by at least 13% by 2031 vs 2019.

Oil refining tariffs

Kazakhstan refineries only offer oil refining services using the set tariffs (processing business scheme). Oil suppliers market finished products independently. Refineries focus on the operations side, streamlining refining activities, and reducing operating expenses.

Oil refining tariffs at Kazakhstan refineries factor in only actual production-related operating expenses and an investment component (capital expenditures to maintain current production rates, repayment of loans raised for modernisation).

Weighted average tariffs to refine 1 tonne of tolling feedstock, KZT

Refinery	2021	2022	2023
Atyrau Refinery	42,434	42,515	54,079
Pavlodar Refinery	23,033	23,240	23,240
Shymkent Refinery	35,191	35,336	35,336
Caspi Bitum	18,472	24,901	27,791

Hydrocarbon refining volumes and oil product output in Kazakhstan

In 2023, three Kazakhstan refineries conducted scheduled preventive maintenance, with process units put back on track ahead of schedule. Kazakhstan's Ministry of Energy, KMG and refineries approved a comprehensive action plan to reduce incidents at Atyrau, Pavlodar and Shymkent refineries for 2023–2027, including a multi-process technical audit to be followed by drafting an upgrade programme. In the reporting year, Atyrau Refinery started producing AI-92 K-5 petrol.

Hydrocarbon refining volumes (net to KMG), thous. tonnes

Refinery	2021	2022	2023
Atyrau Refinery	5,473	5,224	5,475
Pavlodar Refinery	5,407	5,480	5,434
Shymkent Refinery (50%)	2,582	3,103	2,870
Caspi Bitum (50%)	464	461	427
Total	**13,927**	**14,269**	**14,206**

Oil product output (net to KMG), thous. tonnes

Oil products	2021	2022	2023
Atyrau Refinery	4,867 (100%)	4,647 (100%)	4,858 (100%)
▪ Light[1]	3,169 (65%)	2,988 (64%)	3,602 (74%)
▪ Dark[2]	1,499 (31%)	1,447 (31%)	1,073 (22%)
▪ Petrochemicals[3]	52 (1%)	85 (2%)	49 (1%)
▪ Other	147 (3%)	127 (3%)	134 (3%)
Pavlodar Refinery	4,935 (100%)	5,137 (100%)	5,034 (100%)
▪ Light	3,736 (76%)	3,879 (76%)	3,895 (77%)
▪ Dark	862 (18%)	927 (18%)	809 (16%)
▪ Other	337 (7%)	331 (6%)	330 (7%)
Shymkent Refinery (50%)	2,352 (100%)	2,857 (100%)	2,638 (100%)
▪ Light	2,035 (87%)	2,348 (82%)	2,222 (84%)
▪ Dark	313 (13%)	504 (18%)	410 (16%)
▪ Other	4	5	6
Caspi Bitum (50%)	460 (100%)	460 (100%)	421 (100%)
▪ Dark	203 (44%)	203 (44%)	179 (43%)
▪ Other	257 (56%)	257 (56%)	242 (57%)
Total	**12,614**	**13,101**	**12,951**

Refining depth, %

Refinery	2021	2022	2023
Atyrau Refinery	77.24	75.72	82.09
Pavlodar Refinery	87.79	88.19	89.63
Shymkent Refinery	85.96	82.79	84.88

[1] Petrol, diesel fuel, jet fuel, and LNG.
[2] Fuel oil, vacuum gas oil, and bitumen.
[3] Benzene and paraxylene.

PETROSUN. KMG position in oil product marketing

To improve its positions in oil marketing, KMG acquired a 49% stake in PETROSUN operating in Kazakhstan since 17 January 2012.

Following the acquisition of the 49% stake in PETROSUN, KMG's share in the domestic market for oil products stands at 80%.

PETROSUN LLC's core activities:
- foreign trade, commerce, and export and import;
- sales of hydrocarbons and their derivatives;
- refining of hydrocarbons and their derivatives;
- procurement and refining of crude oil, natural gas, oil products, lubricants and fuels in Kazakhstan and elsewhere, including treatment, storage, sales and marketing, distribution, and import and export of crude oil, oil products and hydrocarbons and their derivatives, and procurement of materials and equipment (beyond the scope of natural monopolies);
- acquisition, storage, and transshipment of oil products; and
- oil product transportation.

PETROSUN aims to operate efficiently in Kazakhstan's oil product market, ensure energy security and maximise its profit from selling lubricants and fuels in the domestic oil product market and exporting them.

PETROSUN refines the acquired crude oil at the following Kazakhstan refineries. For 2023, the company's actual share in total refining was as follows:
1. Shymkent Refinery – 66%;
2. Pavlodar Refinery – 45%;
3. Atyrau Refinery – 31%.

PETROSUN's oil products made at these refineries are sold to farm operators in the spring and autumn farming seasons, KTZ – Freight Transportation for the needs of its locomotive divisions, major filling station networks in Kazakhstan, buyers on an exchange, and town-forming industrial enterprises.

Kazakhstan refineries source and refine oil under the combined scheme, whereby the crude is supplied to and processed at refineries by subsoil users, their affiliated or associated marketing entities, and the refineries in their capacity as oil product makers. After processing oil, a refinery returns the resulting oil products to oil owners (resource holders) or sells them. In both cases, the products are then shipped from the refinery.

Production and marketing of oil products derived from KMG's own oil

Ozenmunaigas, Embamunaigas, Kazakhturkmunay and Urikhtau Operating supply Atyrau, Pavlodar and Shymkent refineries with KMG's own crude oil, and the resulting refined products are subsequently sold wholesale domestically or for export.

In 2023, Ozenmunaigas, Embamunaigas, Kazakhturkmunay and Urikhtau Operating supplied 4,980 thous. tonnes of crude oil for refining, including 2,452 thous. tonnes to Atyrau Refinery, 1,830 thous. tonnes to Pavlodar Refinery, and 698 thous. tonnes to Shymkent Refinery. The refineries' combined output for the year was 4,474 thous. tonnes of commercial oil products, including 71% of light products, 19% of dark products, 0.5% of petrochemicals, and 9% of other oil products.

Refinery output of oil products derived from KMG's own oil in 2023, thous. tonnes

Oil products	Atyrau Refinery	Pavlodar Refinery	Shymkent Refinery	Total	Average oil product wholesale prices over 12M 2023, KZT per tonne
Light	1,501	1,191	494	3,186	214,689
Dark	486	273	97	856	140,067
Petrochemicals	21			21	240,731
Other	157	212	41	410	40,772
Total	**2,165**	**1,676**	**633**	**4,474**	**184,592**

Note: light products include motor gasoline, diesel fuel, and jet fuel.
Dark products include fuel oil, vacuum gas oil, bitumen, and heavy petroleum feedstock.
Petrochemicals include benzene and paraxylene.

KMG sells oil products wholesale after the oil purchased from Ozenmunaigas, Embamunaigas, Kazakhturkmunay and Urikhtau Operating is refined at refineries in Kazakhstan. In 2023, KMG sold 4,940 thous. tonnes of oil products, primarily light products and fuel oil (79%).

The bulk of oil products was sold domestically (4,224 thous. or 86% out of 4,940 thous. tonnes), and the remainder was exported (716 thous. tonnes). The share of oil product exports in total sales for 12M 2023 was down 12% year-on-year due to a ban on light product exports.

Wholesale of KMG oil products produced in the Republic of Kazakhstan, thous. tonnes

Product	2021			2022			2023		
	domestic market	export	total	domestic market	export	total	domestic market	export	total
Petrol	1,195		1,195	1,333	7	1,340	1,529		1,529
Diesel fuel	1,291	57	1,348	1,513		1,513	1,512		1,512
Jet fuel	120		120	161		161	165		165
Fuel oil	241	542	783	265	588	853	205	504	708
Vacuum gas oil		166	166		105	105		81	81
Bitumen	83		83	125		125	87		87
Coke	79	66	144	56	65	121	50	103	154
Sulphur	3	17	20	5	14	19	12	9	21
Benzene		4	4		3	3		12	12
Paraxylene		25	25		34	34		8	8
Liquefied gas	162	1	163	204		204	230		230
Heating fuel	4		4				3		3
Process fuel	382		382	408		408	411		411
Other	18		18	22		22	21		21
Total	**3,577**	**877**	**4,454**	**4,091**	**816**	**4,908**	**4,224**	**716**	**4,940**

In accordance with Technical Regulations of the Customs Union 013/2011 On Requirements for Motor and Aviation Gasoline, Diesel and Marine Fuels, Fuels for Jet Engines, and Fuel Oil (CU TR), produced fuel conforms with K4 and K5 ecological classes (similar to Euro-4 and Euro-5).

The CU TR does not allow for metal-based additives (manganese, lead, and iron) in motor gasoline and diesel fuel, with sulphur and benzene content not to exceed 50 mg/kg and 1%, respectively.

The upgrade sought to improve the quality of motor fuels to K-5 (similar to Euro-5).

As motor engines running on such fuel generate exhaust gases, the key source of anthropogenic impact on human health, the project also helped reduce the amount of harmful substances as follows:

- sulphur (source of SO_2) – by 10 times;
- aromatic compounds (source of soot) – by 1.5 times;
- benzene (source of benzopyrene, a Group 1 carcinogen) – by 5 times.

Export of oil products broken down by share and supply destination

Oil products	2022			2023		
	Volume, tonne	Country	Share, %	Volume, tonne	Country	Share, %
Fuel oil	585,152	Europe	100	496,582	Europe	99%
				6,955	Uzbekistan	1%
Vacuum gas oil	105,467	Europe	100	80,704	Europe	100%
High-purity paraxylene	33,763	China	100	7,579	China	100%
Benzene	1,684	Russia	53	11,621	China	100%
	1,498	Africa	47			
Total coke	18,066	China	30	82,236	China	84%
				7,821	Turkey	8%
	42,978	Russia	70	5,280	Russia	5%
				2,836	Tajikistan	3%
Calcined coke	780	China	20	3,761	Russia	72%
	3,170	Russia	80	1,499	China	28%
Sulphur	8,041	Europe	59	3,558	Europe	40%
	5,577	Africa	41	5,239	Turkey	60%
AI-92 K4 petrol	7,454	Europe	100			
Heavy petroleum feedstock for carbon black production	2,630	Russia	100			
Total	**816,259**			**715,672**		

KMG supplies diesel fuel for agricultural field operations and provides social and production facilities, and institutions, with fuel oil during the heating season.

In 2023, KMG also sold jet fuel to aviation services of the Ministry of Defence, National Security Committee and National Guard of the Republic of Kazakhstan as well as local airports and airlines through KazMunayGas-Aero and exchange trading.

The rest of the volumes are sold wholesale to third parties domestically or abroad.

In 2023, oil product exports were dominated by dark oil products shipped to Europe. Paraxylene, benzene, coke, and sulphur were supplied to Europe, China, Russia, Tajikistan, and Turkey.

KMG procured oil from four fully owned oil-producing subsidiaries (Ozenmunaigas, Embamunaigas, Kazakhturkmunay, Urikhtau Operating) in Western Kazakhstan to be further refined at three refineries (Atyrau, Pavlodar, and Shymkent).

The Company spent KZT 685 bln on such procurement and refining services.

Due to the completion of production testing and preparations for signing an improved model subsoil contract, Urikhtau Operating suspended oil supplies to Pavlodar Refinery in 2H 2023. In the reporting year, Pavlodar Refinery refined a total of 16.4 thous. tonnes of oil from Urikhtau Operating vs the planned 28.3 thous. tonnes.

In line with oil product supply plans approved by Kazakhstan's Ministry of Energy, motor gasoline, jet fuel, and bitumen were traded on exchange. In November 2023, KMG also started exchange trading of diesel fuel amounting to 10% of total sales under the said plans.

Imports

In 2023, KazMunayGas imported diesel fuel to make up for a domestic shortage occurring on the back of price disparity with neighbouring states and a resulting fuel outflow. All imported volumes were sent to KTZ – Freight Transportation, a subsidiary of Kazakhstan Temir Zholy.

Total demand exceeding total supplies amid regulated prices made it impossible for Kazakhstan refineries to meet growing domestic needs for diesel fuel despite their operation at full capacity.

In furtherance of the order of the Chairman of Samruk-Kazyna's Management Board issued on 30 January 2023, KMG imported 148,665 tonnes of diesel fuel from Russian refineries from February to May 2023.

Additionally, to secure the availability of required stocks, the Fund commissioned Kazakhstan Temir Zholy to independently purchase up to 150 thous. tonnes of diesel fuel from Russia by the end of 2023. At the initial stage, KMG provided Kazakhstan Temir Zholy with advice on such independent purchases.

To prevent such shortages going forward, Kazakhstan refineries are building diesel fuel stocks. Together with the Ministry of Energy, KMG monitors EAEU prices to gradually raise price caps for oil products, reach price parity, and reduce fuel outflow.

Refining in Romania

The core business of KMG International is hydrocarbon refining, as well as wholesale and retail sales of oil products. The KMG International-owned Petromidia Refinery is responsible for primary hydrocarbon refining, with the Vega Refinery focusing on secondary refining. The Petromidia and Vega refineries operate according to the model where refineries purchase hydrocarbons for their own account, refine them, and then sell them either wholesale or retail through an owned retail network of filling stations.

KMG International also owns a major petrochemical complex producing polypropylene and low- and high-density polyethylene (LDPE and HDPE). In addition, KazMunayGas Trading AG, the trading subsidiary of KMG International, is focused on trading in crude oil and oil products produced by KMG International refineries or by third parties.

Refining volumes at KMG International assets (Petromidia and Vega refineries) decreased by 4.3% to 5,387 thous. tonnes following an incident at a mild hydrocracker in mid summer 2023. Currently, repairs are still ongoing at the unit and are to be completed at the end of Q1 2024 due to large-scale work on reactors to ensure their integrity and continued safe operation of the unit.

Hydrocarbon refining volumes (net to KMG), thous. tonnes

Refinery	2021	2022	2023
Petromidia Refinery	4,586	5,258	5,012
Vega Refinery	321	373	374
Total	**4,907**	**5,631**	**5,387**

Oil product output (net to KMG), thous. tonnes

Refinery	2021	2022	
Petromidia Refinery	4,470	5,142	4,848
▪ Light[1]	3,590	4,075	4,269
▪ Dark[2]	530	889	411
▪ Other	152	178	168
Vega Refinery	320	370	373
▪ Dark	93	100	105
▪ Other	226	270	268
Total	**4,790**	**5,512**	**5,221**

In 2023, Petromidia's refining margin calculated as the difference between Urals crude prices and oil product prices (petrol, diesel fuel, naphtha, liquefied gas, jet fuel, fuel oil, propylene, sulphur, and oil coke) amounted to USD 87 per tonne as the company responded fast to market changes by streaming and maximising output of high-value products.

Petromidia Refinery's refining margin

Unit	2021	2022	2023
USD per tonne	7.2	135	87
USD per bbl[3]	1	17.8	11.5

In 2023, crude oil volumes for resale marketed through KMG International's trading operations totalled 7.64 mln tonnes.

Crude oil for resale, thous. tonnes

KMG International's retail network

The 44 stations retail network construction project is part of KMG International's long-term strategy; the focus is on developing the retail segment by expanding on the Romanian market considered the most attractive for retail sales. The project's key mission is to increase the Company's share of the retail oil product market in Romania. Project progress update:

- In February 2023, KMG's Investment Committee approved construction completion and commissioning of 12 highway filling stations as part of CNAIR 1 tender and suspended the construction of standard stations until a decision is made regarding the Spectrum project. Material and equipment purchases along with construction and installation at six filling stations as part of CNAIR 2 tender were also suspended.
- In August 2023, following KMG's letter 42/6438, a decision was made to start obtaining permits for CNAIR 2 locations budgeted at USD 70 thous. per location.
- In November 2023, a joint meeting of working groups from Samruk-Kazyna, KMG and KMG International N.V. decided to suspend the Spectrum project. In light of this decision, the construction of six highway filling stations as part of CNAIR 2 tender held in 2022 proceeded on an increased budget, while the project for standard stations will go on within the established budget of up to USD 1.8 mln per station.
- CNAIR 1 tender saw 12 highway filling stations constructed and 11 opened. The last station was completed in December 2023 and put in operation in February 2024.

1 Petrol, diesel fuel, jet fuel, and LNG.
2 Oil coke, fuel oil, natural gasoline.
3 To convert tonnes to bbl a conversion factor of 7.6 was used.

Production suspension at Petromidia Refinery

In summer 2023, Petromidia Refinery had an incident resulting in a partial shutdown of production.
An investigation of the KMG International commission identified violation of procedures by the operating personnel as the root cause of the incident, with remedial action taken with respect to responsible persons and procedures. The fire partially disrupted the operation of the mild hydrocracker's static and rotating equipment. There were no victims in the incident, with a Global Security Systems fire engine driver sustaining damage as he bruised his ankle while jumping from the ladder.
At present, repairs at the mild hydrocracker are completed, with the unit back on track from 26 February 2024.

Refinery development plans

As part of new laws drafted by the Romanian government in 2023, KMG International updated investment initiatives aimed at compliance with these laws, among other things.

- On 1 January 2023, Romania introduced a requirement on the minimum percentage of the next-generation biofuel. On 6 December 2022, the government approved Ordinance No. 163/2022 for supplementing the legal framework on the promotion of the use of energy from renewable sources. Among others, the document introduced a requirement for the minimum percentage of the next-generation biofuel of at least 0.2% in 2023, at least 1% in 2025, and at least 3.5% in 2030.
- On 20 July 2023, the Romanian government passed a law obliging fuel suppliers to produce or buy green hydrogen starting from 2025.
- On 13 September 2023, the European Parliament approved new regulations requiring electric charging pools for cars with at least a 400 kW output to be deployed along main EU roads by 2026, with the network's power output increasing to 600 kW by 2028. For trucks and buses, charging stations have to be provided every 120 km.
- On 9 October 2023, the EU Council adopted a new regulation forcing jet fuel suppliers to incorporate 2% of SAF in 2025 and 6% in 2030.

New projects

CHP construction project: approved by KMG's Investment Committee on 16 March 2020, the project will provide all the necessary steam and electricity to the Petromidia Refinery.

The reporting year saw certain delays in the overall performance under the EPC contract. On 22 March 2023, Calik Energy ("Calik"), a Turkish general contractor, suspended work due to the delay in signing Addenum No. 2 to the EPC contract and relevant payment.

On 19 January 2024, Addendum No. 3 to the EPC contract was signed providing for work completion with 37 months before 30 June 2024.

For the purposes of project benefit analysis, the initial date is 1 October 2024, which will give the parties some extra time to obtain all work permits, among other things.

Dolphin project

The Dolphin project for refineries is a programme to improve operational efficiency with a focus on continuous improvement, energy efficiency, maintenance, and organisational efficiency.

In 2012, after implementing the 2010 investment package, Rompetrol Rafinare started developing a Dolphin programme running from 2014. Its primary objective is to fully unlock the potential of Petromidia and Vega platforms. Every year, in pursuance of these goals, the company introduces sustainable improvements and enhances the existing processes to boost productivity, reduce technology losses, and deliver positive financial results.

In 2024, as part of Dolphin 8, Rompetrol Rafinare will continue to implement ideas and low-cost projects aimed at increasing energy efficiency and bettering operational performance.

Petrochemicals

KMG will be strongly involved in developing Kazakhstan's petrochemical industry with support from the government, which is expected to significantly boost the national economy as growth in the petrochemical sector will have a multiplier effect on the entire domestic market.

Key objectives of KMG's petrochemical projects:
- build the first gas chemical complex and establish a petrochemical cluster in the Republic of Kazakhstan;
- use the available large volumes of gas for the petrochemical complex;
- manufacture export-oriented products with high added value;
- produce polymers to diversify industry sectors.

Polypropylene

About KPI Inc.

Kazakhstan Petrochemical Industries Inc. Limited Liability Partnership (KPI Inc.) is the operator of Phase I of the first integrated gas chemical complex project in the Atyrau Region. Established in 2008, the Partnership has the abbreviated name KPI Inc.

Project participants: National Company KazMunayGas with 49.5%; SIBUR Holding with 40%, Samruk-Kazyna Ondeu with 9.5% (the sole member of Samruk-Kazyna Ondeu is Sovereign Wealth Fund Samruk-Kazyna. Samruk-Kazyna Ondeu was established to carry out the commission of the President of the Republic of Kazakhstan to implement projects in the chemical industry); Firm Almex Plus with 1% (a private investor, member of a major Kazakhstani holding group, Holding Group ALMEX).

KPI Inc. polypropylene production was officially launched in November 2022 as part of Phase I of the integrated gas chemical complex construction project in the Atyrau Region. Polypropylene is used as feedstock in mechanical engineering, medicine and electrical engineering, production of packaging materials, containers, fibre, pipes and fittings for hot water supply, office equipment, consumer electronics, consumer goods, outdoor and office furniture.

Plant highlights

A capacity of 500 thous. tonnes of polypropylene per year represents:

- about 1% of global polypropylene production;
- 26.3% of total polypropylene production in the Russian Federation;
- more than total polypropylene production in Turkmenistan, Uzbekistan, and Azerbaijan.

Feedstock: propane from the Tengiz field, free of harmful impurities, thus minimising the environmental impact.

Technologies used: Catofin (propane dehydrogenation) and Novolen (propylene polymerisation) technologies by Lummus Technology Inc. (USA).

- Similar complexes have been built in five countries (Saudi Arabia, USA, Belgium, South Korea, and China).
- 77% of equipment was manufactured in Europe, the USA, South Korea, Japan, and India.

Project cost: total project cost – USD 2,630 mln, including EPC contract – USD 1,865 mln.

Funding: USD 2 bln (loan from China Development Bank, PRC).

New jobs:

- during construction (temporary) – over 4,000;
- during operation (permanent) – 630.

General contractor: China National Chemical Engineering Co. (CNCEC, PRC).

Effect of the project:

- covering Kazakhstan's domestic demand (import substitution) for polypropylene (Kazakhstan market capacity is about 50 thous. tonnes per year);
- opportunities for SMEs to make higher value-added products from polypropylene for the construction, medical, automotive, food processing, textile industries, etc.;
- new jobs in SMEs and related industries;
- the contribution to the country's GDP will be up to 1%.

Current status

Currently, work is underway to bring the entire complex to a stable operating mode. Construction and installation have been completed, and off-site facilities, propane loading rack and propane storage park have been put into operation. Commissioning works are underway. Given the scale and complexity of production processes and the products, and the fact that this is Kazakhstan's first petrochemical plant, coupled with the industry's specific requirements, it takes a long time to achieve stable production across the entire complex.

2023 results

Today, KPI Inc. produces six polypropylene grades in accordance with its grade range offering (with the total of nine grades based on the grade range and 64 grades based on the project design):

- PP H270 FF (1105 RC)
- PP H350 FF (1105 SC)
- PP H120 GP (1100N)
- PP H030 GP (1100K)
- PP H031 BF (1104K)
- PP H036 BF (1104K)

Production of the remaining three polypropylene grades is expected to be set up in January 2024.

Another highlight of this year was the launch of production of phthalate-free polypropylene grades (used to produce more environmentally friendly end products).

KPI Inc. has also developed its Production Stabilisation Programme for 2024 to achieve maximum performance based on the Uptime indicator allowing to detect production losses and find ways to eliminate them for a systematic and effective loss identification.

To quickly train the production team, a Standard Operating Procedure (SOP) has been introduced offering step-by-step instructions for young specialists.

Over the reporting year, some 50 Kazakh manufacturers have already switched to KPI Inc. polypropylene praising its quality. It is fair to say that KPI Inc. has started to fully cover domestic demand in polypropylene.

2023 production update

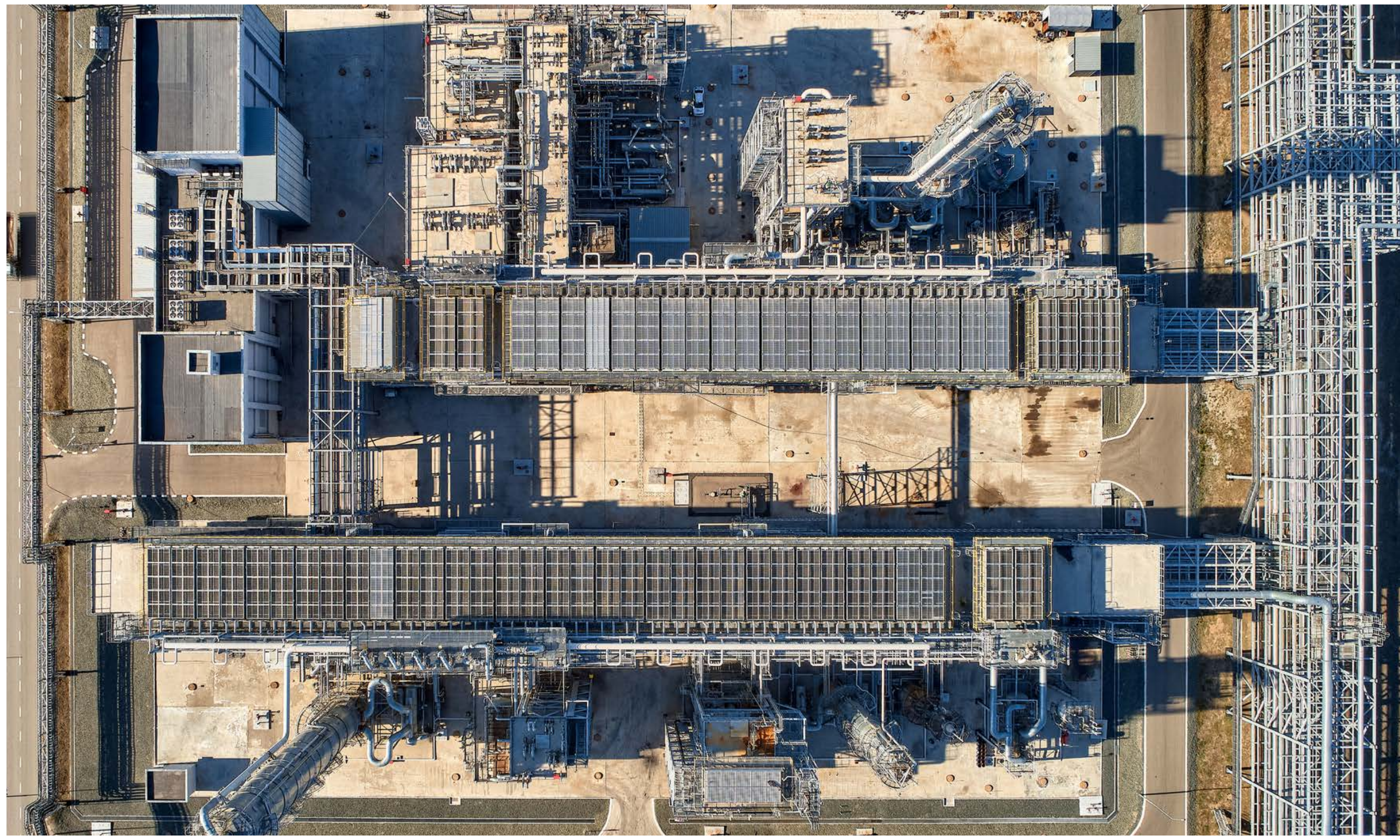
Product	January–December
Feedstock, tonnes	
Propane	248,189
Polypropylene, tonnes	
PP H085 CF/7	0
PP H350 FF/7	1,040
PP H270 FF/7	2,600
PP H030 GP/7	111,228
PP H120 GP/7	4,149
PP H253 FF/7	0
PP H250 GP/7	0
PP H031 BF/7	2,600
PP H270 GP/7	520
PP H036 BF/7	1,563
PP H015 TR/7	520
PP H 030 TR/7	43,227
PP H 070 TR/7	4,268
PP H 150 TR/7	3,061
PP H 300 TR/7	1,002
Industrial grades	4,262
Total:	**180,041**

2023 events

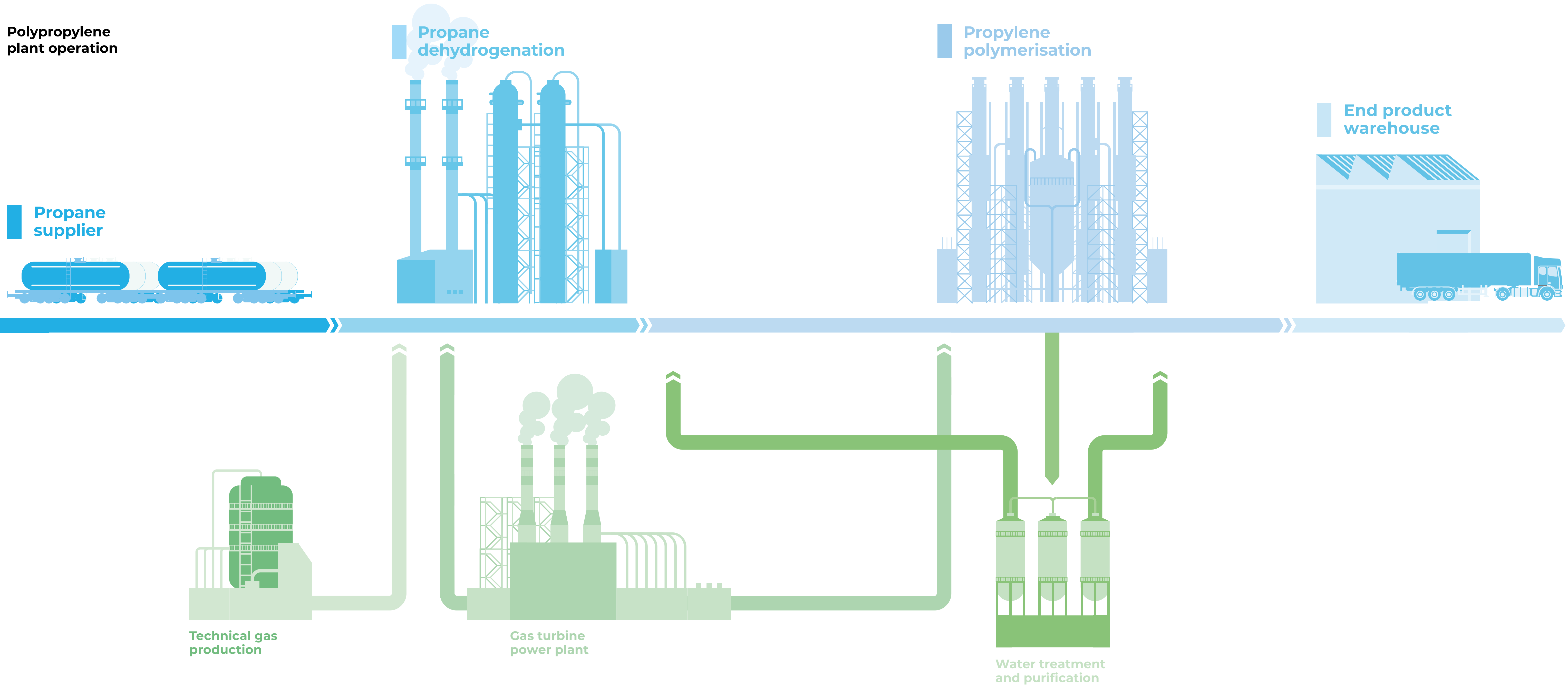
- On 22 October 2023, a full power outage occurred with no power supplied from KUS' steam and gas turbine power plant resulting in a technological failure at the Complex and emergency shutdown of the propane dehydrogenation and polypropylene production operations. This incident will impact the timing of warranty testing and commissioning of the Complex facilities.
- Commissioning certificate will be signed after the completion of full adjustment and test running of the equipment at designed capacity, Licensor inspection, completion of operational and warranty tests, as well as the completion of claim settlement procedures involving CNCEC.
- Commissioning a petrochemical complex takes some time given the complexity of the production processes and the fact that this is Kazakhstan's first project of its kind.

Expected deliverables

- creation of a petrochemical cluster in the Republic of Kazakhstan for the production of petrochemical products using feedstock from the Tengiz field;
- manufacture of export-oriented products with high added value;
- production of polymers to diversify national industry sectors;
- headcount at KPI Inc. totals 628 employees.



Polypropylene plant operation



Step one

Tengizchevroil ships feedstock gas by rail to a plant located 40 km away from the regional centre.

Step two

Propane (C_3H_8) comes from Tengiz already purified from harmful substances. Each of the eight 145-tonne reactors of South Korean Wooyang HC (the heart of the plant) converts (dehydrogenates) propane into propylene (C_3H_6) with the release of hydrogen.

Step three

Polypropylene (C_3H_6)n is produced by polymerisation at a Lummus Technology (USA) plant, there being only six such plants in the world.

Environmental safety

The production process is associated with minimal water consumption: 82% of the liquid used is returned to the production cycle, which partially compensates for the energy costs of endothermic operations.
As a consequence, there are no emissions to vaporisation fields. In other words, the production is as environmentally friendly as it can be.

Polyethylene

As part of Phase II of the integrated petrochemical complex construction, on 7 November 2022 KMG and SIBUR signed binding documents for joining the Polyethylene (PE) project. The move was in line with KMG's strategy to join forces with a strategic partner which is among Top 5 polymer companies in the world and has a strong track record of successfully delivering large-scale projects. The project's annual design capacity is 1,250,000 tonnes of polyethylene. The project is expected to be completed in 2028.

It will be required to supply feedstock (ethane) to the PE project. To this end, negotiations are ongoing with Tengizchevroil to consider building a gas separation unit with a capacity of 9.7 bln m3 (the GSU) to create infrastructure for extracting ethane from dry gas. Preferential government funding for the GSU is also being worked out.

The PE project is implemented as part of the National Project "Sustainable economic growth aimed at improving the welfare of Kazakhstanis", and meets KMG's long-term strategic goals, which include improvement of the value chain efficiency, business diversification and expansion of the hydrocarbon product portfolio.

One of the main objectives for KMG and the entire oil and gas industry in Kazakhstan is the processing and commercialisation of re-injected associated gas, especially at the major oil and gas projects (Tengiz, Kashagan and Karachaganak). A number of projects in this field are underway in Kazakhstan, including the processing of propane (polypropylene production), ethane (polyethylene production) and butane (butadiene production) from the Tengiz field, as well as construction of gas processing facilities at the Kashagan field.

In addition to its advantageous location close to the feedstock production facility, the key competitive advantages of the PE project include:

1. high ethane fraction content (up to 14%) in the feedstock;
2. attractive cost of feedstock;
3. lower infrastructure costs, as they are split among several projects;
4. advantageous location and access to main markets;
5. accumulated KMG experience and expertise in implementing large-scale projects of refining facilities upgrade and construction.

Polyethylene and ethylene copolymers serve as the basis for a wide range of products widely used in the national economy: sewer, water and gas pipes, fittings, films of all grades (food, packaging, bags, etc.), fibres, non-woven materials, monofilaments, film threads, electrical insulation, shells for boats and cross-country vehicles, technical equipment parts, containers (bottles, crates, jerrycans, etc.), technical, household and medical items, for the manufacture of various containers of large and small size, pallets, crates, etc.

Granulated polyethylene is a non-hazardous non-toxic product. It does not produce toxic emissions at room temperature and is not harmful to human health if in contact with skin. No special precautions are required for working with it. However, small polymer dust when breathed in and entering the lungs can cause sluggish fibrotic changes in the lungs. Due to its low conductivity, polyethylene can generate static electric charges.

When in a stable state, polyethylene is not harmful to the environment as it does not form toxic compounds at ambient temperature when exposed to atmosphere or wastewater where other substances or factors are present. Polyethylene and the additives it contains are known to cause no damage to the ozone layer.

The Company plans to supply finished products to both domestic and international markets. The capacity of Kazakhstan's domestic market is estimated at about 180,000 tonnes of polyethylene per year, with an expected annual growth rate of 4% on average. Target export markets include the CIS, China, Turkey, and Europe, where the consumption of polyethylene, including imported one, is also expected to go up. Located at the crossroads of transport corridors connecting Asia and Europe, Kazakhstan has a favourable trade, economic, and strategic position.

Engineering design

Today, the Project is in the active design stage:

- feasibility study developed with a positive opinion received from the government regulator Gosexpertiza (Independent State Expert Review) on 24 November 2023;
- EBD/FEED and design and estimate documentation are being developed.

The main purpose of the current Design Phase is to prepare for the Final Investment Decision (FID) to be made by the Project participants and to move to the Implementation Phase. The current phase includes an assessment of the implementation and subsequent operation risks and opportunities, including in terms of future profitability. Project FID is expected in 2024.

Economic attractiveness of the project

In case of a positive FID, the PE project will improve the efficiency and diversification of the Company's business, as well as the competitiveness of the country's economy as a whole due to the production of advanced and high-margin products.

The PE project has significant social and economic benefits for the country as it will help maintain social stability in the region and create new jobs. In particular, about 8,000 jobs will be created during the construction and about 800 permanent jobs – during the operation.

Indicative cost of the Project is USD 7.7 bln.

The pattern of the PE project financing is under development and involves a combination of borrowings and the Company's own funds.

Strategic partners

On 28 March 2023, SIBUR Holding was officially registered by Kazakhstan's authorities as a 40% stakeholder in joint venture Silleno LLP.

On 16–17 October 2023, binding documents regarding Sinopec's entry into the project were signed at the Belt and Road Forum for International Cooperation in Beijing. The legal formalities surrounding its entry into the project are expected to be completed in Q1 2024 upon receipt of domestic approvals in China.

By the end of 2023 the Project's ownership structure: KMG with a 49.9% stake, SIBUR with 40%, and KMG PetroChem with 10.1%. Target ownership structure: KMG to hold 29.9%, SIBUR and Sinopec each to hold 30%, and KMG PetroChem to hold 10.1%.

Reporting period achievements

- March 2023: SIBUR's entry into the Project finalised;
- April 2023: EBD/FEED development contracts signed;
- October 2023: binding documents on Sinopec's entry into the Project signed;
- November 2023: Process Design Packages (PDP) received in full from Licensors CPChem, Axxens and Univation;
- November 2023: Project's feasibility study approved by Gosexpertiza;
- December 2023: contract signed with the Kazakh Institute of Oil and Gas for the development of design and estimate documentation;
- December 2023: Bank of China engaged as a financial advisor to raise capital.

Other petrochemical projects

Construction of a terephthalic acid and polyethylene terephthalate (TPA/PET) plant, and Urea projects are currently at the preFS stages, specifically:

- in the TPA/PET project, preliminary planning efforts have been taken to supply the Project with feedstock and infrastructure with marketing report developed, and preFS development launched;
- in the Urea project, work is underway to determine feedstock sources and engage a strategic partner with the preliminary process flow diagram reviewed and potential licensors determined.

PreFS results for the projects are expected in Q4 2024.

For reference: indicative annual capacity of the TPA/PET project comprises up to 735 thous. tonnes of polyethylene terephthalate. The Project is scheduled for completion in 2029. Indicative annual capacity of the Urea project comprises up to 1.15 mln tonnes of urea. The project is scheduled for completion in 2028.

As resolved by Samruk-Kazyna, the Butadiene project has been transferred to the Fund with Butadiene LLP re-registered on 19 June 2023.

Service projects

KMG coordinates service projects by maintaining current production levels, implementing new projects, and improving competitiveness as well as takes into account its leading role in maintaining social stability in the regions of its footprint. It should be noted that oilfield services are a socially sensitive sector. As some oilfield services are unprofitable, this inevitably leads to extra costs resulting from the need to retain employees regardless of current operational needs and meet all obligations under the collective bargaining agreement: benefits, medical insurance premiums, and upskilling costs.

Service infrastructure

KMG's service operations are supported by 10 key companies.

Key services:
- drilling and developing oil and gas wells;
- providing well services and workovers;
- transporting freight and passengers, providing field transportation and maintenance;
- providing maintenance, repair, set-up, and testing services for electrical installations and cathode protection; commissioning and routine servicing of electrical equipment;
- operating offshore and onshore drilling rigs, oil and gas production engineering, drilling services;
- servicing measuring equipment, automation systems, and telemechanics, providing telecoms, radio, cable or satellite TV services at oil fields; checking and repairing measuring equipment; and servicing security alarms;
- servicing transport GPS monitoring systems;
- building steel and fibreglass pipelines for oil transportation, building gas pipelines, and constructing oil and injection wells;
- reconstructing oil pipelines, water pipelines, and roads;
- producing and transporting drinking water, ensuring sea water transport;
- catering, maintaining social facilities, etc.

To maintain the current production levels, KMG holds annual activities aimed at ensuring efficient production, improving working conditions, and upgrading fixed assets.

Development projects

Satti jack-up floating drilling rig is the first drilling rig built entirely in Kazakhstan according to the world standards. On 25 January 2019, KMG and SOCAR signed the Memorandum of Understanding as well as Joint Venture Agreement on the rig operation to perform drilling at Apsheron structure, Azerbaijan sector of the Caspian Sea, operated by BP. The upgraded rig capacity increased from 453 to 680 tonnes.

Implementation of the project will improve KMG's competitiveness, provide the opportunity to become one of the offshore drilling leaders, and raise professional qualification of the operational staff according to the global criteria.

To maintain and develop oilfield services, KMG has defined the following strategic initiatives for improving the service quality that will contribute to oil production ramp-up:
- building an efficient target portfolio of oilfield services;
- making oilfield service companies breakeven.

To achieve these objectives, various activities are required, including automation of business processes, implementation of segregated accounting, initiatives to ensure high levels of staff competence, building an effective industrial relations system, increasing the efficiency of processes, API Q1 and Q2 certification.

As part of implementing the IR action plan in the Samruk-Kazyna Group, IR teams/departments were established in all oilfield service subsidiaries from the beginning of 2022 and, accordingly, employees responsible for the development of industrial relations were appointed by service subsidiaries and associates and by contractors. The aim of industrial relations is to maintain a favourable working environment with zero tolerance for adverse social and living conditions and all forms of workplace violence, and develop internal communications and effective interaction with contractors. During the reporting year, scheduled workplace, accommodation and catering audits of contractors were carried out and IR screenings were conducted. Remedial action plans were drawn up and implemented. Throughout the reporting year, IR specialists together with top managers met with contractors' employees to address their issues and concerns in order to stabilise the social situation and dampen the protest mood among contractors' employees.

Certification to API Specification Q2 for oilfield service assets is designed to raise the quality of oilfield service to the level of compliance with the best and accepted practices of API international standards for the oil and gas industry. Work was carried out to implement and adapt the requirements of the API Spec Q2 and an application for certification was submitted.

Subsidiaries and associates rendering oilfield services and prepared for certification:
- Oil Services Company;
- Oil Construction Company;
- MangistauEnergoMunay;
- OzenMunayService.

Implementation period:
- 2022–2026.

New projects

Desalination plant construction

The project of seawater desalination plant is being implemented in accordance with the Nationwide Action Plan and with the Comprehensive Plan of Socio-economic Development of Mangistau Region for 2021–2025. The purpose of the project is to provide Zhanaozen with fresh water for domestic and industrial use and reduce the load on the Astrakhan–Mangyshlak main water pipeline. The planned design capacity of the plant is 50.000 m3 per day. The desalination plant construction forms an integral part of the comprehensive water supply project for Western Kazakhstan. The decision to implement the project was taken after reviewing the concept of reconstructing and expanding the main water pipeline to cover water shortages by 2025.

Given the expected population growth and applicable standards, the population of Zhanaozen will consume about 49.8 thous. m3 per day by 2030.

Progress update:
On 7 June 2023, an EPC contract for the construction of infrastructure worth of KZT 60.2 bln, including VAT (water pipeline to Zhanaozen, gas pipeline, power transmission line, fibre optic communication line, road, etc.) was concluded with KMG Group's oilfield service companies. On 23 August 2023, an EPC contract for the construction of a desalination plant worth of KZT 57.8 bln, including VAT, was signed with a consortium led by Metito LLC (together with Akzhol Kurylys LLP, Caspian HES Consulting LLP, SMK-Atameken LLP). Construction and installation works are underway and are planned to be completed in due time, by the end of December 2024.

The plant is expected to reach its design capacity between January and May 2025.

Innovative technology development

KMG Engineering

KMG Engineering was founded in 2014 to provide comprehensive scientific and engineering support for exploration, production, and drilling of KMG's hydrocarbon resources.

KMG Engineering has its head office in Astana and two branches: Atyrau Branch LLP in Atyrau and KazNIPImunaygas LLP in Aktau, which provide direct real-time support for KMG's assets.

Strategic objectives of KMG Engineering and its branches

- R&D advancement and new technology implementation to develop resource base;
- R&D support for reliable and efficient field operation;
- implementing advanced technologies as part of production digitalisation;
- developing hydrogen energy projects and competencies.

To deliver against its strategic goals, KMG Engineering focuses on addressing end-to-end objectives in the areas of technology development, digitalisation, business process optimisation, IT, HR, and risk management.

Exploration

In 2023, for the first time in its history, KMG conducted pilot seismic operations using unique arrangement of field equipment to study the subsurface geology of the Caspian sedimentary basin, covering depths of up to 20 km. In 2024, the Company plans to test wireless sensors in seismic surveying to streamline timelines and survey areas. Also in 2024, it is planned to test pulse source technology for seismic surveying in environmentally sensitive areas of the Caspian Sea to minimise an environmental impact.

Based on the analysis of geological and geophysical data, five new promising blocks were identified for exploration in the medium and long run – Bozashi, South Kalamkas, South Kamyshitovy, Zhylyoi, and Kairan – Aktoy – Tazhigali Subsalt. KMG Engineering also revised project seismic profiles and measured investments in seismic work at three underexplored basins.

The geological survey of the areas of geological exploration has been completed, and the processing of seismic data for the Kalamkas-Sea and Hazar deposits continues. A dynamic analysis of 3D seismic data was done for certain areas, and R&D assistance was provided in well drilling and testing.

The company drafted reports on reserves reestimation, increase and conversion, and approved design documents for constructing a 5,500 m deep exploration well in the Turgai Paleozoic block. A hydrocarbon exploration project at Karaton Subsalt was approved, while those for the Taisoigan-1 and Taisoigan-2 blocks are at the development stage.

Well drilling and workover

KMG Engineering's Online Drilling Competence Centre focuses on real-time drilling control and support as key to stable field production. Drilling of new wells, including horizontal ones, is one of the main ways to sustain oil production at the mature fields of KMG's subsidiaries and associates. This helps reduce the total number of wells, make oil recovery more efficient and tap into new reservoirs, including those with high-viscosity oil.

In 2023, Embamunaigas drilled 16 horizontal wells, with the average reservoir penetration of 86%, which proves the applied techniques and solutions as highly efficient. To streamline drilling, 1D geomechanical models were built and updated to gain a deeper insight into the geological structure and select the best drilling parameters.

Cementing quality is important to ensure the reliability of well production strings. In 2023, cementing strength of completed wells at KMG's subsidiaries and associates improved to reach 78.53%. This was possible thanks to continuous analysis and enhancement of relevant technologies, which reduces the risk of incidents during well operation.

Along with drilling new wells, it is vital to conduct overhauls to secure proper well operation in the long run. Efficiency of all types of overhaul is subject to continuous monitoring in order to streamline processes and introduce cutting-edge technologies.

The Company places a special emphasis on the use of cutting-edge technologies and design of new techniques. For example, Radiagreen EME Salt lubricant for drilling fluids and Welltec Light Packer (metal hydraulic expandable packers) serve to make drilling more efficient and construct reliably sealed wells.

Over the last 11 months of 2023, our facilities actively introduced advanced drilling and overhaul solutions, which increased the productivity and efficiency of our operations. After switching to a new BIT 215,9 VT 513 drill bit, the drilling speed has been accelerated by 43.72% and reduced work completion time, improving overall project performance at Zhetybai and Asar fields. Capital and routine well repairs completed, modern lifting equipment and machinery introduced, enhancing reliability and safety of production processes. These results are driven by our ambition to innovate and apply modern solutions.

In 2024, a LED display is planned to be installed to monitor drilling and introduce Petrel and StarSteer geosteering software to cover as much of the target reservoir as possible. Landmark, Techlog and Peloton software will serve to provide technological support aimed at accident-free drilling and cutting down idle time.

All in all, these measures and technologies seek to make oil production more efficient and ensure sustainable field development in the long run.

Production

To ensure stable production levels at its assets, the Company focuses on slowing down the decline of basic production and intensifies rational recovery of residual hydrocarbon reserves. KMG Engineering provides continuous R&D support to drilling, production and refining processes. The key strategies to maintain basic production include boosting performance and reducing the number of inefficient wells. The achievement of these objectives include the analysis of the effectiveness of methods to enhance oil recovery, the identification causes of failure, the development of corrective actions, and improvement of the efficiency of inefficient wells.

To keep geological and hydrodynamic models up-to-date, we created and updated them considering several development scenarios for Kalamkas, Karamandybas, Alibekmola and Kozhasai fields. Sector geological and hydrodynamic models were put in place to assess thermal enhanced oil recovery and chemical flooding techniques.

To develop hard-to-recover reserves more rationally, KMG Engineering provided R&D assistance in implementing measures to enhance oil recovery and drain water, especially as regards low-permeable layers such as fractured carbonate deposits of the Alibekmola field, undeveloped reserves of low-permeability reservoirs of the Uzen field, and the Kenbay high-viscosity oil. It conducted lab studies for chemical enhanced oil recovery (EOR), made various sector geological and hydrodynamic models, and selected the best options in terms of technical and economic parameters. In particular, KMG Engineering conducted tests to select optimal polymers for Kalamkas and Uzen. Pilots were launched to evaluate chemical compositions for profile modification at Kalamkas and waterproofing at several fields.

As part of the research, KMG Engineering tested chemical EOR methods for applicability at Uzen, identified high-potential solutions and conducted a pre-feasibility study followed by recommendations to further test potentially viable technologies.

To standardise approaches and methodology to assess EOR methods, standards for the feasibility study of EOR methods, oil production intensification and waterproofing during planning and testing are currently drafted for KMG's oil producing subsidiaries.

To identify production bottlenecks and hampering factors, KMG Engineering classified such bottlenecks into technological and methodological groups, studied possible solutions and gradually integrated various R&D tools in production processes. Then the company made a review of technological bottlenecks and recommended solutions for key fields of KMG's subsidiaries and associates and drafted detailed schedules to address these bottlenecks and improve EOR efficiency for the said fields.

January 2023 saw the launch of a pilot testing centre, an internet portal to improve communications between potential suppliers and KMG's oil subsidiaries, streamline the procedure to present and assess new technologies, and keep all oil subsidiaries up to date on current and completed pilot tests of such techniques and innovations.

Oil refining and petrochemicals

To build new refining and petrochemical facilities and units, KMG leverages proven modern solutions designed by the leading foreign licensors using their proprietary licences and know-how.

Based on the licences acquired by KMG, licensors develop a FEED project.

A FEED project comprises R&D, design and engineering process solutions, including hardware and controls to ensure products are made from the approved feedstock.

The FEED document contains data required to use the technology (if linked to specific conditions) as a process solution when drafting design documentation for construction.

The project to construct an LPG treatment facility at Pavlodar Refinery relies on a UOP (FEED project developer) technology – Merox. It is an efficient and cheap catalytic process to chemically treat hydrocarbon gases by removing sulphur in the form of mercaptans. The facility has an annual capacity of 100 thous. tonnes.

The project on reconstruction of the diesel hydrotreating plant including integration of a dewaxing unit at Pavlodar Refinery leverages Shell (FEED developer) technology to obtain winter diesel fuel with a cloud point of –28 °C (improvement by 20 °C) as well as K4 and K5 summer diesel fuel. The plant has an annual capacity of 160 thous. tonnes.

KPI Inc.'s polypropylene facility in the Atyrau Region takes advantage of Lummus Technology (FEED developer) processes for propane dehydrogenation (Catofin) and propylene polymerisation (Novolen PP process). A 500 ktpa facility uses cutting-edge production technologies and equipment to make innovative products unique to Kazakhstan.

The technology is a continuous combined manufacturing method with fast processes and process flows (at temperatures from +5,900 °C to –1,500 °C) that can produce explosive mixtures (propane, propylene, ethylene, fuel gas and hydrogen). It is used for small-scale production of customised grades (high-refractive-index, phthalate-free, etc.)

A part of a complex manufacturing facility, the propane dehydrogenation plant with eight reactors has a short main reaction (24 minutes),with propane residence time in the reaction zone of the pyrolysis furnace of 0.2 seconds at 620 °C (pyrolysis intensity).

The facility also represents highly specialised critical production, with processes and hardware associated with a high risk of explosion (including critical operating parameters) and high hazard indicators.

Engineering simulation at Kazakhstan refineries
In 2020, Kazakhstan refineries ran the first engineering simulation systems – software to create a digital twin of a process unit and select an optimal operating mode.

Atyrau and Pavlodar refineries created models of primary and key secondary oil refining processes.

Based on calculations made to optimise operating parameters, process units were running in a test mode between 2022 and 2023.

Atyrau Refinery streamlined the operation of a column at the AVT-3 vacuum distillation unit by increasing its load by 10%. This helped improve the yield and sharpness of oil product separation, with an economic effect equal to KZT 500 mln in December 2023 and estimated at KZT 5 bln for the year.

While testing the calculations, Pavlodar Refinery achieved fuel savings equivalent to KZT 170 mln per year at its bitumen and atmospheric oil distillation units.

As part of a strategic initiative to address the rising demand for light oil products and to adjust Atyrau Refinery’s processes for Tengiz oil, Atyrau Refinery initiated the Efficiency Improvement project. The project will help implement advanced technologies at LG-35–11/300–95 catalytic reformer, delayed coker unit and EDD-ADU-2 unit to boost the output of high-quality fuels such as motor petrol, diesel, and LNG. These measures seek to increase production efficiency and eco-friendliness, with emissions to be cut by 12% from the 2019 level by 2031. The project is expected to run between 2023 and 2027.

Advanced process control system
In 2020, the Company started to introduce an advanced process control (APC) system at Atyrau Refinery.

The APC system works as an autopilot to maintain the unit’s operation within set parameters. The system automatically controls the stability of loading parameters, temperature in columns and furnaces, and the quality of outgoing flows to increase oil product yield, reduce energy consumption, minimise human errors in process control, and boost product quality.

Similar control systems running at ADU-2 and AVDU-3 distillation units helped increase the yield of straight-run petrol and kerosene and gasoil fractions by 0.3% and 0.43%, respectively, with an annual economic effect of KZT 1.2 bln.

In 2024, the system will be fully implemented at a gasoline hydrotreating and catalytic reforming unit at Atyrau Refinery and an oil refining unit of PetroKazakhstan Oil Products.

Efficiency improvement at Atyrau Refinery
As part of the strategic project to boost efficiency at Atyrau Refinery, KMG focused on upgrading and expanding production capacities to meet the demand for light oil products and refine oil from the Tengiz field. The project comprises eight subprojects, including the upgrade of LG-35–11/300–95 catalytic reformer, an increase in LNG production, reconstruction of a delayed coker unit, installation of an extra compressor at the Prime D unit, EDD-ADU-2 upgrade, construction of a pumping station, and design of infrastructure for straight-run naphtha processing. These steps seek to boost the output of quality oil products, streamline logistics and minimise environmental risks to deliver a 12% cut in GHG emissions from the 2019 level by 2031. Scheduled for 2023–2027, the project demonstrates Atyrau Refinery’s drive for innovation and environmental sustainability.

Production ramp-up at Caspi Bitum
At present, KMG is considering the ramp-up of Caspi Bitum refining capacities from 1 to 1.5 mln tonnes of oil per annum, with an annual road bitumen output potentially reaching 750 thous tonnes. This project will ensure the permanent availability of bitumen for road pavement domestically, including during road construction and reconstruction. On top of that, it will help substitute imports with local products and boost the country’s export potential. This is to be achieved through the upgrade of the existing EDD-AVDU primary oil refining unit. The project is scheduled for 2023–2024. In the reporting year, a pre-feasibility study of the Project was developed, a technical audit of the plant was carried out, and the FEED stage of the Project was approved by the KMG Investment Committee.

Developing professional competencies of KMG Group employees

- 1. An electronic library of production equipment and technical documents has been developed using QR codes to provide access to information at production sites.
- 2. Managers and officers in charge can take a 72-hour Workplace Health and Safety course, including nine modules on key requirements.
- 3. Updated tests on industrial safety are available in two languages, and safety courses have been refreshed.
- 4. Videos on safety standards, the Tazalyq project and automated environmental monitoring information system have been prepared.
- 5. Modular educational programmes across five domains have been revised and updated to enhance field development competencies.

Hydrogen energy development

- 1. A feasibility study for low-carbon blue hydrogen has been conducted and a derivative production blueprint developed.
- 2. KMG commenced to draft a water resource atlas to produce green hydrogen and are conducting negotiations with local and foreign institutions.
- 3. International standards for using metal hydride to store hydrogen were analysed and recommendations were issued to be included in the 2024–2027 National Standardisation Plan.
- 4. An international workshop on hydrogen energy has been organised to further educate employees of the Company and its subsidiaries and associates.
- 5. The Company held meetings with potential partners and signed a memorandum of understanding with Mitsubishi Heavy Industries.
- 6. KMG have drafted technical specifications, purchased equipment and conducted start-up at a hydrogen research lab.
- 7. An article was published at International Journal of Hydrogen Energy.
- 8. Employees received training in hydrogen technologies under an international internship programme organised by Japan Cooperation Centre for Petroleum and Sustainable Energy.

Digital technology implementation

Control and analytics centre
In October 2023, KMG opened a new control and analytics centre (CAC), one of the most advanced globally. This is a digital platform to monitor and analyse all processes related to oil and gas production, transportation and treatment in real time.

The centre boasts a huge 4K LED video display occupying over 100 m^2. Supplied and installed by Daktronics, a global leader in LED display manufacturing and integration, the display shows data, such as maps, charts, tables, and videos, from a variety of sources, including satellites, drones, sensors and cameras.

The control and analytics centre is equipped with excellent computing resources and AI to help make analytics- and forecast-driven day-to-day and strategic decisions. It can process and store huge data volumes, while keeping them confidential and secure.

The centre is an important step in KMG’s digital transformation aimed at boosting efficiency, reliability and eco-friendliness of its operations. The CAC is a driving force behind innovation and R&D in Kazakhstan’s oil and gas industry. Its employees working round the clock in any conditions show high professionalism and strong competencies.

FINANCIAL OVERVIEW

Statement from the Deputy Chairman of the Management Board

In the reporting year, the Company delivered sustainable production and financial results, continuing to focus on balanced growth and proper fulfilment of its obligations.

Brent crude traded at an average of USD 82.6 per bbl, down 18.4% year-on-year, when the average oil price was at USD 101.32 per bbl, while KEBCO discount to Brent declined to USD 0.6 per bbl by the year-end.

2023 financial results

Despite the decrease in oil prices compared to 2022, KMG's financial and operational results ensured sufficient stability for the Company in 2023.

Upon the whole, the decrease in the oil prices had a moderate impact on KMG's financial results.

Its EBITDA went down by 20.5% to USD 4.4 bln. At the same time, KMG's adjusted EBITDA, which includes dividends received from joint ventures and associated companies instead of equity share in their profits, amounted to $4.6 billion USD, increasing by 4.7%.

Dividends received from joint ventures and associated companies increased by 35.5% compared to the same period and amounted to $1.4 billion USD.

Capital expenditures on an accrual basis was at USD 1.8 bln and on a cash basis at USD 1.5 bln, showing a year-on-year increase of 51.8% and 52.9%, respectively.

Free cash flow went down 10.9% year-on-year and was at USD 2.2 bln. The reduction is due to the decline in the oil prices and increase in capital expenditures.

Comfortable debt load

KMG maintains a comfortable leverage level. Total debt as at the end of the reporting year was at KZT 3.8 tln or USD 8.3 bln, having decreased year-on-year by 9.6% and by 8%, respectively. The Company's net debt was at USD 3.6 bln, which is a 22.3% drop year-on-year.

In April 2023, KMG made a complete early repayment of eurobonds maturing in 2025, amounting to $500 million USD. It is worth noting that the next major repayment of eurobonds according to the schedule is not expected until 2027.

In December of the reporting year, Atyrau Refinery, a KMG subsidiary, took advantage of favorable currency exchange rates and fully repaid a loan to VTB Bank in the amount of 42.4 billion rubles, equivalent to 213.7 billion tenge. The Company is committed to financial discipline and consistently fulfils all of its financial obligations, and so the investment community sees it as a borrower with a robust credit history.

Credit ratings (S&P, Fitch, Moody's)

Confirming the Company's financial stability, international rating agencies have assigned more positive assessments to the Company. In March 2023, Standard & Poor's reaffirmed the Company's rating at BB+, revising the outlook to "stable". In June of the reporting year, Fitch Ratings upgraded KMG's rating from BBB- to BBB, with a "stable" outlook. At the end of 2023, Moody's reaffirmed the Company's rating, revising the outlook to "positive".

Dividends to shareholders and the growth in share value

As a public company, KMG strives to ensure maximum benefits for its shareholders. In June 2023, KMG paid its shareholders a record-high dividend in the amount of KZT 300 bln or USD 667 mln. Analysis of dividend dynamics over the past years shows that the dividend amount in the reporting year increased more than fivefold compared to 2017. Additionally, we observe a significant growth in the value of KMG's shares, which increased by 37.3% since the listing date by the end of 2023. Considering the dividends paid, the yield for KMG shareholders from the listing date to the end of the reporting year was 43.1%. Furthermore, KMG's market capitalization reached $15.5 billion USD, or over 7 trillion tenge.

Taxes and other social payments

Annually, the Company makes a significant contribution to the national economy through taxes and social obligations. In 2023, the Company paid KZT 1,162 bln as taxes and other mandatory contributions to the country's budget. In addition to implementing social projects in its regions of operation, KMG made social investments under its subsoil use contracts for an amount of KZT 5.6 bln. KMG's balanced approach to ensuring positive financial results and fulfilling its commitments (including social ones) is key for the Company's long-term development.

Summarising the year 2023, we can say that the Company maintains quite a sufficiently stable financial position.

DIANA ARYSSOVA
Deputy Chairman of the Management Board of JSC NC «KazMunayGas»

KMG's credit ratings

KMG intends to maintain investment-grade credit ratings and a strong credit profile, and to support its business image as a reliable borrower. In 2023, the Company's financial stability measures helped KMG improve its credit ratings.

Change in KMG's ratings

- On 9 March 2023, Standard & Poor's confirmed the Company's rating at BB+, and revised outlook to stable reflecting the agency's rating action on Kazakhstan (the rating being confirmed at BBB-, with outlook revised to stable).
- On 3 May 2023, S&P updated the likelihood of government support from high to very high without changing the Company's rating.
- Fitch Ratings upgraded KMG's credit rating on 22 June 2023 from BBB- to BBB with a stable outlook, following an upgrade in its standalone credit profile. This rating aligns with the sovereign rating of the Republic of Kazakhstan.
- On 13 December 2023, Moody's confirmed KMG's Baa2 rating, but revised the outlook to positive indicating confidence in the Company's sustained standalone credit profile. This rating aligns with the sovereign rating of the Republic of Kazakhstan.
- On 26 December 2023, S&P confirmed KMG's BB+ rating, while upgrading its standalone credit profile from BB- to BB.

KMG's credit ratings

Moody's	S&P	Fitch
Baa1	BBB+	BBB+
Baa2 (Positive)	BBB	**BBB (Stable)**
Baa3	BBB–	BBB–
Investment grade		
Ba1	**BB+ (Stable)**	BB+
Ba2	BB	BB
Ba3	BB–	BB–

Kazakhstan's sovereign ratings

Moody's	S&P	Fitch
Baa2 (Positive)	BBB– (Stable)	BBB (Stable)

For more details, see the Shareholder and Investor Relations section

Key 2023 financial results[1]

Revenue, USD mln (KZT bln)

'23	**18,236** (8,320)
'22	**18,860** (8,693)

Free cash flow, USD mln (KZT bln)

'23	**2,157** (984)
'22	**2,421** (1,116)

EBITDA, USD mln (KZT bln)

'23	**4,372** (1,995)
'22	**5,502** (2,536)

Total debt, USD mln (KZT bln)

'23	**8,265** (3,757)
'22	**8,980** (4,154)

Adjusted EBITDA, USD mln (KZT bln)

'23	**4,560** (2,080)
'22	**4,355** (2,007)

Net debt, USD mln (KZT bln)

'23	**3,620** (1,645)
'22	**4,655** (2,154)

Net profit, USD mln (KZT bln)

'23	**2,026** (924)
'22	**2,835** (1,307)

Net profit for the period attributable to the Parent Company's shareholders, USD mln (KZT bln)

'23	**2,105** (960)

[1] For reader convenience, amounts in USD were translated at the average exchange rate for the applicable period (average exchange rates for 2022 and 2023 were 460.93 and 456.21 KZT/USD respectively; period-end exchange rates as of 31 December 2022 and 31 December 2023 were 462.65 and 454.56 KZT/USD respectively).

Consolidated financial results according to IFRS

Indicator	Unit	2021	2022	2023
Dated Brent oil	USD/bbl	70.91	101.32	82.64
KEBCO[1] oil	USD/bbl	–	–	81.7
Average exchange rate	KZT/USD	426.06	460.93	456.21
End of period exchange rate	KZT/USD	431.80	462.65	454.56
Revenue	KZT bln	6,459	8,693	8,320
	USD mln	15,161	18,860	18,236
Share in profit of JVs and associates	KZT bln	680	991	534
	USD mln	1,597	2,151	1,171
Net profit	KZT bln	1,287	1,307	924
	USD mln	3,020	2,835	2,026
Net profit for the period attributable to the Parent Company's shareholders	KZT bln	1,305	1,278	960
	USD mln	3,062	2,773	2,105
EBITDA[2]	KZT bln	2,015	2,536	1,995
	USD mln	4,730	5,502	4,372
Adjusted EBITDA[3]	KZT bln	1,750	2,007	2,080
	USD mln	4,108	4,355	4,560
Free cash flow[4]	KZT bln	756	1,116	984
	USD mln	1,774	2,421	2,157
Total debt[5]	KZT bln	3,746	4,154	3,757
	USD mln	8,676	8,980	8,265
Net debt[6]	KZT bln	1,984	2,154	1,645
	USD mln	4,594	4,655	3,620

For more details, see the Financial Statements section

[1] KEBCO is Kazakhstan's oil grade in trade since 6 June 2022.
[2] EBITDA = revenue plus share in profit from JVs and associates, net, minus cost of purchased oil, gas, oil products and other materials minus production expenses minus G&A expenses minus transportation and selling expenses minus taxes other than income tax.
[3] Adjusted EBITDA = revenue minus cost of purchased oil, gas, oil products and other materials minus production costs minus G&A expenses minus transportation and selling expenses minus taxes other than income tax plus dividends received from joint ventures and associates.
[4] Free cash flow = cash flow from operating activities (including dividends received from joint ventures and associates) minus acquisition of property, plant and equipment, intangible assets, investment properties, exploration and evaluation assets.
[5] Total debt includes bonds and loans (short-term and long-term). Guarantees issued are not included in the calculation.
[6] Net debt = bonds plus loans minus cash and cash equivalents minus short-term and long-term bank deposits. Guarantees issued are not included in the calculation.

Consolidated statement of profit and loss

Indicator	Unit	2021	2022	2023	Change	%
Revenue and other income						
Revenue from contracts with customers	KZT mln	6,459,335	8,693,081	8,319,543	(373,538)	(4.3)
Share in profit from joint ventures and associates, net	KZT mln	680,292	991,310	534,177	(457,133)	(46.1)
Finance income	KZT mln	85,226	120,603	147,245	26,642	22.1
Gain on sale of joint ventures	KZT mln	19,835	0	186,225	186,225	100.0
Other operating income	KZT mln	30,779	22,319	55,378	33,059	148.0
Total revenue and other income	**KZT mln**	**7,275,467**	**9,827,313**	**9,242,568**	**(584,745)**	**(6.0)**
Costs and expenses						
Cost of purchased oil, gas, oil products and other materials	KZT mln	(3,607,202)	(4,960,176)	(4,621,881)	338,295	(6.8)
Production expenses	KZT mln	(721,057)	(1,144,241)	(1,219,722)	(75,481)	6.6
Taxes other than income tax	KZT mln	(461,244)	(677,921)	(594,080)	83,841	(12.4)
Depreciation, depletion and amortisation	KZT mln	(523,044)	(506,900)	(601,204)	(94,304)	18.6
Transportation and selling expenses	KZT mln	(183,439)	(205,352)	(245,525)	(40,173)	19.6
General and administrative expenses	KZT mln	(151,392)	(160,479)	(177,792)	(17,313)	10.8
Impairment of property, plant and equipment, intangible assets, and exploration expenses	KZT mln	(20,724)	(19,917)	(230,580)	(210,663)	1,057.7
Finance costs	KZT mln	(262,823)	(308,055)	(322,073)	(14,018)	4.6
Net foreign exchange gain	KZT mln	17,565	40,089	25,222	(14,867)	(37.1)
Other expenses	KZT mln	(27,714)	(85,424)	(60,124)	25,300	(29.6)
Total costs and expenses	**KZT mln**	**(6,020,157)**	**(8,028,376)**	**(8,047,759)**	**(19,383)**	**0.2**
Profit before income tax	**KZT mln**	**1,255,310**	**1,798,937**	**1,194,809**	**(604,128)**	**(33.6)**
Income tax expenses	KZT mln	(321,248)	(492,377)	(270,348)	222,029	45.1
Profit for the year from continuing operations	**KZT mln**	**934,062**	**1,306,560**	**924,461**	**(382,099)**	**(29.2)**
Discontinued operations						
Profit after income tax for the year from discontinued operations	KZT mln	352,478	0	0	0	0
Net profit for the year	KZT mln	1,286,540	1,306,560	924,461	30,779	(29.2)
Net profit/(loss) for the year attributable to:						
the Parent Company's shareholders	KZT mln	1,304,761	1,278,359	960,483	(317,876)	(24.9)
the non-controlling interest	KZT mln	(18,221)	28,201	(36,022)	(64,223)	(227.7)
	KZT mln	**1,286,540**	**1,306,560**	**924,461**	**(382,099)**	**(29.2)**

Revenue

Revenue for 2023 was KZT 8,320 bln (USD 18,236 mln), down 4.3% year-on-year. The downward trend was attributable to an 18.4% year-on-year decrease in the average Brent crude price.

Share in profit of joint ventures and associates

The share in the profit of joint ventures and associates in 2023 decreased by 46.1% year-on-year to KZT 534 bln (USD 1,171 mln) mainly due to a decline in TCO and CPC profit by KZT 402 bln (USD 864 mln) and KZT 53 bln (USD 114 mln) respectively.

Costs

In the reporting period, the cost of purchased oil, gas, oil products and other materials amounted to KZT 4,622 bln (USD 10,131 mln), reflecting a decrease of 6.8% year-on-year, which was largely due to a lower average price of oil purchased for resale.

Other expenses

Production expenses went up 6.6% to KZT 1,220 bln (USD 2,674 mln) mainly driven by payroll indexation for employees in the regions of operation, as well as growth of transportation and short-term lease expenses.

In the reporting period, transportation and selling expenses totalled KZT 246 bln (USD 538 mln), up 19.6% year-on-year. The growth was attributable to higher sales of oil by KMG Kashagan B.V. and oil products by KMG International N.V.

General and administrative expenses increased by 10.8% to KZT 178 bln (USD 390 mln) driven by higher payroll expenses and a rise in the provisions for the impairment of accounts receivable under IFRS.

Taxes other than income tax declined by 12.4% to KZT 594 bln (USD 1,302 mln) primarily due to decreases in the rent tax for crude oil exports, mineral extraction tax (resulting from lower oil prices), and export customs duty expenses.

Payroll expenses in 2023 amounted to KZT 612 bln (USD 1.341 mln), showing a 15.6% increase year-on-year, and were reflected in production expenses, transportation and selling expenses, and general and administrative expenses in the consolidated statement of comprehensive income.

Finance costs in 2023 amounted to KZT 322 bln (USD 706 mln), an increase of 4.6% year-on-year, mainly due to growing interest expense on loans and bonds amid weaker tenge and marginally higher interest rates.

Impairment of assets

According to the assessment of 2023, the loss on impairment of assets for KMG Group amounted to KZT 230.6 bln (USD 505 mln), up 1,058% year-on-year (from KZT 19.9 bln or USD 43 mln). Due to negative drilling results at Zhenis, and after receiving a notification by Kazakhstan's Ministry of Energy on the termination of subsoil use rights for the Aktoty and Kairan fields, a loss on impairment of assets was recognised in the amount of KZT 114.5 bln. KMG International, a subsidiary of the Company, also recognised a KZT 95 bln loss on impairment of property, plant and equipment based on impairment indicators, including high refining margin volatility in the oil and gas market. In June 2023, Petromidia Refinery, a subsidiary of KMG International, had an incident resulting in a partial shutdown of its mild hydrocracker. Following the assessment of the incident, Petromidia Refinery recognised loss on impairment of property, plant and equipment in the amount of KZT 2.7 bln.

Net profit

Net profit demonstrated a 29.2% year-on-year decrease to KZT 924 bln (USD 2,026 mln). The decline in the price of oil throughout the reporting year is the primary cause of the decline in net profit.

Net profit for the period attributable to the Parent Company's shareholders was KZT 960 bln (USD 2,105 mln). The key reason behind the drop in net profit were lower oil prices during the reporting period.

CAPEX

In 2023, CAPEX on an accrual basis in the Company's segment reporting was KZT 804 bln (USD 1,761 mln). The 50.2% year-on-year growth is mainly due to well drilling expenses at Ozenmunaigas and Embamunaigas, replacement of a section at the Uzen–Atyrau–Samara pipeline, and the Astrakhan–Mangyshlak water pipeline upgrade and expansion expenses.

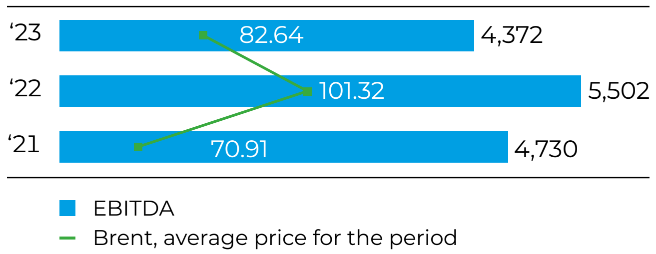
EBITDA

Consolidated EBITDA declined by 21.4% year-on-year to KZT 1,995 bln (USD 4,372 mln) compared to KZT 2,536 bln (USD 5,502 mln) in 2022.

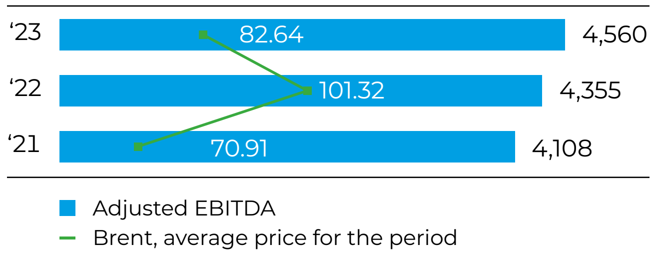
Adjusted EBITDA increased by 3.6% to KZT 2,080 bln (USD 4,560 mln) compared to KZT 2,007 bln (USD 4,355 mln) in 2022.

Given the vertically integrated operations of KMG, we analyse EBITDA broken down by the segments below. We analyse and report segmented information according to IFRS. Segment performance is evaluated based on revenues and net profit. The operating segments of KMG Group are structured and managed in a manner corresponding to the relevant types of products and services and encompass the strategic lines of business for different products and markets. The Company's operations comprise four main operating segments: oil and gas exploration and production, oil transportation, refining and sales of crude oil and oil products, KMG's Corporate Centre, etc. (oilfield service companies and other insignificant companies). KMG presents the Corporate Centre's activities separately, since KMG not only performs the functions of the parent company, but is also involved in operations (processing of crude oil at Atyrau and Pavlodar refineries, and further sale of oil products to both domestic and export markets).

EBITDA in 2021, 2022, and 2023, USD mln



Adjusted EBITDA in 2021, 2022, and 2023, USD mln

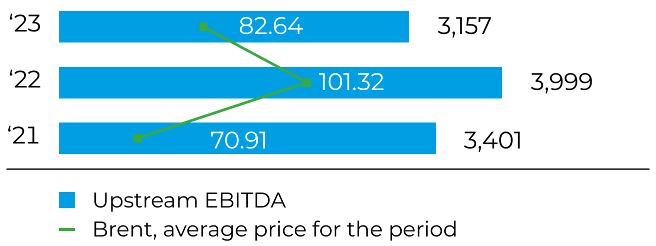


EBITDA by segment for 2021, 2022, and 2023

Segment	Unit	2021	2022	2023	Δ
Oil and gas exploration and production	KZT mln	1,449,088	1,843,075	1,440,106	(402,969)
	USD mln	3,401	3,999	3,157	(842)
	%	73	73	72	(1 p.p.)
Oil transportation	KZT mln	211,356	238,237	198,463	(39,774)
	USD mln	496	517	435	(82)
	%	10	9	10	1 p.p.
Refining and sales of crude oil and oil products	KZT mln	289,422	456,807	393,861	(62,946)
	USD mln	679	991	863	(128)
	%	14	18	20	2 p.p.
Corporate Centre	KZT mln	71,449	60,570	(28,100)	(88,670)
	USD mln	168	131	(62)	(193)
	%	3	2	(1)	(3 p.p.)
Other	KZT mln	12,400	(39,404)	9,843	49,247
	USD mln	29	(85)	22	107
	%	1	(2)	0	2 p.p.
Elimination	KZT mln	(18,422)	(23,063)	(19,453)	(4,641)
	USD mln	(43)	(50)	(43)	(7)
	%	(1)	(1)	(1)	0 p.p.
EBITDA	**KZT mln**	**2,015,293**	**2,536,222**	**1,994,720**	**(541,502)**
	USD mln	**4,730**	**5,502**	**4,372**	**(1,130)**

The improvement in EBITDA by segments in 2023 was largely driven by a 21.9% EBITDA decrease in Oil and Gas Exploration and Production resulting from lower average Brent price.

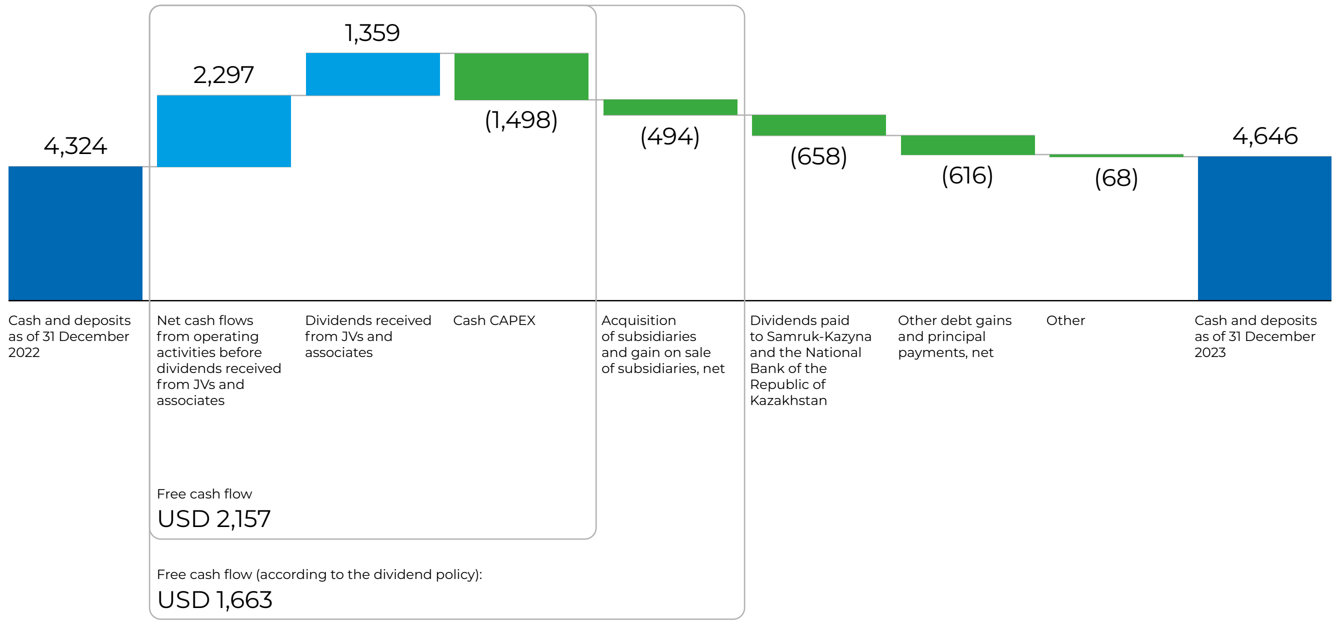
Adjusted EBITDA of the Oil and Gas Exploration and Production segment for 2021, 2022, and 2023, USD mln



Cash flows

Indicator	Unit	2021	2022	2023	Δ
Net cash flows from operating activities	KZT mln	1,209,475	1,567,311	1,667,614	100,303
Net cash flows used in investing activities	KZT mln	(1,084,028)	(2,302,310)	(759,636)	1,542,674
Net cash flows used in financing activities	KZT mln	(273,989)	288,071	(604,362)	(892,433)
Effects of exchange rate changes	KZT mln	26,482	65,755	(15,942)	(81,697)
Change in allowance for expected credit losses	KZT mln	(136)	114	14	(100)
Net change in cash and cash equivalents	**KZT mln**	**(122,196)**	**(381,059)**	**287,688**	**668,747**
Net change in cash and cash equivalents	**USD mln**	**(287)**	**(827)**	**631**	**1,466**

Sources and use of funds and free cash flow, USD mln



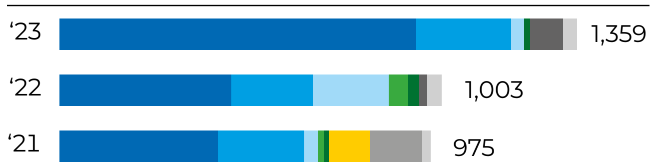
Cash and cash equivalents

Consolidated cash and cash equivalents, including deposits, increased by 5.6% year-on-year to KZT 2,112 bln (USD 4,646 mln) as of 31 December 2023. The increase in cash and cash equivalents is mainly due to a positive net cash flow from operating activities in the amount of KZT 1,668 bln (USD 3,655 mln), which was partially offset by CAPEX and payment of dividends to the shareholders. US dollar-denominated consolidated cash and cash equivalents increased by 7.4% to USD 4,646 mln compared to USD 4,324 mln as of 31 December 2022.

Dividends received

KMG is a parent company of the Group and receives dividends from its subsidiaries and associates, JVs and associated companies. The Company received dividends in the amount of KZT 620 bln (USD 1,359 mln) and KZT 462 bln (USD 1,003 mln) in 2023 and 2022 respectively. In 2023, dividends from TCO amounted to KZT 427 bln (USD 936 mln) and from CPC – KZT 114 bln (USD 250 mln).

Dividends received, USD mln



Company	2021	2022	2023
Tengizchevroil	416	451	936
Caspian Pipeline Consortium	226	214	250
Mangistaumunaigaz	36	200	
Kazgermunai	17	50	35
Kazakhoil Aktobe	14	30	15
KazRosGas	107		1
Petrosun		21	86
JV KTG	137		
Others	22	37	36

Dividends paid

In accordance with Samruk-Kazyna's resolution dated 30 May 2023, KMG paid KZT 302 bln (USD 679 mln) in dividends, including KZT 300 bln (USD 675 mln) of dividends paid to Samruk-Kazyna and the National Bank of the Republic of Kazakhstan.

Statement of financial position

Item	Unit	2021	2022	2023	Δ
Assets					
Property, plant and equipment	KZT mln	6,725,910	6,994,001	7,181,206	187,205
Long-term bank deposits	KZT mln	56,058	59,229	63,891	4,662
Investments in joint ventures and associates	KZT mln	4,145,646	4,947,403	4,821,427	(125,976)
Other non-current assets	KZT mln	1,462,758	14,385	27,409	13,024
Short-term bank deposits	KZT mln	562,352	1,178,138	997,012	(181,126)
Cash and cash equivalents	KZT mln	1,144,193	763,185	1,050,873	287,688
Other current assets	KZT mln	1,759,740	166,230	232,127	65,897
Assets classified as held for sale	KZT mln	795	459	180	(279)
Total assets	**KZT mln**	**15,857,452**	**16,656,890**	**16,942,712**	**285,822**
Total assets	**USD mln**	**36,724**	**36,003**	**37,273**	**1,270**
Equity and liabilities					
Total equity	**KZT mln**	**10,016,906**	**9,867,426**	**10,394,397**	**526,971**
Total equity	**USD mln**	**23,198**	**21,328**	**22,867**	**1,539**
Liabilities					
Long-term loans	KZT mln	3,261,347	3,784,897	3,365,736	(419,161)
Other long-term liabilities	KZT mln	1,145,634	56,628	56,520	(108)
Short-term loans	KZT mln	484,980	369,489	391,358	21,869
Other short-term liabilities	KZT mln	948,585	377,039	277,466	(99,573)
Total liabilities	**KZT mln**	**5,840,546**	**6,789,890**	**6,548,315**	**(241,149)**
Total liabilities	**USD mln**	**13,526**	**14,675**	**14,406**	**(269)**
Total equity and liabilities	**KZT mln**	**15,857,452**	**16,656,890**	**16,942,712**	**285,822**
Total equity and liabilities	**USD mln**	**36,724**	**36,003**	**37,273**	**1,270**

Debt management

KMG's total debt is represented by bonds and loans. The debt portfolio is mainly denominated in US dollars – the currency of principal incomes. Accordingly, the "organic" hedging effect of FX risk is achieved without the need to use derivatives.

The total debt decrease was partially offset as KMG International received a USD 307 mln (equivalent to KZT 140 bln) syndicated loan and borrowed USD 101 mln (equivalent to KZT 46 bln) from Bank of Tokyo Mitsubishi UFJ. Ltd and USD 83 mln (equivalent to KZT 38 bln) from Banque de Commerce et de Placements to finance its working capital.

Total debt

Total debt[1] as of 31 December 2023 was KZT 3,757 bln (USD 8,265 mln), down 9.6% year-on-year in tenge terms (down 8% in US dollars).

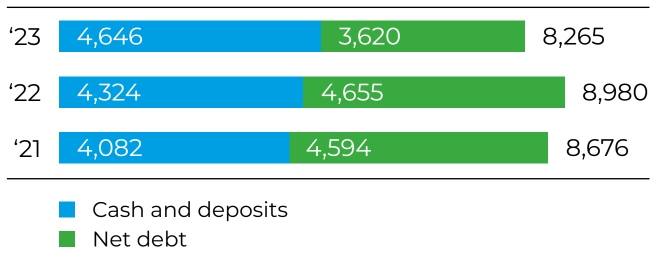
In April 2023, KMG made full early redemption of USD 500 mln Eurobonds due 2025.

In December 2023, Atyrau Refinery fully repaid a RUB42,371 mln (equivalent to KZT 213,729 mln) loan to VTB Bank, including interest, and partially repaid a loan to Halyk Bank in the total amount of KZT 102,674 mln, including interest.

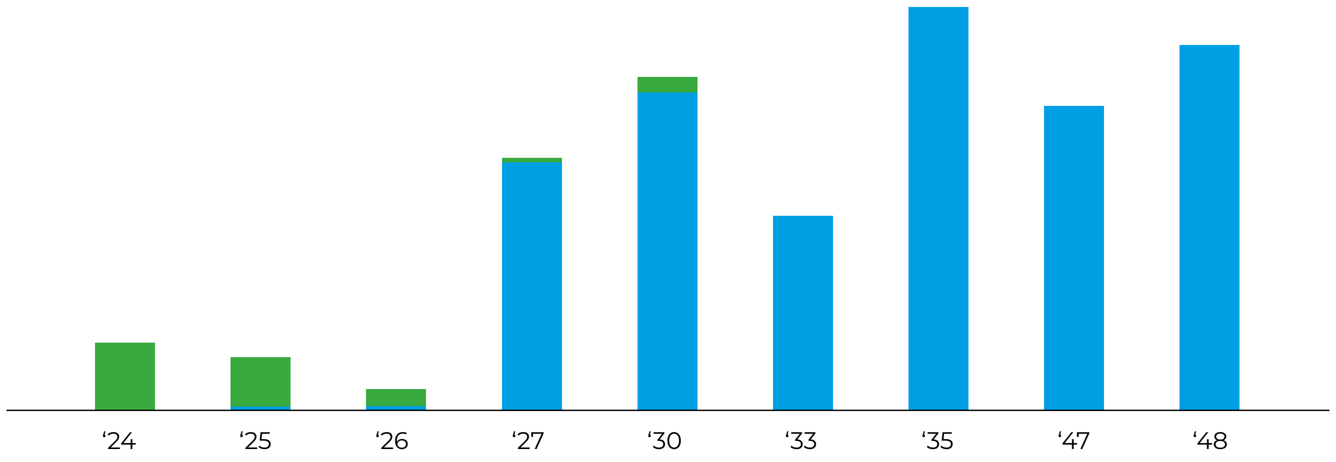
Net debt

Net debt as of 31 December 2023 was KZT 1,645 bln (USD 3,620 mln), down 23.6% year-on-year in tenge terms.

Total debt, USD mln



Debt repayment schedule, USD mln



Company	2024	2025	2026	2027	2030	2033	2035	2047	2048
Bonds	0	16	18	1,018	1,304	798	1,654	1,250	1,500
Loans	278	203	71	19	64				

[1] Excluding guarantees.

ENSURING SUSTAINABLE DEVELOPMENT

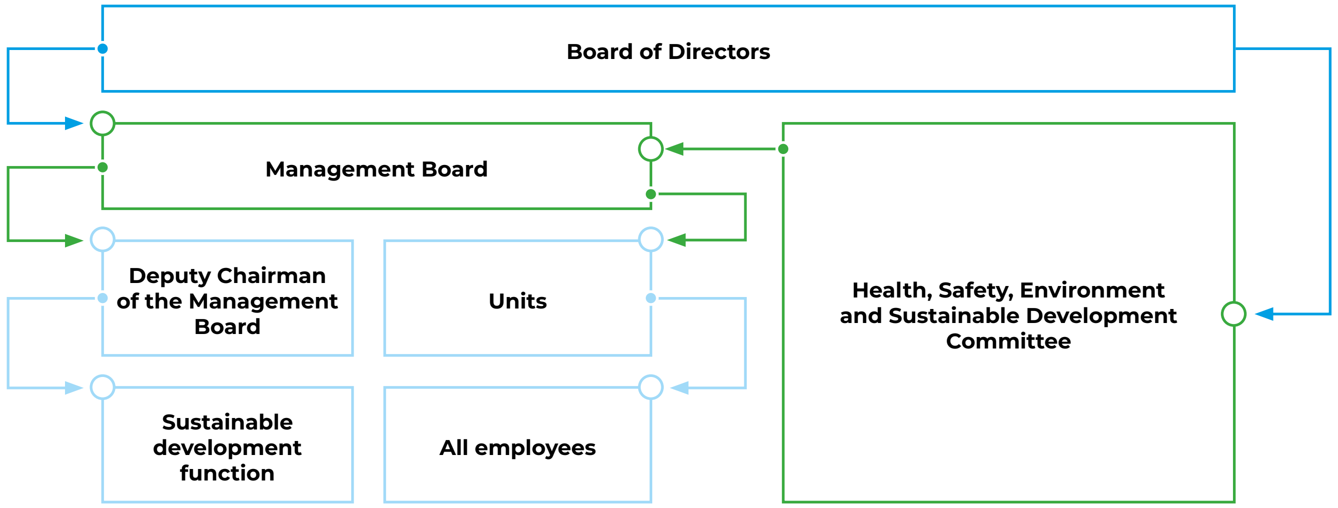
KMG’s principles of sustainability management

In its new 2022–2031 Development Strategy, KMG identified sustainability and gradual reduction in carbon intensity of production as one of its strategic goals. To that end, all business processes and decision-making must embed sustainability principles.

Our sustainability management is based on the following sustainable development principles:

- **disclosure:** we are open for meetings, discussion and dialogue; we are committed to building long-term cooperation with stakeholders based on mutual interests, rights and balance of the interests of the Company and stakeholders;
- **accountability:** we recognise that we are accountable for our impact on the economy, environment and society;
- **transparency:** our decisions and actions should be clear and transparent for stakeholders;
- **ethical behaviour:** our decisions and actions are based on our values such as respect, honesty, disclosure, team spirit, trust, fairness, and impartiality;
- **respect:** we respect rights and interests of stakeholders resulting from the law, contracts, or indirectly, through business relationships;
- **rule of law:** our decisions, actions and behaviour comply with the law of Kazakhstan and resolutions of the Company’s bodies;
- **respect for human rights:** we observe human rights as provided by the Constitution of the Republic of Kazakhstan and international documents;
- **intolerance for corruption:** we declare intolerance for any manifestation of corruption in interaction with all stakeholders;
- **unacceptability of conflict of interest:** personal interests of an officer or employee should not have effect on unbiased fulfilment of their job duties and functions;
- **personal example:** each of us in our daily actions, behaviour and decision-making promotes the principles of sustainable development; officers and employees in management positions should act as role models in terms of adopting sustainability principles.

Comprehensive approach to ensuring KMG's sustainable development



The Board of Directors of KMG engages in strategic oversight and control over implementation of sustainable development principles. It also approves the Company's annual Sustainability Report.

The Board of Directors confirms that ESG matters are of highest priority for the Company. The Board provides strategic governance of KMG's climate agenda and overall sustainability efforts by delegating these matters to the Health, Safety, Environment and Sustainable Development Committee.

The Health, Safety, Environment and Sustainable Development Committee (HSE&SD) of the Board of Directors considers and manages sustainability matters, develops recommendations on sustainability policy, annual Sustainability Report, action plans and other internal documents on sustainability that fall within the remit of the Board of Directors, implements ESG aspects of sustainable development, builds a governance system to oversee sustainability, defines sustainability goals and KPIs, monitors KMG's progress in the area of sustainability, and integrates sustainability into KMG's key processes.

The Management Board is responsible for proper execution and implementation of the Company's sustainability principles, policies, standards, and action plan. It also monitors KMG's sustainability activities and progress against goals and KPIs in this area.

Deputy Chairman of the Management Board, who is responsible for sustainable development, coordinates approaches to achieve goals and KPIs in sustainability initiatives and oversees the preparation of sustainability reports and the implementation of corporate sustainability standards.

The sustainable development function of KMG's Strategy and Portfolio Management Department is responsible for initiating, coordinating and implementing the sustainable development management system, supporting its integration into the Company's business, providing methodology support in sustainability matters, annual preparation and approval of the Sustainability Report, assisting the Company's units as needed in identifying and managing sustainability risks and in developing a stakeholder map and ways of interaction, training in sustainable development, as well as liaising with rating agencies to assign and maintain the Company's ESG rating.

Units of KMG are responsible for implementing the sustainable development management system, identifying sustainability risks, developing a stakeholder map and ways of interaction, running sustainable development initiatives, and preparing information for the Sustainability Report as per international standards.

All employees of KMG, at their respective level, implement sustainability principles and activities by acting as role models and following respective policies and standards.

List of key documents that govern sustainability at KMG Group

E

Environmental

- Environmental Policy
- Energy Policy
- Pollutant Emissions Management Policy
- KMG's 2022–2031 Low-Carbon Development Programme
- Sustainable Development Policy
- GHG Emissions Management Policy
- Site Closure and Land Reclamation Policy for Exploration Sites and Fields of JSC NC KazMunayGas
- Corporate Water Resources Management Standard
- Corporate Standard for Assessing the Environmental Impact of Planned Activities
- Guidelines on Health, Safety and Environment Management System
- KMG's Crisis Management Regulations
- Regulations on Energy Saving and Efficiency
- Quality Manual
- Internal Carbon Pricing Framework
- GHG Emission Monitoring and Reporting Methodology

S

Social

- HR Policy
- Standard Regulations on the Unified System of Internal Communications
- Standard Regulations on Interactions between SACs and Contractors Working on the Sites of JSC NC KazMunayGas
- Code of Leadership and Employee Commitment to Compliance with HSE Requirements
- Occupational Health and Safety Policy
- Policy on Safe Operation of Land Vehicles
- Human Rights and Public Relations Policy
- Corporate Health and Safety Standard Life-Saving Rules of KMG
- Corporate Standard for Occupational Health and Hygiene Management
- Corporate Standard for Process Safety Management
- Corporate Standard for Building HSE Capabilities
- Corporate Standard for Engaging Contractors on HSE
- Corporate Standard for Provision of Workwear, Footwear and Personal Protective Equipment
- Corporate Standard on Mandatory Medical Examinations
- Corporate Unified Occupational Health Management System
- Regulations on the Application of Qorgau Card
- Regulations on Safe Operation of Land Vehicles
- Regulations on Emergency Medical Care
- Employee Health Management Programme
- HSE Improvement Roadmap
- Behaviour-Based Safety Rules
- Rules for Accident Reporting and Investigation
- Rules for Rendering Social Support to Employees

G

Governance

- Corporate Governance Code
- Sustainable Development Concept
- Sustainability Management Guidelines
- Sustainability Report Development Rules
- Code of Business Ethics
- Anti-Corruption Standards
- Anti-Corruption Policy
- Information Security Policy
- Confidential Informing Policy
- Conflict of Interest Management Policy for Employees and Officers
- Corporate Risk Management System Policy
- Policy on KMG and its Subsidiaries and Associates' Relations Under the Divisional Management Structure
- Sanctions Policy
- KMG's Rules for Conducting Anti-Corruption Monitoring and Internal Analysis of Corruption Risks
- KMG's Corporate Regulations for Physical Security and Counter-Terrorism Protection
- Internal Control System Regulations
- KMG's Economic Security Regulations
- Information Security Management System Manual
- Action plan to improve KMG's ESG rating
- Counterparty Due Diligence Policy

ESG risk rating

An ESG risk rating was approved by KMG's Board of Directors as a functional KPI for 2023, reflecting the Company's intent to manage material ESG risks and commitment to sustainability principles in the international oil and gas market. Achievement of the above KPI includes addressing the key ESG matters within KMG Group.

In 2023, Sustainalytics assessed KMG's ESG risk management at 32.3. The Company's risk of exposure to ESG factors is high. The Company received a "strong" score for its ESG risk management from Sustainalytics. At the same time, ESG risk exposure was rated as "high". According to the analysts, KMG's high exposure to ESG risks is on a par with the industry average, i.e. risks inherent in the oil and gas industry.

The key ESG challenges for KMG are reducing emissions and waste, carrying on with the Low-Carbon Development Programme, placing a stronger focus on the health and safety of employees, and aligning its corporate governance system with best global practices. Even so, KMG received a strong risk management score as regards anti-corruption, improved its performance around human capital management, and maintained a stable risk management score for resource utilisation, biodiversity and business ethics.

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Sustainalytics assessed KMG's ESG risk management

KMG will keep streamlining its activities to meet the highest sustainability standards. We will take steps to prevent and eliminate workplace accidents, consistently reduce GHG emissions, and work more to improve social and environmental conditions across our footprint. KMG has developed and approved an action plan to improve its ESG risk rating, which includes 43 measures that cover and factor in environmental and social risks for the business, as well as corporate governance risks for the Company.

Particular attention is paid to enhancing the sustainability culture. Sustainability training courses are held on a regular basis for employees of the Corporate centre and subsidiaries and associates.

KMG did the following to improve its ESG rating:

7 Affordable and clean energy; 13 Climate action	Approved an Action Plan to implement the Low-Carbon Development Programme for 2022–2031
8 Decent work and economic growth; 10 Reduced inequalities; 16 Peace, justice and strong institutions	Put in place and run an accessible complaint review mechanism
8 Decent work and economic growth; 16 Peace, justice and strong institutions; 17 Partnerships for the goals	Conducted tax reporting under GRI 207 and BEPS Action 13
17 Partnerships for the goals	Disclosed the Report on Payments to Government Bodies for public access on the corporate website
5 Gender equality; 10 Reduced inequalities	Improved gender balance on the Board of Directors by adding independent director Saya Mynsharipova and on the Management Board by adding Diana Aryssova
12 Responsible consumption and production; 15 Life on land	Approved the Site Closure and Land Reclamation Policy for Exploration Sites and Fields of JSC NC KazMunayGas
3 Good health and well-being; 8 Decent work and economic growth	Disclosed information on contractors' injury and fatality rates by publishing the Company's reports
17 Partnerships for the goals	Disclosed the annual Sustainability Report in line with the new GRI 2021 standards
8 Decent work and economic growth; 10 Reduced inequalities; 16 Peace, justice and strong institutions	Conducted human rights training for relevant employees
3 Good health and well-being; 15 Life on land	Obtained ISO 14001, ISO 9001 and ISO 45001 certificates for the corporate management of oil operations

Action plan to improve KMG's ESG rating:

- Approve KMG's 2060 Low-Carbon Development Programme and related Action Plan (2024–2025)
- Provide TCFD disclosure as part of KMG's reporting (2024–2025)
- Disclose information in line with CDP's Climate Change questionnaire (on an annual basis)
- Disclose information on activities and risks related to climate change and its impact on the Company (2024–2025)
- Disclose information in line with CDP's Water Security questionnaire (on an annual basis)
- Develop a programme to bring down pollutant emissions (2024)
- Implement the World Bank's Zero Routine Flaring by 2030 initiative (2030)
- Create the Biodiversity Programme (2025)
- Develop and approve the Programme for Development and Engagement of Local Communities in the Regions of Operation (2024–2025)
- Develop the Human Rights Programme and carry out a human rights impact assessment (2025)
- Update and approve KMG's HR Policy (2024)
- Implement the Green Office project (2024–2026)
- On a step-by-step basis, increase the share of women on the Board of Directors and Supervisory Boards to 30% (2023–2030)
- Update and approve the KMG Board of Directors' Succession Policy that supports diversity (2024)
- Approve KMG's Water Resources Management Programme (2024)
- Introduce a pilot project to deploy carbon capture, utilisation and storage (CCUS) (2025)

Commitment to UN Global Compact principles and 17 Sustainable Development Goals

KMG's approach to sustainable development is based on aligning the Company's interests and plans with the basic principles of the UN, universal human values, global trends, and development priorities in Kazakhstan.

KMG reiterates its commitment to all the **ten principles of the UN Global Compact.**

- Principle 1. Businesses should support and respect the protection of the internationally proclaimed human rights.
- Principle 2. Businesses should make sure that they are not complicit in human rights abuses.
- Principle 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
- Principle 4. Businesses should uphold the elimination of all forms of forced and compulsory labour.
- Principle 5. Businesses should uphold the effective abolition of child labour.
- Principle 6. Businesses should uphold the elimination of discrimination in respect of employment and occupation.
- Principle 7. Businesses should support a precautionary approach to environmental challenges.
- Principle 8. Businesses should undertake initiatives to promote greater environmental responsibility.
- Principle 9. Businesses should encourage the development and diffusion of environmentally friendly technologies.
- Principle 10. Businesses should work against corruption in all its forms, including extortion and bribery.

SUSTAINABLE DEVELOPMENT GOALS

KMG is committed to all the **17 Sustainable Development Goals of the United Nations (UN SDGs)**.

We prioritise ten SDGs and twenty-four targets in line with our strategic goals and priorities and report on our contribution to their achievement.

Implementation of sustainable development goals at KMG

SDGs	Priority targets	KMG's contribution
3 GOOD HEALTH AND WELL-BEING Ensure healthy lives and promote well-being for all at all ages	3.6. Reduce the number of deaths and injuries from road traffic accidents	**Travel Management project** In order to improve transport safety and foster a safe driving culture, a phased roll-out of the Travel Management project is planned between 2023 and 2025. It involves the introduction of an automated vehicle monitoring system across KMG's subsidiaries and associates with the largest fleets within KMG Group. The following activities were completed as part of the project roll-out: ▪ Diagnostics of transportation management processes was successfully completed at seven of KMG's subsidiaries and associates (Karazhanbasmunai, Ozenmunaigas, Mangistaumunaigaz, Oil Services Company, Oil Transport Corporation, KazTransOil, and KMG-S). ▪ A detailed roadmap for the Travel Management project roll-out was approved at five of KMG's subsidiaries and associates (Karazhanbasmunai, Ozenmunaigas, Mangistaumunaigaz, Oil Services Company, and Oil Transport Corporation). **Convincer frontal collision simulator** To raise employee awareness across KMG's subsidiaries and associates about the importance of using seat belts, three Convincer crash simulators were acquired by KMG Group (KazTransOil, Ozenmunaigas, Oil Transport Corporation). **Outcome** As part of a campaign to stop road accidents run in 2023, the Convincer simulator was used for practical training, involving 7,783 employees of KMG's subsidiaries and associates. A total of 1,451 employees of KMG's subsidiaries and associates and 454 employees of contractors completed defensive driving training in line with international RoSPA standards
	3.8. Achieve health coverage, including access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines	**Personnel health improvement programme** A personnel health improvement programme is currently being developed for the period of 2024–2028. Its main focus areas include: ▪ implementation of an information system that will enable monitoring and observation of the health status of employees with chronic diseases and production personnel; ▪ introduction of comprehensive preventive programmes for chronic diseases; ▪ adoption of innovative approaches to pre-shift medical examinations; ▪ reduction of employee illness rates, as well as improvement in the accessibility and quality of medical care; ▪ discussions with labour unions regarding conditions for improving employee health at the workplace. **Health insurance** Medical examinations and vaccination of employees are carried out on a regular basis. **Outcome** 100% of KMG's employees are covered by health insurance
	3.9. Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	**Leadership initiatives** The Code of Employees' HSE Leadership and Commitment has been introduced and is being implemented. **Qorgau Card** The Qorgau Card programme is aimed at identifying and reporting unsafe conditions / unsafe behaviour / unsafe actions / hazardous factors

SDGs	Priority targets	KMG's contribution
5 GENDER EQUALITY Achieve gender equality and empower all women and girls	5.1 End all forms of discrimination against all women and girls everywhere 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	KMG staunchly upholds the requirements of labour legislation in the Republic of Kazakhstan, ensuring compliance with its provisions, which prohibit any forms of labour discrimination against individuals based on their origin, social status, position, wealth, gender, race, nationality, language, religion, beliefs, place of residence, age, physical disabilities, or affiliation with public associations. Our recruitment processes are conducted without any restrictions or biases related to gender, age, or any other characteristics. A unified system of remuneration and social benefits is established for all. **Increasing the share of women on the Board of Directors and Supervisory Boards** across KMG Group to 30% by 2030 **Promoting WEP**s established by UN Women and the UN Global Compact The Women's Empowerment Principles (WEPs) are informed by international labour and human rights standards and grounded in the recognition that businesses have a stake in, and a responsibility for, gender equality and women's empowerment. **Within this initiative, the following steps are planned:** ▪ Signing the CEO Statement of Support for the Women's Empowerment Principles ▪ Conducting a self-assessment using the WEPs Gender Gap Analysis Tool to evaluate our strategic approach to gender equality, identify gaps and opportunities for continuous improvement, and help set goals and objectives ▪ Disclosing gender-disaggregated data in sustainability reports to communicate our progress to stakeholders **Outcome** The share of women on the Board of Directors, the Management Board, and Supervisory Boards: ▪ Since the beginning of 2023, a number of new appointments were made to KMG's Board of Directors and Management Board. Saya Mynsharipova was elected to the Board of Directors by the resolution of the extraordinary General Meeting of Shareholders of KMG, minutes No. 4/2023 dated 14 August 2023. Diana Aryssova was appointed as Deputy Chair of the Management Board of KMG in April 2023.

SDGs	Priority targets	KMG's contribution
7 AFFORDABLE AND CLEAN ENERGY Ensure access to affordable, reliable, sustainable and modern energy, improve energy efficiency and increase the share of renewable energy	7.1. Ensure access to affordable, reliable and modern energy services	KMG Group's key strategic energy saving and energy efficiency initiatives include process equipment upgrades, deployment of energy saving technologies, optimisation of heat generation and consumption, and the development of the Group's own generation assets, including RES-based ones. **Our initiatives:** The 2031 Low-Carbon Development Programme was approved and its priority focus areas defined. **Improved energy efficiency:** - introducing the best available technologies (BAT); - upgrading boiler and furnace equipment; - upgrading process units consuming thermal energy; - upgrading machinery; - implementing management programmes to streamline the operation of machinery and pumping equipment by introducing variable speed drives (VSD); - installing thermal insulation on core and auxiliary equipment; - optimising the transport fleet; - introducing automated fuel and energy accounting and management systems; - establishing energy management services. **Outcome** KMG approved an Action Plan to implement the 2022–2031 Low-Carbon Development Programme. In 2023, 60 initiatives were implemented, resulting in savings of ca. 22.2 thous. tonnes of reference fuel, an equivalent to the emissions reduction of 45 thous. tonnes of CO_2. A **technological audit of furnaces and boiler equipment** was conducted at KMG Group's production assets (Ozenmunaigas, Embamunaigas, Mangistaumunaigaz, and Karazhanbasmunai). Following its completion, 23 initiatives were developed, 14 of which were approved as economically and technically viable and will be included in the audited subsidiaries' and associates' action plans implemented as part of the Low-Carbon Development Programme. The overall savings potential of these initiatives is 32.1 thous. tonnes of reference fuel or 42.9 tonnes of CO_2. **Sustainable aviation fuel (SAF)** In September 2023, KMG together with Air Astana, with the support of the European Bank for Reconstruction and Development, started a feasibility study of the SAF market and its prospects in Kazakhstan. At the meeting on 23–24 November 2023, the study participants identified SAF technologies with the highest potential in Kazakhstan. At the next stages, they will be scrutinised to assess the feasibility of SAF production by KMG and review the relevant regulatory framework in Kazakhstan. The feasibility study results will be presented in 1H 2024.
	7.b Expand infrastructure and upgrade technology for supplying modern and sustainable energy services	**Renewable energy projects:** - 1 GW wind power plant jointly with Total Eren; - 120 MW hybrid power plant jointly with Eni; - Achieving an at least 15% share of green energy in our energy procurement by 2031; - Purchase of 10,000 International Renewable Energy Certificates (I-REC) to certify the consumption of power generated from renewable energy sources (completed in December 2023). **Outcome** 2031: - Achieving a 15% share of renewable energy in KMG's energy consumption - Implementing renewable energy projects with a total capacity of at least 300 MW - Developing the hydrogen energy sector in the Republic of Kazakhstan

SDGs	Priority targets	KMG's contribution
8 DECENT WORK AND ECONOMIC GROWTH Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work	8.5. Achieve full and productive employment and decent work for women and men, including for young people and persons with disabilities, and equal pay for work of equal value	KMG employs over 49,000 individuals. Ensuring gender equality and non-discrimination at all levels is integral to our human capital development. We embrace global sustainability initiatives, including those that promote equal opportunities for both men and women, and uphold the principle of equal pay for work of equal value.
	8.6. Substantially reduce the proportion of youth not in employment, education or training	**Recruitment and development programmes for young professionals skilled in production occupations** **Zhas Maman** programme run by Atyrau Refinery and Pavlodar Refinery to attract and develop young talent. In 2022–2023, Atyrau Refinery hired 7 out of 31 people enrolled in the programme, and Pavlodar Refinery hired 1 individual (the only one enrolled). **Dual training:** a programme offering training, internship, and further employment with KMG Group. In 2022–2023, Embamunaigas hired 4 out of 99 people enrolled in the programme, Atyrau Refinery hired 17 out of 62 people enrolled, and Pavlodar Refinery employed 36 out of 53 people enrolled. **Internship programme:** the programme kicked off with a focus on three professions: process unit operator, pump and compressor operator, and instrumentation and control technician. Interns complete their training and practical internships at Atyrau Refinery. In 2022–2023, Atyrau Refinery hired 29 out of 60 individuals enrolled in the programme.
	8.8. Protect labour rights and promote safe and secure working environments for all workers	KMG provides social benefits to its employees in line with collective bargaining agreements and internal regulations. Collective bargaining agreements are in place at 25 KMG's subsidiaries and associates. The social package offered by them encompasses over 50 types of social benefits. Currently, all terms and conditions outlined in the collective bargaining agreements and internal regulations are fully adhered to across all KMG enterprises. For more details, see the Personnel Development section.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE Build resilient infrastructure, promote sustainable industrialisation and foster innovation	9.1. Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being	**KMG's Digital Transformation Programme** promotes the expansion of scientific research and development of technological capabilities across industrial sectors. KMG invests heavily in relevant scientific research and local capacity building. The development of domestic technological capacities to ensure industrial diversification will also have a positive impact on the climate situation in the country. **Development of the ABAI Information System** Under the project, all production data of KMG Group will be centralised in a single Big Data database and will be processed and analysed using AI and machine learning. The ABAI information system will comprise 17 standalone modules, each designed to tackle specific operating issues. **Outcome** Six ABAI modules implemented (Database, Map Builder, Technological Mode, Selection of Downhole Pumping Equipment, Selection of Well Interventions and Assessment of Their Efficiency, and Production Planning and Monitoring) Effects achieved: ▪ data collection and production reports exporting automated; ▪ production increased thanks to more efficient process operations at Ozenmunaigas and Kazgermunai; ▪ number of well services reduced owing to reduced number failures of downhole pumping equipment at Ozenmunaigas and Mangistaumunaigaz; ▪ well interventions effectiveness improved at Ozenmunaigas and Mangistaumunaigaz; ▪ additional production gains secured thanks to an enhanced system for maintaining reservoir pressure at Kazgermunai.
	9.4. Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes	The 2031 Low-Carbon Development Programme was approved, with the following priority areas in energy efficiency defined: ▪ streamlining energy management and establishing energy management services; ▪ introducing automated fuel and energy accounting and management systems; ▪ exploring possibilities to implement breakthrough innovations across the assets of specific subsidiaries and associates; ▪ introducing the best available technologies (BAT); ▪ upgrading machinery; optimising and upgrading the transport fleet. **Outcome** 2031: ▪ 100% of subsidiaries and associates covered by energy management services; ▪ 10% energy intensity reduction from the 2019 level.

SDGs	Priority targets	KMG's contribution
 Make cities and human settlements inclusive, safe, resilient and sustainable	11.6. By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	**Implementation of the best available technologies aimed at gradual reduction of environmental impact** In 2024, several companies within KMG Group, which are among the 50 largest pollutant emitters in Kazakhstan, plan to develop a programme aimed at improving their environmental performance. This programme will be based on national industry-specific guidelines on best available technologies and will require a comprehensive environmental approval of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan. **Drafting a programme to bring down pollutant emissions** KMG Group is planning to develop a programme with the aim of reducing pollutant emissions and mitigating its environmental impact. **Implementation of the World Bank's Zero Routine Flaring by 2030 initiative by 2023** KMG is involved in the World Bank's 2015 initiative to eliminate the routine flaring of associated petroleum gas by 2030. This global effort brings together governments, oil companies, and public organisations to maximise the beneficial utilisation of associated petroleum gas. In alignment with this initiative, the Company implements its Emissions Management Policy, which aims to fully eradicate routine gas flaring by 2030. **Green Belt tree planting initiatives** Atyrau Refinery has committed to planting 10,000 trees in the city of Atyrau over the course of three years, in line with the Memorandum of Cooperation it signed with the Akimat of the Atyrau Region and KMG on the margins of the environmental conference held on 5 June 2023. **Outcome** ▪ With the well-being of the population in mind, our oil refineries are implementing measures to improve the environment and air quality. These efforts align with the targets of the Green Kazakhstan National Project. As part of this initiative, they have set a target to reduce emissions by 20% over the next five years. ▪ The installation of automated systems for monitoring pollutant emissions is currently underway. Construction and installation works are being carried out in accordance with the relevant roadmaps. ▪ In 2023, Atyrau Refinery donated 200 fully grown root-balled ash trees to the Akymat of the Atyrau Region. The trees were planted in the retro park area. Furthermore, as part of the Memorandum, Embamunaigas planted around 22 thous. tree saplings during 2022 and 2023. ▪ As part of the Green Belt initiatives, a memorandum was signed between the Akymat of the Atyrau Region and Embamunaigas to undertake greening efforts on a designated 243 ha area in the local village of Talkayran.

SDGs	Priority targets	KMG's contribution
12 RESPONSIBLE CONSUMPTION AND PRODUCTION Ensure sustainable consumption and production patterns	12.4. Achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment 12.5. By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	**Water Resources Management Programme** In order to establish measurable goals for reducing water intake and increasing water reuse, KMG Group has developed long-term Water Resources Management Programme. **Tazalyq** Atyrau Refinery is actively implementing an ambitious Tazalyq project, which aims to bring about significant environmental improvements. **Programme to dispose of legacy oil waste** A dedicated programme is in place to facilitate the disposal of KMG's historical oil waste and decontaminate oil-contaminated soils. **Outcome** From 2018 to 2023, a total of 3.2 mln tonnes of oil products was recovered as part of the legacy waste disposal efforts.
	12.6. Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle	**Carbon Disclosure Project** The Company calculates its water footprint and posts its Water Security Questionnaire on the website of the CDP. **Green Office** Company-wide green initiatives are being actively promoted, and the Green Office principles, including the introduction of separate waste collection, and water and energy saving in the office, are being gradually implemented. **Outcome** As part of our efforts to implement the Green Office initiative and reduce plastic and metal waste generation, a reverse vending machine was installed on the first floor of our office in the Emerald Towers business centre. Since its introduction, the machine has successfully collected 17,516 plastic bottles and 3,403 aluminium cans. The Water Security Questionnaire for the year 2022 was posted on the CDP platform.

SDGs	Priority targets	KMG's contribution
13 CLIMATE ACTION Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	13.2. Integrate climate change measures into policies, strategies and planning.	**Reduction of methane emissions** KMG entered into a Memorandum of Understanding with Carbon Limits, a global leader in methane leakage management. In line with the MoU's roadmap, KMG's employees completed training in methane leakage management. Plans for 2024 include simulation-based training using the LDAR programme for methane leakage detection and repair and an inventory of methane emissions at KMG's assets using Mist, a methane inventory systematic tool. **Joining Oil and Gas Methane Partnership 2.0** The Company joined the UNEP OGMP 2.0 methane initiative, which entails setting its individual targets for reducing methane emissions and reporting methane emissions to UNEP. **Joining Oil and Gas Decarbonisation Charter** KMG joined the Oil and Gas Decarbonisation Charter at the 28th Conference of the Parties to the UN Framework Convention on Climate Change. **Forest-climate projects** A designated project area of 2,000 ha in the Pavlodar Region was identified, and an assessment of its potential for GHG sequestration is currently underway. **Expansion of GHG emissions reporting scope** To improve GHG emissions reporting and management across the Group, KMG made an inventory of Scope 3 indirect emissions across 12 categories and designed a methodology to collect inputs with the aim of subsequently integrating it into its GHG Emission Monitoring and Reporting Methodology. **Outcome** ▪ KMG approved an Action Plan to implement the 2022–2031 Low-Carbon Development Programme. ▪ The Company is developing a pilot project to deploy carbon capture, utilisation and storage (CCUS) and explore the potential for CO_2 injection to enhance oil recovery from depleted oil reservoirs. ▪ A feasibility study is being carried out to assess the opportunities for the low-carbon production of hydrogen, technical, commercial and economic viability of investments in construction, and potential for blue hydrogen production with further CO_2 injection into oil and gas fields to intensify oil recovery. ▪ A benchmark for light petroleum products was developed. ▪ Changes are being made to the Company's GHG Emission Monitoring and Reporting Methodology, taking into account Scope 3 emissions. ▪ Guidelines are being developed for methane leak detection and emissions reduction at KMG's subsidiaries and associates.
	13.3. Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	**Internal carbon pricing framework** KMG developed internal carbon pricing mechanisms with a view to implementing carbon footprint reduction planning and ensuring relevant action by subsidiaries and associates as well as fully assessing the impact of carbon-related regulations on its financial and economic performance. Currently, efforts are underway to integrate these mechanisms into business processes across KMG Group. **CDP** The Company calculates its carbon footprint and posts its Climate Questionnaire on the website of the CDP (formerly Carbon Disclosure Project). According to the Oil and Gas Benchmark published by the World Benchmarking Alliance, which evaluates low-carbon transition and social impact indicators, KMG ranked 37th among the top 100 global oil and gas companies in 2023. This marks a significant improvement from its 77th position in 2022. **Task Force on Climate-related Financial Disclosures (TCFD)** As part of activities to improve international ratings on climate risk management and sustainability, in 2023 KMG teamed up with the European Bank for Reconstruction and Development for a project to develop an action plan for corporate climate governance and disclosure aligned with the TCFD recommendations. In addition, KMG was advised to add new measures to its decarbonisation list, namely steps aimed at climate change mitigation and adaptation in order for the Company to achieve its climate goals, reduce risks, and capitalise on climate-related opportunities. The analysis insights were leveraged to develop a Corporate Climate Governance Plan. **Outcome** In December 2023, an updated Internal Carbon Pricing Programme was approved, which includes a mechanism for applying an implicit carbon price to assess the Company's carbon regulation costs.

SDGs	Priority targets	KMG's contribution
15 LIFE ON LAND Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	15.3. Combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.	KMG implements projects and initiatives aimed at curbing discharges and reducing fresh water withdrawal from natural sources: **Carbon Disclosure Project** The Company calculates its water footprint and posts its Water Security Questionnaire on the website of the CDP. Efforts are underway to develop KMG Group's Water Resources Management Programme. **Tazalyq** Atyrau Refinery is actively implementing an ambitious Tazalyq project, which aims to bring about significant environmental improvements. **Construction of desalination plants** A formation water desalination plant is a unique project to address the water supply issue in the Mangistau Region. The plant will free up at least 6.2 mln m^3 of the Volga River water annually to help develop the region. A desalination plant near the Kenderly recreational zone, Mangistau Region. Its planned capacity is 50,000 m^3 per day. **Land remediation** The Company works to ensure recovery of historical oil wastes and oil-contaminated soil treatment. **Outcome** **Tazalyq**: The project to upgrade closed-loop mechanical treatment plants at Atyrau Refinery is nearing completion. Phase 1 was completed, and Phase 2 construction is in its final stages. Reconstruction of the channel for wastewater treated to standard quality and reclamation of evaporation fields are also underway. The evaporation fields were split into four sectors, with the work progressing in stages. Sectors 1 and 2 of the fields were fully drained and reclaimed. A pipeline was laid in place of the previously existing open channel, which had been used for discharging wastewater from Atyrau Refinery to the evaporation fields.
	15.5. Take significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species.	**Mitigation hierarchy to manage biodiversity risks** In its planning and operations, the Company relies on mitigation hierarchy to manage biodiversity risks, with four key steps in place: avoidance, minimisation, rehabilitation/restoration, and offset. **Biodiversity Conservation Programme** We are developing a Biodiversity Conservation Programme, setting goals and action timelines related to preserving biodiversity in collaboration with local and international conservation organisations. **Forest-climate projects** As part of KMG's Low-Carbon Development Programme until 2031, forest-climate projects are expected to be implemented, delivering benefits for terrestrial ecosystems. **Outcome** A designated project area of 2,000 ha in the Pavlodar Region was identified, and an assessment of its potential for GHG sequestration is currently underway.

SDGs	Priority targets	KMG's contribution
17 PARTNERSHIPS FOR THE GOALS Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	17.1. Strengthen domestic resource mobilisation, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection	KMG makes tax disclosures in accordance with the relevant **GRI standard** and the **Country-by-Country Reporting initiative under OECD Action 13**. **Payments to governments** The Company issues annual reports on payments to governments with regard to the following types of payments: ▪ Taxes All taxes other that the mineral extraction tax. ▪ MET The mineral extraction tax (MET) is a mandatory tax payable by a subsoil user for each type of extracted mineral resources (such as crude oil), underground waters, and therapeutic mud. The tax amount is calculated based on the physical volume of resources (e.g. crude oil, gas condensate, or natural gas) extracted over the tax period. ▪ Signature bonus The signature bonus is a one-off payment made by a subsoil user upon either acquiring a subsoil use right for a particular territory (subsoil area) or in case of its enlargement, in accordance with the legislation of the Republic of Kazakhstan. ▪ Other payments This category encompasses all other payments to governments, including export customs duties. **Outcome** KMG follows the best global practices designed to improve transparency in government payments, enhance accountability for mining revenue management, and promote public awareness of the mining companies' activities in the regions where they operate.
	17.16 Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	In pursuit of the UN Sustainable Development Goals, KMG actively collaborates with industry peers and international agencies and participates in intergovernmental organisations that focus on energy conservation, occupational health and safety, environmental protection, combating climate change, reducing emissions, and promoting sustainable green energy and similar initiatives.

KMG prepares an annual Sustainability Report in line with GRI standards. KMG's Sustainability Reports are available on the Company's website

The Company's annual Sustainability Report also serves as Communication on Progress for the UN Global Compact: https://www.unglobalcompact.org/what-is-gc/participants/6810

Upholding human rights

KMG is committed to sustainable business development, with a strong focus on both financial and social performance.

We are dedicated to upholding internationally recognised human rights, as enshrined in the International Bill of Human Rights and ILO's labour standards, and implementing the UN Guiding Principles on Business and Human Rights.

KMG staunchly upholds the requirements of labour legislation in the Republic of Kazakhstan, ensuring compliance with its provisions, which prohibit any forms of labour discrimination against individuals based on their origin, social status, position, wealth, gender, race, nationality, language, religion, beliefs, place of residence, age, physical disabilities, or affiliation with public associations.

We make no use of child or forced labour and acknowledge the equal rights of all employees, regardless of their race, religion, or gender.

No instances of discrimination were reported in 2023.

In 2022, KMG's Board of Directors approved the Human Rights and Public Relations Policy. For more details on this policy, see the Corporate Documents section on the Company's website.

We undertake the following human rights commitments:

- respecting human rights in accordance with international standards;
- introducing programmes to address human rights issues within the industry, with the approval by senior management of KMG and its subsidiaries and associates;
- monitoring and reporting the impact of business activities on human rights;
- following established procedures for handling complaints and grievances at KMG;
- providing remedies and legal protection to mitigate or alleviate any negative impacts;
- exercising due care in relation to human rights by monitoring the impact of business activities on human rights and preparing relevant reports;
- ensuring that employees have access to legal protection to address any negative impacts of business activities on human rights;
- communicating KMG's expectations regarding human rights to employees and third parties.

Sustainable development KPIs of KMG's management

To meet the 2023 strategic sustainability objectives and ensure sustainable development and gradual reduction in carbon intensity of production, the Board of Directors approved motivational KPIs for the Chairman of the Management Board (corporate KPIs), Management Board members, heads of units and chief executive officers of subsidiaries and associates. These KPIs include:

- corporate KPIs linked to investment projects, including in the realm of sustainable development, a comprehensive OHS indicator aimed at reducing LTIR, and identifying and communicating, among other things, unsafe working conditions and potential hazards throughout the Group;
- KPIs for the Management Board linked to investment projects, including in the realm of sustainable development, performance under the Low-Carbon Development Programme Action Plan for 2022–2031, and the ESG rating;
- a carbon footprint monitoring and reduction KPI for chief executive officers at subsidiaries and associates;
- KPIs for implementing the Company's sustainability goals for the heads of units, including:
  - reduction of associated petroleum gas flaring;
  - recovery of historical oil wastes;
  - automation of industrial safety and labour protection management;
  - development of Water Resources Management Programme;
  - implementation of the Employee Health Management Action Plan for 2023–2025;
  - income from the sale of carbon credits;
  - development of KMG's internal carbon pricing mechanism;
  - targeted audit of process furnaces and boiler equipment for identifying technically and economically feasible opportunities for improving fuel and natural gas utilisation efficiency at producing subsidiaries and associates;
  - preparation for initial TCFD disclosure;
  - screening of CO_2 emission sources and reservoirs suitable for CO_2 injection at KMG's assets (CCS/CCUS pilot);
  - conducting industrial relations screening to study social and living conditions at subsidiaries and associates / jointly controlled entities in accordance with Samruk-Kazyna's Corporate Standard for the Development of Industrial Relations.

Low-Carbon Development Programme

Global energy transition driven by decarbonisation, technical upgrade and ESG-based corporate governance lies at the heart of updated long-term economic growth strategies in both developed countries and EMDEs.

Today, to be more competitive, governments need to assess the potential for decarbonisation and the use of low-carbon technologies, while also taking steps to identify barriers and challenges to be addressed with the aim of reducing emissions.

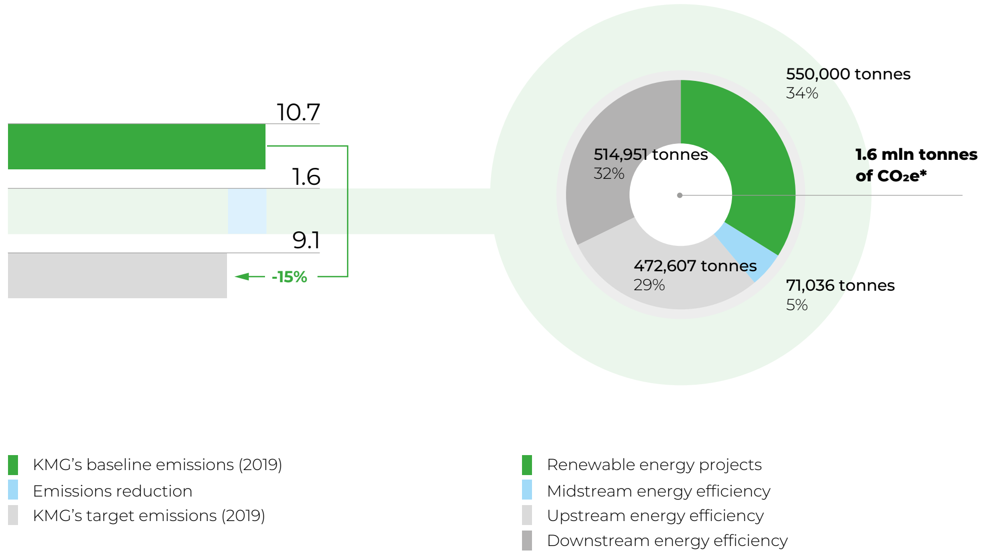
The analysis of global carbon markets shows that in the coming decades low-carbon development aimed at reducing climate impact and boosting energy efficiency will be the backbone of advanced economies. Oil and gas companies will play a key role in accelerating energy transition by investing in energy systems of the future such as renewable energy sources, low-carbon fuel, carbon capture, utilisation and storage (CCUS), low-emission hydrogen and other emission-cutting technologies. Considering the importance of the climate agenda and supporting national goals to achieve carbon neutrality by 2060 and reduce GHG emissions by 15% from the 1990 level, KazMunayGas intends to focus on a moderate, balanced, and consistent decarbonisation of its operations. To pursue this objective, KMG adopted the 2022–2031 Low-Carbon Development Programme (LCDP) in November 2021, and approved a relevant Action Plan for 2022–2031 (the "Action Plan"). The Action Plan includes a number of initiatives aimed at reducing GHG emissions and focused on four areas: energy efficiency, renewable energy, methane monitoring, and organisational measures. These initiatives will help achieve the goal of reducing KMG's GHG emissions by 15% by 2031 set out in the Company's Low-Carbon Development Programme.

Within its remit, the **Board of Directors** helps build and implement the required sustainability framework, while the Company's officers and employees at all levels contribute to low-carbon development.

The Board of Directors approves climate-related policy and strategy together with goals in energy transition and combatting climate change. In 2023, the Board held several annual meetings to discuss sustainability issues, progress under the Low-Carbon Development Programme, TCFD disclosures and new financial reporting standards at KazMunayGas.

KMG's 2022–2031 Low-Carbon Development Programme

SDGs **Key areas** **Additional measures**



I. CCUS technologies
II. Electric vehicles
III. Methane leak detection and repair (LDAR) programme
IV. Forest-climate projects
V. Routine flaring
VI. Hydrogen energy development

As part of the Carbon Disclosure Project (CDP), KMG has been disclosing data on direct and indirect greenhouse gas emissions, greenhouse gas management, and key risks and opportunities across all KMG's assets, including international assets in Romania and Georgia, since 2019. In 2023, CDP assigned climate score C to KMG. As part of the 2022–2031 Low-Carbon Development Programme, the Company plans to raise this score to A, which is granted to leaders in implementing best available technologies to manage climate change.

In July 2023, the KMG Climate Change 2022 Questionnaire was published. According to the report, direct carbon dioxide emissions at KMG Group totalled 7.6 mln tonnes of CO_2 (8.1 mln tonnes of CO_2e) in 2022. The CO_2 equivalent data are presented using the global warming potential ratios set out in the IPCC Fifth Assessment report (28 for methane and 265 for nitrous oxide).

The greenhouse gas emissions data were verified by independent accredited organisations' reports for each subsidiary or associate. Data for 2023 will be disclosed in KMG's CDP report to be published in Q3 2024. We seek to ensure consistency and comparability when preparing our disclosures. We are committed to enhancing disclosures and increasing the scope of reporting around our Scope 3 emissions.

Indicator	Unit of measurement	2020	2021	2022
Scope 1 direct emissions	mln tonnes of CO_2e	15.8	10.6	8.1
Market-based Scope 2 indirect emissions	mln tonnes of CO_2e	3.5	3.3	3.2
Location-based Scope 2 indirect emissions	mln tonnes of CO_2e	3.5	3.3	3.3
Scope 3 indirect emissions	mln tonnes of CO_2e	61.3	62.1	61.8

Sustainable aviation fuel (SAF)

In September 2023, KMG together with Air Astana, with the support of the European Bank for Reconstruction and Development, started a feasibility study on the SAF market and its prospects in Kazakhstan. The bid winner ICF SH&E Limited presented the analysis of global and local strategies in aviation decarbonisation, along with a SAF market research study, including demand, feedstock availability and overview of applicable technologies for sustainable jet fuel.

At the meeting held on 23–24 November 2023, the study participants identified SAF technologies with the highest potential in Kazakhstan. At the next stages, they will be scrutinised to assess the feasibility of SAF production by KMG and review the relevant regulatory framework in Kazakhstan. The feasibility study results will be presented in 1H 2024.

Targeted energy audit of process furnaces and boiler equipment at Embamunaigas, Ozenmunaigas, Mangistaumunaigaz and Karazhanbasmunai

In the reporting year, the Company held a targeted audit of process furnaces and boiler equipment at Embamunaigas, Ozenmunaigas, Mangistaumunaigaz and Karazhanbasmunai to check their state, measure actual fuel consumption and assess the potential to further reduce it. The project's analytical stage resulted in 20 initiatives set to save a total of 56,894 tonnes of reference fuel and cut CO_2 emissions by 87,212 tonnes. Following the analysis, the audited subsidiaries and associates came up with 23 initiatives, 14 of which were approved as economically and technically viable and will be included in their local action plans implemented as part of the Low-Carbon Development Programme. The total potential of these initiatives is 32.1 thous. tonnes of reference fuel or 42.9 tonnes of CO_2.

I-REC

To reduce indirect GHG emissions, KMG purchased International Renewable Energy Certificates (I-REC) and made a claim for 10.0 mln kWh, an equivalent of expected electricity consumption by KMG's headquarters in 2023.

Voluntary I-REC certification represents a proof of energy generation from renewable sources. The certificate is linked to 1 MWh of green electricity, location of the power station and time period of electricity generation. KazMunayGas acquired certificates issued in 2023 for solar and hydroelectric power stations in Almaty and Turkestan regions in line with the International Tracking Standard Foundation's standard. Recognised by GHGP, CDP, RE100, ISO and other international organisations, I-REC certificates are traded globally and issued in 51 countries.

CCUS project

KMG is running a pilot project to deploy carbon capture, utilisation and storage (CCUS) and explore the potential for CO_2 injection to enhance oil recovery from depleted oil reservoirs.

To date, we have completed R&D as part of the first stage.

It included screening CO_2 emission sources across subsidiaries and associates and breaking them down into main groups suitable for the CCUS pilot.

To inject and store the emitted CO_2, we analysed prospective traps and selected regions with the highest level of emissions within 100 km from these sources. Potential storage volumes and maximum injection duration are estimated for each trap taking into account the location of the nearest emission source. As CO_2 may be used to increase an oil recovery factor, the Company screened suitable assets, created a database for developed fields and forecast the development potential based on the injected CO_2.

As part of the FEED stage, we designed solutions for surface equipment and pipelines for the collection and cooling of exhaust gas from emission sources, CO_2 capture, drying, accounting, compression, transportation and injection into dedicated wells.

In 2024, we will complete the second stage to study the injection and underground storage technology and develop the methodology for CO_2 capture, use and storage.

Hydrogen energy development

As part of hydrogen energy development, we are doing a feasibility study to assess resources for the low-carbon production of hydrogen, technical, commercial and economic viability of investments in construction, and potential for blue hydrogen production with further CO_2 injection into oil and gas fields to intensify oil recovery.

Blue hydrogen technologies involving hydrocarbon (natural gas) processing into hydrogen are the backbone of nearly all methods of large-scale natural gas treatment:
- steam methane reforming;
- dry methane reforming;
- partial oxidation (gasification).

Then CO_2 capture and storage technologies come into play.

For steam reforming, CO_2 capture is a must to reduce GHG emissions, with blue hydrogen produced as a result. There is a wide range of carbon dioxide capture techniques.

CCUS-enabled methods of blue hydrogen production are key to conforming with the classification.

As a hydrocarbon production operator, KMG can produce hydrogen using steam reforming or pyrolysis of natural and/or associated petroleum gas combined with CO_2 capture and burying in accordance with carbon intensity requirements.

Regulations on Energy Saving and Efficiency at KazMunayGas

In 2022, the Management Board approved KazMunayGas' Energy Policy. In line with its paragraph 3, to ensure the integration of energy management system requirements into the Company's business processes, we drafted the Regulations on Energy Saving and Efficiency at KMG Group.

The Regulations set out an interaction procedure along with the scope of authority, responsibilities and duties of the Group's units and employees as part of energy saving and efficiency management including the following processes:
1) management of statutory requirements;
2) energy saving and efficiency planning;
3) energy saving and efficiency introduction and/ or streamlining;
4) performance assessment.

Part of KMG's 2022–2031 Low-Carbon Development Programme, the Regulations lay foundation for setting and reviewing energy-related goals and objectives.

Internal Carbon Pricing Programme

In December 2022, the Management Board approved KMG's Internal Carbon Pricing Programme describing relevant international practices.

In 2023, in accordance with an order of the Chairman of the Management Board, a dedicated working group comprised of representatives of all KMG's relevant units came up with a mechanism to apply an implicit carbon price to assess the Company's carbon regulation costs.

In December 2023, the Management Board approved a new Internal Carbon Pricing Programme presenting an implicit pricing framework.

Light product benchmarks

In line with the Environmental Code of the Republic of Kazakhstan, carbon dioxide quotas are calculated using benchmarks approved by Order of the Acting Minister of Ecology and Natural Resources No. 260 dated 19 July 2021. The current benchmark for oil products relies on data that mostly take into account dark oil products, while the production of light oil products is a technologically more sophisticated process involving several stages of treatment and hence more energy- and carbon-intensive compared to dark oil products. This is why three major producers of light oil products – Atyrau, Pavlodar and Shymkent refineries – need to apply for additional quotas and provide relevant substantiation every year.

To further prove the need for a fair benchmark and reduce the shortage of quotas at KMG facilities, benchmarks for light oil products were calculated in 2023. In 2024, the Ministry of Ecology and Natural Resources will continue its work to agree on and approve new draft benchmarks.

Climate reporting

To improve GHG emissions reporting and management across the Group, KMG made an inventory of Scope 3 indirect emissions and designed the methodology to collect inputs for reporting.

In 2023, KMG also took steps to introduce financial disclosures consistent with TCFD (Task Force on Climate-related Financial Disclosures) recommendations. We published first such disclosure and drafted a Corporate Climate Governance Plan.

Methane emission initiatives

KMG pays special attention to reducing methane emissions as a potential tool to spearhead a carbon offset policy and minimise carbon footprint. For example, a key target of the 2031 Low-Carbon Development Programme is putting in place methane leak detection and elimination system at all KMG's producing assets by 2031.

As a participant of the COP28 UN Climate Change Conference in December 2023, the Company signed a number of landmark agreements in methane management and joined the OGMP (Oil & Gas Methane Partnership) 2.0 initiative on reporting of methane emissions by oil and gas companies. The OGMP 2.0 membership will enable KMG to learn from the experience of international companies that have a well-established management and prevention system for methane leaks and get methodological assistance in emissions inventory, calculations and selection of technological solutions to reduce leaks. The Company also signed a memorandum of cooperation with TetraTech engaged in the Power Central Asia (PCA) Activity financed by the USAID to take stock of methane emissions sources across KMG assets and further cut relevant emissions. The parties drafted a joint action plan.

In 2023, KMG signed a memorandum of cooperation with Carbon Limits. In September 2023, a workshop was held for the Group's experts on methane emission management, including quantitative assessment, gas utilisation, identification of key leak sources and elimination methods. From 26 February to 1 March 2024, Mangistaumunaigaz and KazGPZ benefited from the presentation of LDAR technologies and procedures. Carbon Limits will also assist KMG with its first OGMP 2.0 disclosure as part of Mist-driven GHG emissions inventory.

On the sidelines of the conference, 50 oil and gas companies, including KMG, announced joining the Oil and Gas Decarbonisation Charter, a global industry document to deliver ambitious results and accelerate climate action. The key objectives are to achieve carbon neutrality by 2050, cut routine flaring by 2030 and reduce methane emissions to near zero.

Projects in 2024:

- Developing the 2060 Low-Carbon Development Programme and a related action plan;
- embedding steps recommended after the targeted audit of process furnaces and boiler equipment into the Action Plan to implement the Low-Carbon Development Programme;
- SAF market research;
- developing a project to process natural and/or associated petroleum gas using low-carbon technologies;

A feasibility study for a pilot to build a full-chain CCUS (second stage).

- analysis of low-carbon hydrogen production from APG / natural gas, utilised formation water and/or wastewater at fields;
- feasibility study of a project to expand the EV charging infrastructure in Kazakhstan;
- initiatives to introduce methane management at KMG Group;
- offset projects.

Health, safety and environment

Industrial safety, occupational health and environmental protection

Participation in initiatives and programmes

THE WORLD BANK
IBRD · IDA | WORLD BANK GROUP

The World Bank's Zero Routine Flaring by 2030 initiative

SUSTAINABLE DEVELOPMENT GOALS

UN 17 Sustainable Development Goals initiative

CDP
DISCLOSURE INSIGHT ACTION

CDP climate programme

Global Methane Initiative

Global Methane Initiative

IOGP International Association of Oil & Gas Producers

Caspian Environmental Protection Initiative — CEPI

CASPIAN ENVIRONMENT PROGRAMME

International Association of Oil & Gas Producers – IOGP

Performance highlights

Social highlights

Indicator	2021	2022	2023
Lost Time Incident Rate (LTIR)	0.31	0.36	0.30
Fatal Accident Rate (FAR)	2.93	1.00	2.11
Fatalities	1	1	2

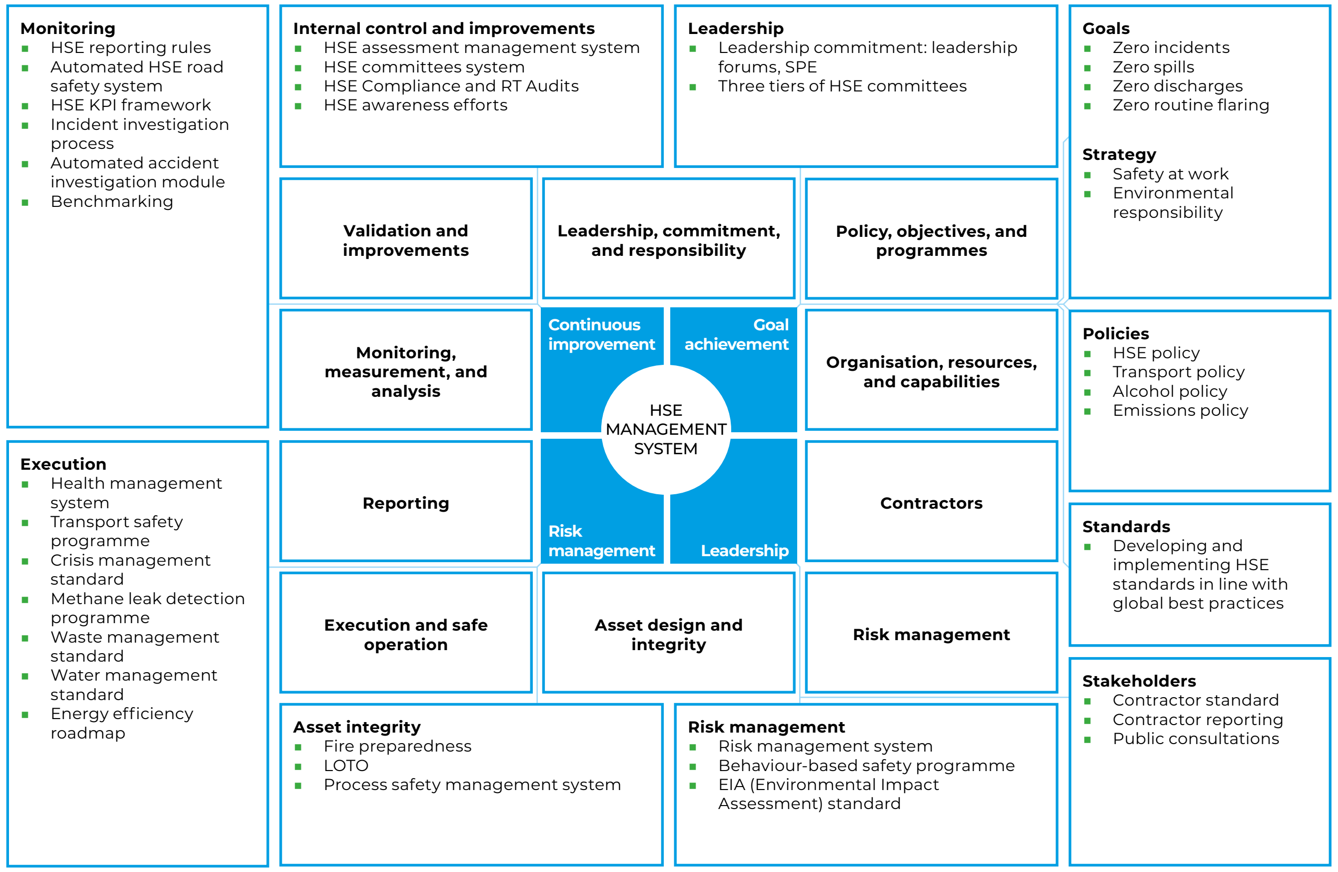
Environmental highlights

Indicator	2021	2022	2023
NO_x emissions, tonnes per 1,000 tonnes of produced hydrocarbons	0.24	0.31	0.36
SO_x emissions, tonnes per 1,000 tonnes of produced hydrocarbons	0.22	0.21	0.23
APG flaring rate, tonnes per 1,000 tonnes of produced hydrocarbons	2.1	1.5	1.4

Health, safety and environment management system

The health, safety and environment management system is designed to Kazakhstan's statutory requirements, ISO 14001 and ISO 45001 international industry standards, global best practices and guidelines, and recommendations of the International Association of Oil & Gas Producers (IOGP). It covers ten areas and relies on four pillars: goal achievement, leadership, risk management, and continuous improvement.

Since 2006, KMG operates an integrated quality, environmental, and occupational health and safety management system compliant with ISO 9001, ISO 14001, and ISO 45001. KMG's significant energy users are certified to ISO 50001. The effectiveness of the HSE management system is verified by independent auditors on a regular basis.

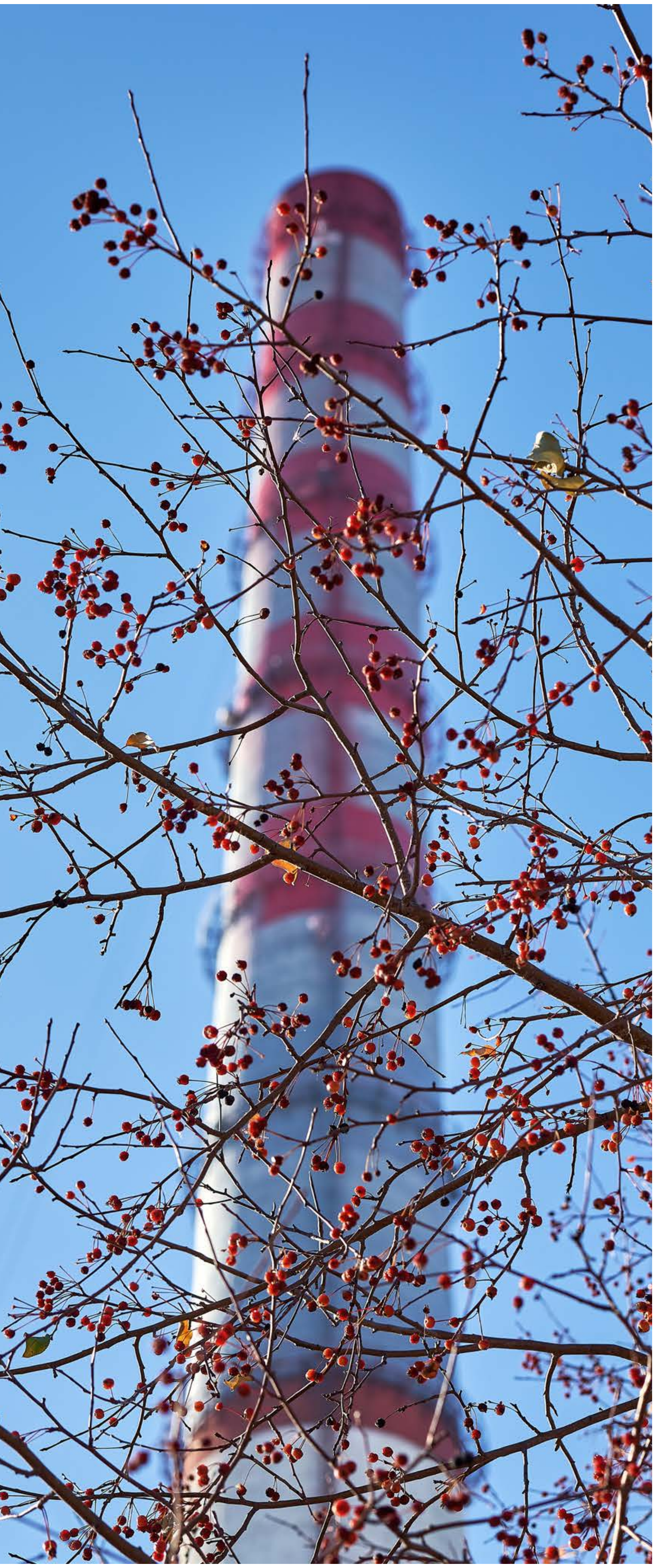


To improve its management system, KMG has its Health, Safety and Environment Management System (HSE MS) certified to ISO 45001.

The management system is designed to create an environment for managing HSE risks and opportunities. Its deliverables include prevention of injuries and health damage across KMG Group and ensuring occupational health and safety. That said, it is of vital importance for KMG to eliminate or minimise HSE risks by taking effective preventive actions.

In 2023, the Group updated and approved the Guidelines on Health, Safety and Environment Management System to improve its overall HSE management, in particular as regards:

1) management responsibility for employee compliance with KMG Life-Saving Rules;
2) granting KMG Group employees a guaranteed legal right to reject or suspend work in case of a situation reasonably believed to be potentially threatening to health, safety or environment;
3) designing and implementing the Group's Employee Health Management Programme relying on health risk assessment;
4) using Qorgau Cards to engage the Group's employees and contractors in risk management, identification and notification of potential hazards.



To keep the management system documents up to date, KMG Group revised a number of internal regulations:
1) Regulations on HSE Risk Management in Hazardous Operations;
2) Regulations on Emergency Medical Care;
3) Rules for Accident Reporting and Investigation;
4) Standard for Provision of Workwear, Footwear and Personal Protective Equipment.

On 5 October 2023, representatives of KMG's Management Board and Board of Directors, TCO, NCOC and KPO together with CEOs of 44 subsidiaries and associates took part in the Forum of KMG Group's CEOs – Leadership in Shaping a Robust Safety Culture. JMJ's global experts held a workshop on safety leadership, with TCO, NCOC and KPO representatives sharing experience in accident investigation and consequence management.

"KMG prioritises health and safety of everyone involved in its operations and maintaining environmental sustainability across its footprint. For us, these values are indisputable," noted Magzum Myrzagaliev, Chairman of KMG's Management Board.

Environmental responsibility and safety

2023 highlights

0.23 (IOGP – 0.09)
SO_x emissions intensity

0.36 (IOGP – 0.35)
NO_x emissions intensity

1.4 (IOGP – 8.6)
Associated petroleum gas (APG) flaring rate

98.9%
APG utilisation rate

1,145 thous. tonnes
Recovery of historical waste and remediation of oil-contaminated soils (693.7 thous. tonnes in 2022)

6%
Reduction in energy consumption (from the 2022 baseline)

C
CDP score

C
CDP water security score

Environmental performance indicators, tonnes per 1,000 toe of produced hydrocarbons

Year	SOx emissions intensity	NOx emissions intensity	Raw gas flaring rate	Raw gas utilisation, %
2021	0.22	0.24	2.1	98
2022	0.21	0.31	1.5	98.8
2023	0.23	0.36	1.4	98.9

KMG Group's goals in HSE management are directly related to its Development Strategy. KMG's Development Strategy until 2031 covers strategic initiatives to promote greater environmental responsibility. KMG Group's environmental priorities include management of air emissions, water resources and production waste, flaring reduction, and land reclamation.

Management teams at KMG and its subsidiaries and associates take a zero tolerance approach to losses and harm caused by environmental pollution. In reducing our air emissions, we focus on increasing raw gas utilisation while minimising flaring.

According to the approved Environmental Policy, the Company strives to achieve zero routine gas flaring.

In 2015, KMG supported the World Bank's Zero Routine Flaring by 2030 initiative. Gas flaring reports under the Initiative are submitted on an annual basis.

The Company remains committed to being an environmentally responsible business, further enhancing its environmental protection management system, maintaining dialogue with all stakeholders on this matter, and thus delivering on its commitments as stated in the Company's Environmental Policy.

To mark the World Environment Day, KMG held a conference in Atyrau titled "Atyrau Ecological Dialogue: Ecology and Industry. Partnership for the Benefit of Society". During the event, environmental projects were widely discussed, as well as measures to reduce atmospheric emissions at the Company's assets.

In support of the initiative of President Kassym-Jomart Tokayev to plant 2 bln trees within five years, the Akymat of the Atyrau Region and KMG signed a Memorandum of Cooperation on the greening of Atyrau. In accordance with the document, Atyrau Refinery will plant 10 thous. trees along the Sokolok canal close to Talkayran within three years. In 2023, the refinery also donated 200 fully grown root-balled ash trees to the Akymat. The trees will be planted in the retro park area.

As part of this initiative, about 300 employees of the Company took part in a corporate environmental tree planting event in October.

In September 2023, the Company sponsored an environmental challenge as part of the World Cleanup Day, an environmental campaign uniting millions of people who show care for nature by cleaning it from waste. This challenge was successfully replicated by KMG subsidiaries – OMG, KBM, EMG, MMG, Atyrau Refinery, PetroKazakhstan Oil Products, Pavlodar Refinery, CaspiBitum, KazGPZ, and OSC. As a result, over 900 tonnes of waste was collected across all regions, an equivalent of a five-storey building.

In 2023, the Company established **KMG-Volunteer**, a volunteering programme. As part of the programme's Action Plan and in line with the President's Address to the People of Kazakhstan, volunteers planted trees on the territory of Alikhan Bukeikhan school-lyceum No. 76 in the country's capital. KMG donated 129 trees to the school.

Priority environmental projects

Eliminating legacy pollution

Elimination of historical pollution, as well as sources of negative environmental impact (idle wells, wastewater reservoirs, landfills and other production facilities).

Reducing atmospheric emissions

Reduction in emissions through improved technology solutions, e.g. replacing fuel oil with fuel/natural gas used as a process furnace fuel, using next-generation additives, tree planting and land improvement at production facilities, replacing equipment, expanding gas processing capacity, installing gas processing units, etc. Key emission reduction targets are to be set as part of a programme to bring down pollutant emissions.

Project: Tazalyq

The Tazalyq project provides for the upgrading of Atyrau Refinery's wastewater treatment facilities as well as the reclamation of the Tukhlaya Balka evaporation fields.

Formation water desalination plant at the Karazhanbas field

The plant plays a strategic role in the region and is expected to make the field self-sufficient in terms of water supply and free up significant amounts of water for local residents.

Automated environmental monitoring information system

The automated environmental monitoring information system is designed to create a shared information space in environmental protection and covers the following critical tasks: automated generation of environmental reports to government agencies; maintaining the database of authorisation regulations and calculating environmental emission fees; day-to-day environmental monitoring based on environmental controls at production sites.

Recovery of historical oil wastes and oil-contaminated soil treatment

Complete disposal of historical oil waste and oil-contaminated soil treatment through 2024.

Water Resources Management Programme

The programme is to improve the efficiency of water use and protection and identify measures and targets to reduce water withdrawal and water consumption, increase recycled water supply and water reuse, reduce discharges and adverse environmental impact in general for KMG and its subsidiaries and associates, and develop recommendations.

Employee training in HSE

People are our most important asset, so HSE training remains top of mind for KMG Group. Therefore, mandatory staff education, training and upskilling in occupational health, industrial and fire safety and environmental protection are priority training areas for KMG.

Starting from 2021, KMG's Corporate Centre employees undergo mandatory training in occupational health and industrial and fire safety basics. The sessions are held on the platform of KMG Engineering.

In 2023, KMG Group spent a total of KZT 938,991.09 thous. to train 108,464 employees, including HSE training in the following key business segments: KZT 482,964.4 thous. in the upstream business; KZT 143,839 thous. in the midstream business; KZT 196,533.5 thous. in the downstream business; KZT 110,614.9 thous. in the service business, and KZT 5,039.2 thous. in the Corporate Centre.

Employee training expenses

Indicator	2021	2022	2023
Employees trained	61,678	79,071	108,464
Amount in KZT '000	498,714	504,548.6	938,991.09

HSE training by key business segment

Business segment	Number of employees	Amount in KZT '000
Upstream	56,867	482,964.4
Midstream	17,046	143,839
Downstream	17,802	196,533.5
Service	16,668	110,614.9
KMG Corporate Centre	81	5,039.2

HSE training is performed according to the "70/20/10 – on-the-job training / internal training /external training" model rolled out across KMG's existing training facilities/ centres. Mentoring and internal coaching programmes are implemented for long-service employees, with master classes and training sessions conducted as well as various contests to recognise the best performers, which enhances internal communications and motivates personnel to strive to excel in their jobs.

The companies that have their own training facilities/ centres include OMG (Zhanaozen), KTO (Aktau), Oil Services Company (Aktau), and KMG Engineering (Astana).

Energy saving and energy efficiency programmes

Using energy resources and improving energy efficiency

KMG's energy saving and energy efficiency efforts are based on the methodology set out in ISO 50001 Energy management systems, an internationally recognised best-practice framework for systemic energy management.

In December 2022, as part of its Low-Carbon Development Programme for 2022–2031, KMG approved the Energy Policy applicable to all its subsidiaries, associates and contractors.

The Policy supports energy efficient procurement and projects, defines roles and responsibilities in energy management, and promotes economically feasible best available techniques, international practices, standards and administrative resolutions to improve energy efficiency and saving. An integral part of KMG's 2022–2031 Low-Carbon Development Programme, the Policy lays foundation for setting and reviewing energy-related goals and objectives.

In December 2022, all KMG subsidiaries and associates approved similar policies and aligned their internal documents with KMG's Energy Policy.

In 2023, the Company approved the Regulations on Energy Saving and Efficiency in KMG Group. The Regulations set out an interaction procedure along with the scope of authority, responsibilities and duties of the Group's units and employees as part of energy saving and efficiency management.

Energy consumption

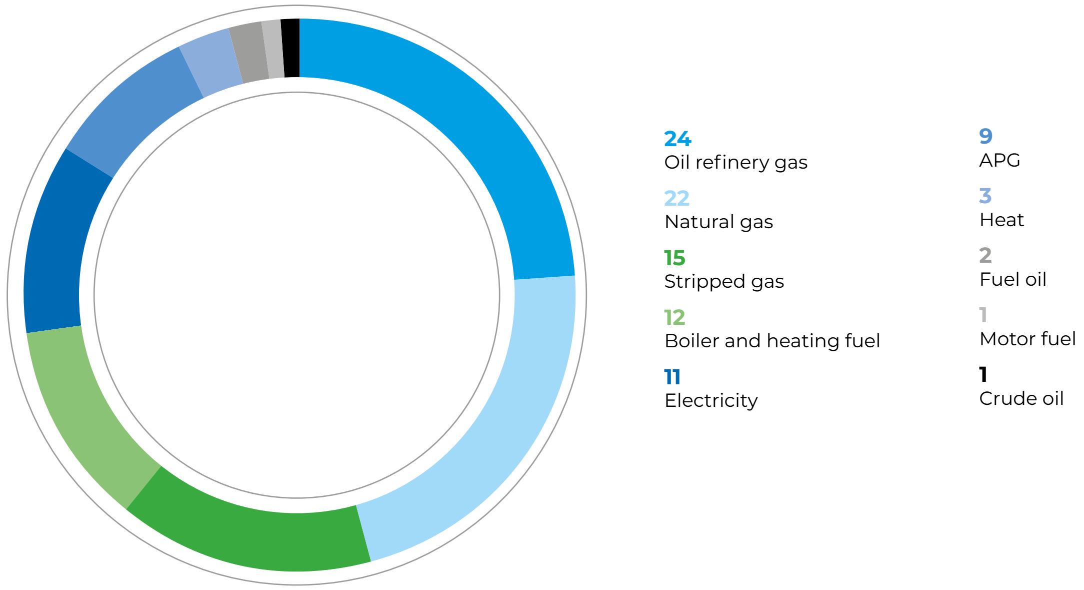
The Company's Corporate Centre collects and analyses energy consumption and energy efficiency-related data, monitors the dynamics, identifies opportunities for improvement, and conducts year-on-year and peer benchmarking (IOGP).

In 2023, total energy consumption amounted to 124.1 mln GJ (4,088 thous. tonnes of reference fuel), down 6% year-on-year, with the reduction in energy consumption attributable to the implementation of an Action Plan on energy saving and energy efficiency as part of the implementation of KMG's Low Carbon Development Programme, including 12.9 mln GJ in electricity, 3.8 mln GJ in heat, 1.6 mln GJ in motor fuel, and 105.8 mln GJ in boiler and heating fuel (with oil refinery gas, natural gas, stripped gas and associated petroleum gas accounting for 24%, 22%, 15% and 9% of the total energy consumption, accordingly). The total energy consumption is divided among three business segments: Upstream, Midstream, and Downstream.

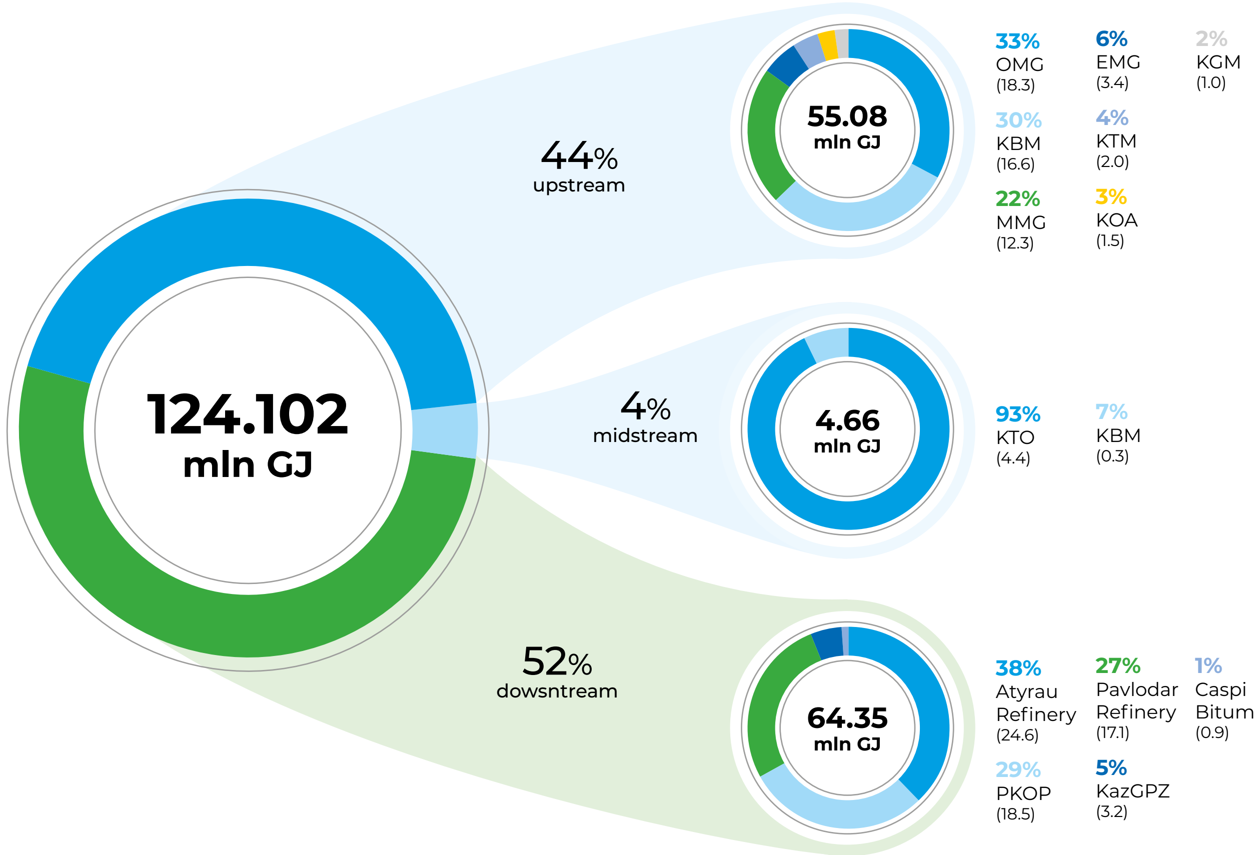
In 2023, KMG Group's self-generated energy amounted to 740 thous. kWh in electricity and 3,988 thous. Gcal in heat.

In accordance with the Rules for Determining the Tariff for the Support of Renewable Energy Sources, Atyrau Refinery purchased for internal use in 2023 from Financial Settlement Centre of Renewable Energy LLP 3,741 thous. kWh of electricity produced by renewable energy facilities. In 2023, PKOP and CaspBitum solar panels generated 101 thous. kWh of electricity for street lighting.

Energy consumption by resource type, %



Energy consumption by segment



Reducing energy consumption

KMG Group's key strategic energy saving and energy efficiency initiatives include process equipment upgrades, deployment of energy saving technologies, optimisation of heat generation and consumption, and the development of the Group's own generation assets, including APG-fired generation.

From 1 July 2023, the wholesale electricity market (WEM) was reformed by introducing centralised purchase and sale of electricity (single buyer mechanism) and a real-time balancing electricity market.

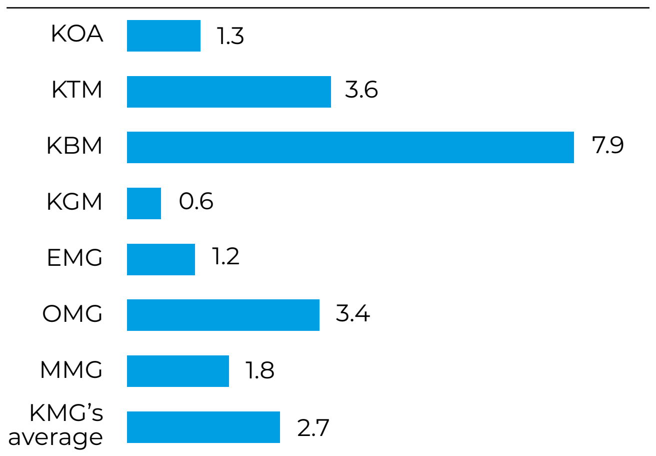
Under the new mechanism, the same electricity tariff is set for all WEM consumers across the country, and WEM players will be financially liable for imbalances.

Some of KMG's subsidiaries and associates already operate in the wholesale electricity market.

In 2023, 60 initiatives were accomplished as part of the Action Plan to implement the Low-Carbon Development Programme. The estimated annual fuel and energy savings amounted to 653.2 thous. GJ, which in physical terms corresponds to 12,312 thous. kWh of electricity, 8,276 Gcal of heat energy, 2,489 tonnes of boiler and heating fuel and 13,149 thous. m^3 of natural gas, an equivalent of 45,054 tonnes of CO_2 in emission cuts. Overall spending on the energy saving and energy efficiency initiatives was KZT 3,509 mln.

Energy intensity

In 2023, KMG Group's energy consumption in the upstream sector averaged at 2.7 GJ per tonne of hydrocarbon production, still 80% above the International Association of Oil & Gas Producers (IOGP) average for 2022, i.e. 1.5 GJ per tonne of hydrocarbon production.



KMG Group's average does not reflect the status quo because of a severe distortion owing to high energy intensities at OMG and KBM. KBM's energy consumption per tonne of produced hydrocarbons is six times higher than the IOGP global average, as production at the Karazhanbas field requires the use of steam and hot water to displace oil from subsoil reservoirs. At OMG, the measure is 2.3 times higher than the IOGP global average as a result of high dissolved paraffin concentrations and the rheological properties of oil, which means that it needs to be heated during production and transportation in both winter and summer.

Renewable energy

In addition to energy efficiency and energy saving, the Action Plan to implement KMG's Low-Carbon Development Programme places a special emphasis on renewable energy projects and the offset policy, which are expected to help reduce our carbon footprint.

KMG is doing a feasibility study to assess resources for the low-carbon production of hydrogen, technical, commercial and economic viability of investments in construction, and potential for blue hydrogen production with further CO_2 injection into oil and gas fields to intensify oil recovery.

CCUS-enabled methods of blue hydrogen production is key to conforming with classification.

As a hydrocarbon production operator, KMG can produce hydrogen using steam reforming or pyrolysis of natural and/or associated petroleum gas combined with CO_2 capture and burying in accordance with carbon intensity requirements.

Climate change and greenhouse gas emissions

Management

KMG's long-term Development Strategy prioritises the following climate-related initiatives:

1. Greenhouse gas emissions management
2. Reduction of routine flaring
3. Improvement of GHG emissions intensity per unit of production and overall energy efficiency;
4. Reduction of methane leaks
5. Increased financing for green projects

The global trend to fight climate change is increasingly affecting companies across the world. In furtherance of the government policy on the low-carbon development of the country, KMG has approved its 2022–2031 Development Strategy, which meets high safety standards and the sustainable development principles. According to KMG's Development Strategy, gradually reducing the carbon footprint is one of the Company's key priorities.

In addition to the Programme's main focus on improving the energy efficiency of the operating processes and implementing renewable energy projects, the Company is also planning to implement additional decarbonisation measures, specifically: carbon capture, utilisation and storage (CCUS) projects, development of hydrogen energy, and implementation of forest-climate projects.

In 2021, KazMunayGas approved its Low-Carbon Development Programme for 2022–2031 with a focus on reducing direct and indirect greenhouse gas emissions by 15% vs 2019. Furthermore, this year KazMunayGas is preparing its 2060 Low-Carbon Development Programme.

Risks and opportunities

The corporate risk management system is a key component of the corporate governance system, and is used to identify, evaluate, monitor and mitigate potential risks that may hinder the achievement of strategic goals. The Company implements a range of initiatives to minimise such risks, with risk reports submitted to the Board of Directors on a quarterly basis.

Information disclosure

In the CDP's Climate Change Questionnaire, KMG discloses direct and indirect greenhouse gas emissions data, greenhouse gas management issues, and key risks and opportunities for all KMG assets, including international assets in Romania and Georgia, starting from 2019.

In July 2023, the KMG Climate Change 2022 Questionnaire was published. According to the report, direct carbon dioxide emissions in KMG Group totalled 7.6 mln tonnes of CO_2 (8.1 mln tonnes of CO_2e) in 2022. The CO_2 equivalent data are presented using the global warming potential ratios set out in the IPCC Fifth Assessment Report (28 for methane and 265 for nitrous oxide).

The greenhouse gas emissions data were verified by independent accredited organisations' reports for each subsidiary or associate. Data for 2023 will be disclosed in KMG's CDP report to be published in 3Q 2024. We seek to ensure consistency and comparability when preparing our disclosures. We are committed to enhancing disclosures and increasing the scope of reporting around our Scope 3 emissions.

For more details on air protection, see the Sustainability Report

Indicator	Unit	2020	2021	2022
Scope 1 direct emissions	mln tonnes of CO_2e	15.8	10.6	8.1
Location-based Scope 2 indirect emissions	mln tonnes of CO_2e	3.5	3.3	3.3
Market-based Scope 2 indirect emissions	mln tonnes of CO_2e	3.5	3.3	3.2
Scope 3 indirect emissions	mln tonnes of CO_2e	61.3	62.1	61.8

Efficient use of raw gas

The reduction of gas flaring is one of the priority tasks for KMG Group. According to the approved Environmental Policy, the Company strives to achieve zero routine gas flaring. KMG is paying increasing attention to the responsible use of gas. Hence, over the last six years, routine flaring has decreased by 89% (2017: 315.8 mln m^3). Utilisation of raw gas in 2023 was 98.9%. Flaring was brought down thanks to the launch of a gas processing unit at Embamunaigas, which provides highly efficient treatment of hydrogen sulphide. In addition, a modern gas processing facility with a capacity of 226 mln m^3 of commercial gas per year was commissioned at Kazakhoil Aktobe's Kozhasai field.

In 2023, raw gas utilisation rate was 98.9 %, with flaring at 1.4 tonnes per 1,000 tonnes of produced hydrocarbons (1.5 tonnes in 2022 and 2.1 tonnes in 2021), down 7% year-on-year and 84% lower than the IOGP industry average.

In 2015, KMG supported the World Bank's Zero Routine Flaring by 2030 initiative. KMG strives to minimise raw gas flaring. Raw gas flaring reports under the Initiative are submitted on an annual basis to the World Bank's representative office in Kazakhstan.

For more details, see KMG's Sustainability Report

Raw gas flaring

Indicator	2017	2018	2019	2020	2021	2022	2023
Total raw gas flaring, mln m^3	315.8	148.9	80.2	57.6	52.5	35.7	33.3
Raw gas utilisation, %	85	93	97	98	98	98.8	98.9
Raw gas flaring rate, tonnes per 1,000 tonnes of produced hydrocarbons	11	6	2.95	2.2	2.1	1.5	1.4

Waste management

KMG's production operations generate production and consumption waste. KMG Group develops and implements a set of measures to improve the waste management system, keeps records of waste generated and accumulated, including contractors' waste, and performs the safe accumulation of waste until it is recovered or disposed of. In 2023, KMG's expenses for the recovery of historical oil waste totalled KZT 17.8 bln.

It is important to emphasise that in selecting waste recovery methods, priority is given to modern technologies, including those that cause no secondary pollution of the environment.

On 6 August 2019, a memorandum of cooperation was signed between the Ministry of Ecology, Geology, and Natural Resources of the Republic of Kazakhstan and KMG with historical oily waste disposal and oil contaminated soil remediation commitments until 2024, inclusively. The memorandum covers MMG, OMG, and KBM.

Starting September 2019, inventories of contract lands were conducted to determine waste characteristics, the content of oil products in the waste, and the waste volume. On the basis of the inventories data, the relevant remediation projects for oil-contaminated soil were developed and agreed upon with the government authorities, with safe and efficient technologies for oily waste disposal selected and recommended and schedules drawn up for oil-contaminated soil remediation through the year 2024, inclusively.

In addition, although EMG and KTM are not covered by the commitments under the memorandum, they work to eliminate historical pollution too.

All of the above companies have entered into long-term contracts with organisations specialising in the disposal of historical oily waste and clean-up of oil-contaminated soil.

In 2023, a total of 1,145 thous. tonnes of historical waste was disposed of at KMG subsidiaries' and associates' facilities, with their disposal sites remediated.

KMG Group's Corporate Waste Management Standard was drafted and scheduled for approval in 2024. The Standard specifies step-by-step actions of officers in charge at subsidiaries and associates when carrying out waste management activities to ensure compliance with the requirements of Kazakhstan's environmental laws. The standard is a guiding document for waste management at production facilities.

As part of introducing the separate collection and recycling of waste, in 2023 terminals (reverse vending machines) were installed in the KazMunayGas building to accept aluminium cans, plastic and glass bottles. In 2023, the machines accepted 17,516 plastic bottles and 3,403 aluminium cans for further recycling.

For more details on waste management, see KMG's Sustainability Report

Asset retirement obligations

Oil and gas assets

Under the terms of certain contracts, in accordance with legislation and regulatory legal acts, KMG has legal obligations to dismantle and liquidate fixed assets and restore land plots at each of the fields. In particular, KMG's obligations include the gradual closure of all non-productive wells and actions to permanently terminate operations, such as dismantling pipelines, buildings and reclamation of the contract area, as well as decommissioning and obligations to prevent environmental pollution at the production site.

The Company calculates asset retirement obligations separately for each contract. The amount of the liability is the present value of the estimated costs that are expected to be required to settle the liability, adjusted for the expected inflation rate and discounted using average long-term risk-free interest rates on government debt of transition economies, adjusted for risks inherent in the Kazakhstan market.

As of 31 December 2023, the carrying amount of the Company's provision for liabilities to liquidate oil and gas assets was KZT 124 bln (as of 31 December 2022: KZT 88 bln) (for details, see Note 30 in the consolidated financial statements).

Oil and gas trunklines

In accordance with the Law of the Republic of Kazakhstan On Trunk Pipeline, which entered into force on 4 July 2012, KMG's subsidiary KazTransOil has a legal obligation to liquidate the trunkline after the end of operation and implement subsequent measures to restore the environment, including land reclamation. The provision for the obligation to abandon pipelines and land reclamation is estimated based on the cost of dismantling and reclamation works calculated by KMG. As of 31 December 2023, the carrying amount of KMG Group's provision for the obligation to abandon pipelines and reclaim land of the Company amounted to KZT 46 bln (as of 31 December 2022: KZT 41 bln) (for details, see Note 30 in the consolidated financial statements).

Environmental remediation

KMG also makes estimates and makes judgements on creating provisions for obligations for environmental clean-up and rehabilitation. Environmental costs are capitalised as an expense based on or attributable to their future economic benefits.

The Company's environmental remediation provision represents management's best estimates based on an independent assessment of the expected costs required for KMG Group to comply with the existing Kazakh and European regulatory frameworks. As of 31 December 2023, the carrying amount of the provision for environmental liabilities was KZT 39 bln (as of 31 December 2022: KZT 681 bln) (for details, see Note 36 in the consolidated financial statements).

6 CLEAN WATER AND SANITATION

Water protection

Water is an integral part of all KMG production processes. KMG adheres to the principles of the UN Global Compact and integrates the Sustainable Development Goals (SDGs) into its operations. The Company adheres to all 17 SDGs, including Goal 6, Clean Water and Sanitation. In its activities, the Company strives to reduce water consumption, increase water use efficiency, drive up water reuse and recycling, improve the quality of effluents, and minimise the impact on natural water bodies.

KMG is a vertically integrated company engaged in the production, transportation, and processing of hydrocarbons. All processes consume a lot of water. KMG takes water from surface and underground sources, municipal water supply systems, and the Caspian Sea. Wastewater from KMG's operations mainly goes to specialised receivers: storage ponds, and evaporation and filtration fields. Those facilities are technical structures designed for natural treatment of wastewater and preventing environmental pollution. Operations that do not have their own storage facilities transfer wastewater to dedicated companies for treatment and disposal. The quality standards for discharged water established by environmental laws are met through the use of mechanical and biological methods of effluent treatment. However, no wastewater is discharged into surface natural water bodies.

One of the Company's most important objectives is to increase the reuse of treated effluents by returning them to the process, using them for irrigation of green areas, and dust suppression on construction sites and roads.

KMG uses the World Resources Institute's (WRI) Aqueduct water stress tool to map operated assets in water stressed areas. For such regions, KMG develops water management measures to use less fresh water, increase recycled water, and closely monitor water use.

To prevent water shortage risks, ensure the planned economic growth, and improve the water management system, KMG Group has developed a Water Resources Management Programme, which is expected to be approved in 2024.

Atyrau Refinery

The Tazalyq project is one of the key ongoing environmental initiatives of Atyrau Refinery. It includes the upgrade of the evaporation fields, mechanical treatment plants, and biological treatment facilities, as well as the construction of an advanced treatment facility. The project will have a significant environmental effect by improving the quality of wastewater treatment and eliminating harmful evaporation into the atmosphere from open tanks of the treatment plant and environmental impacts from evaporation fields.

This project will help double the capacity of mechanical treatment plants. In addition, a pipeline from Atyrau Refinery to the municipal sewage treatment facilities was installed in place of the existing open channel, which was used to discharge wastewater from Atyrau Refinery to its evaporation fields, thus eliminating the release of hazardous substances into the environment. The reclamation of Atyrau Refinery's evaporation fields is also underway. It consists of several stages: drainage of evaporation fields, mowing of reeds, deep ploughing, treatment with a biological agent, and triple reclamation.

Astrakhan–Mangyshlak main water line

2023 saw the launch of the Astrakhan–Mangyshlak main water line in the Atyrau Region after its expansion as a result of comprehensive reconstruction. The water pipeline was upgraded one year ahead of schedule.

Following the upgrade, the water line will become a source of additional 60 thous. m^3 of water for the population, businesses, and agricultural facilities of the Atyrau and Mangistau regions.

As part of the project, the worn-out equipment was modernised and two sections of the main water pipeline with a total length of about 177 km were replaced. With a workforce of over 500 people involved in the construction, the project successfully increased the pipeline's daily throughput capacity from 110 thous. m^3 to 170 thous. m^3.

A desalination plant with a daily capacity of 50 thous. m^3 is currently under construction in Kenderly. A 105 km long main water pipeline will be built from Kenderly to Zhanaozen.

In addition, the Caspi water supply plant is being reconstructed to double its capacity to 40 thous. m^3.

Construction of desalination plants near the Kenderly recreational area, Mangistau Region

KMG is building a seawater desalination plant with a capacity of 50 thous. m^3 per day next to the Kenderly recreational area. This project will solve the problem of drinking water shortage for the residents of Zhanaozen, while also having a multiplier effect on the development of tourism, business, and agriculture. The construction is scheduled to be completed by the end of 2024, with the plant reaching its design capacity in the spring of 2025.

Karazhanbasmunai

KBM's Karazhanbas field in the Mangistau Region launched a formation water desalination plant to address the issue of water supply to the field. Once the full capacity is reached, the formation water processing will amount to 42.5 thous. m^3 per day, while desalinated water production will reach 17.0 thous. m^3 per day, thus releasing a significant volume of water for the needs of the region's population.

For more details on KMG's water management and related projects, see KMG's Sustainability Report

Since 2020, the Company has been calculating its water footprint and making water management disclosures on the Carbon Disclosure Project (CDP) platform as part of the Water Security Questionnaire. The information for 2022 is published on the CDP website.

For more details, see KMG's published reports, which are publicly available at: CDP 2022 Water Security Questionnaire

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Occupational health and safety

KMG and its subsidiaries and associates prioritise the life and health of employees over the results of production activities and put a special emphasis on the elimination of hazardous production factors in occupational health and safety.

KMG's Occupational Health and Safety Policy seeks to engage every employee in building a robust safety culture. Management teams at KMG and its subsidiaries and associates take a zero tolerance approach to losses and damage caused by accidents (including traffic accidents), emergencies, as well as by the use of alcohol, narcotic drugs, psychotropic substances or their analogues. KMG is committed to ensuring compliance with both national laws and relevant international and national standards. The Company will continue to work to ensure a high level of production safety in accordance with global standards and best practices.

2023 highlights

As one of the industry leaders in the Republic of Kazakhstan, KMG places a strong emphasis on health and safety of its employees and local communities across its footprint. According to our employees, the Company creates safe working conditions and complies with the highest standards to ensure health and safety at the workplace.

The number of injuries associated with workplace accidents decreased by 19% year-on-year (from 36 injuries in 2022 to 29 in 2023).

The number of road accidents dropped by 21% (from 24 in 2022 to 19 in 2023), while the number of fires fell by 100% (from 1 in 2022 to 0 in 2023).

In 2023, despite the positive performance in the realm of accident prevention, there were two fatal accidents related to labour activities (one employee of PetroKazakhstan Oil Products was killed in a road accident and one employee of Ken-Kurylys-Service died as a result of impact of moving objects).

Key highlights	Unit	2021	2022	2023	Change 2023/2022	%
Accidents	Acc.	28	35	28	–7	–20
Number of injuries	People	32	36	29	–7	–19
including fatalities	People	3	1	2	+1	+100
Road accidents	Acc.	22	24	19	–5	–21
Fires	Acc.	6	1	0	–1	–100

Accident and fatality rates

Indicator	2021	2022	2023	IOGP
Lost Time Incident Rate (LTIR), per mln person-hours	0.31	0.36	0.30	0.26
Fatal Accident Rate (FAR), per 100 mln person-hours	2.93	1.0	2.11	0.30

Process safety management

As part of the efforts to prevent accidents and incidents in 2023, subsidiaries and associates were consulted and advised on how to organise and ensure process safety / manage barriers. Also in 2023, 23 scheduled audits were carried out on the industrial safety of subsidiaries and associates. The auditors issued 220 items of recommendations to improve the industrial safety at hazardous production facilities of KMG Group.

As part of rolling out KMG's corporate Rules for Isolation of Energy Sources, the subsidiaries and associates were provided with explanations on the implementation of the LOTO industrial safety system. The implementation and application of LOTO is monitored by KMG's Health, Safety, and Environment Department. In 2024, we plan to continue introducing and using the LOTO system in the production operations of KMG Group.

Besides, in order to consistently improve industrial safety at the facilities of KMG's subsidiaries and associates, an emergency drill was conducted to eliminate a blowout and a fire at a well and rescue a victim at the training grounds of PD Zhetybaimunaigaz (MMG), with the participation of a unit of the Mangistau branch of the Centralised Republican Headquarters of Militarised Professional Emergency Services and the Semser Ort-Sondirushi private fire-fighting service. The event was attended by observers from Samruk-Kazyna, KMG, Department of the Industrial Safety Committee, Department of Emergency Situations in the Mangistau Region, and KMG's subsidiaries and associates. The drill participants practised cooling of the well equipment, reduction in the intensity of heat radiation from the blowout, determination of the gas contamination zone, and sealing of the wellhead and killing of the well by injecting heavily weighted drilling mud.

Transport safety

When considering road accident statistics, it is worth noting that there are objective factors that contribute to the risk of incidents. One such factor is a large number of vehicles (more than 11,000 across the Company) and the very nature of service companies' operations – the need to travel regardless of the time of day, season, and weather conditions. The second factor is the geography of the Company's subsidiaries scattered across the Republic of Kazakhstan, as well as their location in big cities and towns where there is a high risk of road accidents due to the fault of a third party. For example, 15 of 19 road accidents (79%) that occurred in 2023 were caused by third parties.

As part of ensuring transport safety, protecting the life and health of people in the process of operating and maintaining motor vehicles, preventing road accidents, and reducing exposure of the Company's employees to potential risks of injury, we make consistent efforts to improve the level of transport safety:

- In 2023, 1,905 employees of subsidiaries and associates (1,451 employees of KMG's subsidiaries and associates and 454 employees of contractors) completed a defensive driving training in line with international RoSPA standards.
- In order to raise awareness among KMG Group employees about the need to use seat belts and reduce the number of injuries in road accidents, the Company undertook practical demonstration of the Convincer frontal collision simulator, which was attended by 7,783 employees of KMG's subsidiaries and associates.
- As part of the Travel Management project to implement an automated vehicle monitoring system, in 2023 diagnostics of transportation management processes were completed at KBM, OMG, MMG, OTC, OSC, and KTO (roadmaps for the project implementation were approved at KBM, OMG, OTC, and OSC).

Fire safety

No fires occurred at KMG's facilities in 2023. However, the following fire safety issues were registered:

11 ignitions (Atyrau Refinery (2), OMG (2), OMS, MMG, Petromidia Refinery (2), EMG, KGM, OSC), 1 flash (OMG), and 3 smoulderings (KTO, Atyrau Refinery, MMG).

According to the applicable laws, "fire", "ignition", "smouldering", and "flash" have different attributes and definitions. Thus, none of the above cases was included in the fire statistics.

On 21 June 2023, a mild hydrocracker (MHC) ignited at Petromidia Refinery in Romania following special maintenance. No injuries were reported. All employees of the unit and other sections of the refinery were evacuated.

To strengthen compliance with fire safety requirements, KMG developed and approved the Integrated Fire Safety Action Plan for 2022–2024, providing for short-, medium-, and long-term measures as well as preventive initiatives.

The reporting year saw scheduled fire drills held in all subsidiaries and associates in accordance with the Integrated Plan and in line with the instructions of Samruk-Kazyna.

In July 2023, drills were held at MMG with the participation of Samruk-Kazyna and Kazakhstan's Ministry of Emergency Situations.

On 20 September 2023, fire drills were held to eliminate a fire at the tank farm of Caspi Bitum with the participation of the Minister of Emergency Situations of the Republic of Kazakhstan.

In 2023, KMG Corporate Centre conducted two fire drills involving people evacuation and extinguishing of a simulated fire in the building.

HSE interaction with contractors

The Company seeks to improve the processes of HSE interaction with contractors on the basis of identification, assessment, and mitigation of risks at all stages of work and services provided by contractors and subcontractors at KMG Group's production facilities.

The Company requires contractors to observe and fulfil the legislative requirements of the Republic of Kazakhstan, KMG Life-Saving Rules, and the Company's HSE policies and standards.

In order to reduce incidents involving contractors, during 2023 KMG's HSE Department conducted compliance audits in 12 subsidiaries and associates to assess their HSE interaction with contractors. The audit yielded 587 performance improvement recommendations.

Based on the analysis of organisational structures of HSE functions across the Group in 2023, subsidiaries and associates received a recommendation to employ a relationship manager for HSE contractors.

Agreements with contractors will also provide for fines to contractors in breach of statutory requirements and KMG's HSE standards.

To manage potential hazards and prevent HSE incidents, the Company put in place Life-Saving Rules applicable to contractors. These rules inform employees of actions they can take to protect themselves and their colleagues from accidents. In accordance with the Policy and management system standards, KMG Group employees and contractors are entitled to reject or suspend work in case of a situation reasonably believed to be potentially threatening to health, safety or environment.

[1] Available IOGP figures for 2022 (https://www.iogp.org).

As a way to improve communication and efficiency of HSE interaction with contractors, a forum was held for the heads of HSE services at subsidiaries and associates to discuss the effectiveness of contractors' accident investigation and HSE management procedures. The event was attended by Samruk-Kazyna officials. The forum focused on the most relevant cases of process approaches and HSE management of contractors, in particular, the analytical approach to solving problems in process management based on the Deming PDCA cycle and its application to the management of contractors based on the example of Chevron.

The Company's key HSE requirement is pre-mobilisation audit for compliance of the contractor's machinery, equipment and personnel prior to the commencement of work, appointment of HSE officers from among the contractor's key employees, holding a kick-off meeting with the contractor, development and implementation of the contractor's HSE Plan (prior to the commencement of work, during work, and upon completion) and evaluation of the contractor's HSE performance.

Digitisation of HSE processes

2022 saw the completion of a pilot project to implement an automated vehicle monitoring system. The Travel Management project was implemented to improve transport safety, foster a safe driving culture, and establish a single centralised digital platform.

Given the positive effect on transport safety as a result of the Travel Management system introduction at EMG, as part of the phased replication of the project to other KMG subsidiaries and associates, in 2023 diagnostics of transportation management processes were completed at KBM, OMG, MMG, OTC, OSC, and KTO, and roadmaps for project implementation were approved.

As part of the industrial safety processes digitisation, EMG continues the implementation of electronic work permits system. Starting December 2023, the system has been put into operation for all EMG' production units. In 2024, the Company was developing TUMAR, an automated intelligent industrial safety system for preventing incidents and reducing the negative impact on employees when carrying out hazardous operations and during underground workover.

Improving the HSE management system

In 2018, KMG decided to join the International Association of Oil and Gas Producers (IOGP) as a full member.

Over the years of its membership in IOGP, KMG has learnt and applied IOGP best global practices and recommendations, which has had a positive effect on KMG's performance and overall HSE management system, as well as KMG's capabilities and rating on the international scale.

Since 1991, IOGP has analysed 2 thous. fatal accidents at some 100 IOGP member companies and identified the most frequent safety violations.

To prevent these violations, nine vital Life-Saving Rules have been drafted to inform workers of actions they can take to protect themselves and their colleagues from from situations with negative implications.

As part of its membership in the Association, KMG has developed and implemented the KMG Life-Saving Rules at its subsidiaries and associates, which carried out campaigns to raise employee awareness of the Rules by means of video materials and presentations. A message was circulated on behalf of the Chairman of KMG's Management Board on the importance of the KMG Life-Saving Rules and the right to refuse to carry out any work if it is unsafe.

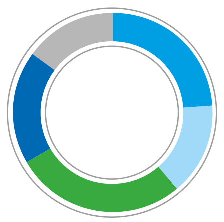
In order to promote a safety culture among employees and according to Samruk-Kazyna's Occupational Safety Action Plan, some 30 thous. employees of KMG and its subsidiaries and associates took training in safety culture.

Occupational health and hygiene

The Company manages occupational health and hygiene matters in accordance with Kazakh laws and international occupational health standards. KMG is strongly focused on employee health protection and improvement, irrespective of the specific production process involved.

In 2023, the number of non-work related fatalities among employees of subsidiaries and associates reduced by two incidents, or 20%, year-on-year, the main reason behind these fatalities being cardiovascular diseases.

Fatalities not related to labour activities, %



As part of strategic initiative 24 Personnel Health Management under the KMG Development Strategy for 2022–2031, the Company developed and approved:

- Employee Health Management Action Plan for 2023–2025;
- Corporate Standard on Mandatory Medical Examinations;
- KMG Group's Regulations on Emergency Medical Care as amended;
- Regulations on Drafting a Group-wide Standard Programme of Occupational Hygiene.

According to the Regulations on Emergency Medical Care, KMG Group conducts annual and regular medical drills to test the Emergency Medical Response Action Plan at each production facility. In 2023, subsidiaries and associates had over 560 medical drills, including those invovling contractors deployed at production sites. The drills covered the following topics: first aid in case of falling from a height, loss of consciousness, poisoning, cardiac arrest, etc.

The Company continues the implementation of hardware systems for medical examinations and rolled out 44 such systems at KMG's subsidiaries and associates by the end of 2023.

Social responsibility

The Company achieves its key social responsibility objectives through the existing systems of internal communications between employers and employees, cooperation with local executive bodies and trade unions, and fair collective bargaining with employees.

KMG complies with the legal and regulatory requirements applicable in the Republic of Kazakhstan, as well as with international laws and treaties regulating oil companies, and is aware of its responsibility to shareholders, communities, and investors for the impact on the economy, environment, and society, for the creation of long-term business value, and for sustainable growth in the long run. All employees of the Company have the right to safe and healthy working conditions, recognition and fair evaluation of their contribution to the Company, assistance in enhancing their professional skills, and an open and constructive discussion of the quality and effectiveness of their work. The Company has a zero tolerance policy for discrimination by nationality, race, religion, age, gender, political beliefs or other grounds.

We promote meritocracy, fairness, and integrity while providing every employee with a workplace conducive to new achievements and assessing their respective contributions to the Company's overall success based on merit. We also foster a culture of understanding, engagement, and support among our employees at all levels.

Social stability

KMG strives to ensure social stability at its enterprises through a constructive dialogue with employee representatives and aims to prevent any protests. We make ongoing comprehensive efforts to maintain social stability, including measures implemented under the group-wide social policy. Among other things, we carry out scheduled activities to improve social stability in subsidiaries and associates, compile a Social Stability Index, leverage internal communications, engage with contractors.

To maintain social stability at our enterprises, we are implementing a 2023 action plan to enhance social stability at subsidiaries and associates.

The action plan relies on Samruk Research Services[1] (SRS) surveys carried out by the Social Partnership Centre at Samruk-Kazyna for all major KMG subsidiaries and associates.

In 2023, KMG's integrated index under Samruk Research Services was 75%.

Based on the results of the Samruk Research Services surveys, each enterprise develops action plans to minimise and eliminate the areas of concern identified in the course of determining the social stability indicators. The action plans set out initiatives designed to boost staff satisfaction levels, enhance confidence in the management, put in place feedback channels, and improve working, living, and catering conditions, etc.

In 2023, the Corporate Centre developed a unified form of the SRS improvement plan for all subsidiaries and associates, and introduced the practice of visiting KMG enterprises and providing assistance in drafting action plans to promote social stability.

In 2023, the Centre ensured provision of legal and administrative advice to employees, and training of 18 internal mediators to participate in conflict resolution, labour disputes, and assist the parties in finding a mutually acceptable solution. We systematised data on all enterprises with risks of labour conflicts and protest sentiment. An algorithm was developed for a timely response to any potential drivers of labour conflicts. The Company continues to monitor the situation in subsidiaries and associates and all their contractors. In 2023, 63 cases with potential risks of social tension at 55 enterprises were under special control.

Since June 2022, KMG's representative office in Aktau (the "Representative Office") has been up and running. Close cooperation was established with government authorities within the framework of interdepartmental and regional headquarters and commissions. The Representative Office participated in 38 meetings and helped 96 enterprises of the region resolve their issues. The Company established cooperation and held 25 meetings with trade unions, with 161 resolutions made based on the meetings' results, of which 125 were implemented and 36 are being implemented.

1 Samruk Research Services is a sociological survey that reveals employees' mood, their social harmony, and the level of protest sentiment. In addition, the index helps identify matters of concern for employees of individual enterprises.

75%

In 2023, KMG's integrated index under Samruk Research Services

645 enquiries

received since the establishment of the Representative Office

The Representative Office took active steps to curb 11 strikes by bringing them within the framework of the law (setting up reconciliation commissions, reaching a compromise between the employer and strikers, etc.); 52 protests were prevented from gathering momentum. To improve the social environment, we now exercise continuous control over industrial relations at KMG subsidiaries and associates' contractors. As part of this work, 11 inspections and IR screenings were carried out.

These measures helped significantly reduce the number of oil and gas enterprises with medium labour conflict risks (January: 20 cases, December: 4 cases). At the moment, all subsidiaries and associates and their contractors are operating normally.

Since the establishment of the Representative Office, the Company has received 645 enquiries on 76 different topics (employment – 22, wage increase and debt repayment – 15, increase in the current tariff – 3, production and environmental issues – 8, bonuses – 10, improvement of social conditions – 13, IPO and acquisition of shares – 3, other issues – 2), of which 84% have been resolved and 16% are being processed.

Employee headcount

KMG Group employs around 50 thous. people across its regions of operation. The actual headcount for KMG Group at the end of 2023 was 49,710 people, of whom 46,603 were full-time employees, while 3,107 employees were outstaffed.

Actual headcount for KMG Group (consolidated), employee

Indicator[1]	Unit	2021	2022	2023
Male	%	82	82	81
Female	%	18	18	19
Blue-collar employees	%	92	92	92
White-collar employees	%	8	8	8
Employees aged 31 to 50, including:	%	59	59	58
▪ Male	%	81	81	81
▪ Female	%	19	19	19
Employees aged over 50, including:	%	29	30	31
▪ Male	%	81	81	81
▪ Female	%	19	19	19
Employees aged under 30, including:	%	12	11	11
▪ Male	%	86	86	88
▪ Female	%	14	14	12
Jobs created	jobs	945	88	918
Of average headcount	%	2.1	0.2	1.9
Employment terminated	Employee	2,757	3,123	2,124
Managers at all levels, including:	%	11	10	10
▪ Male	%	82	82	85
▪ Female	%	18	18	15
Turnover rate for KMG Group	%	6	6	4.5

Given that the Company operates in harsh and hazardous conditions, 81% of employees are male and 19% are female. Blue-collar employees account for 92% of the total headcount, while white-collar employees make up 8%.

In terms of age, the majority of employees (58%) are between 31 and 50 years old, and of those 81% are male and 19% are female.

Employees aged over 50 account for 31% of the total headcount; 81% of them are male and 19% are female.

The share of young people aged under 30 is 11% of the total headcount, including 88% male and 12% female employees.

In 2023, KMG created 918 jobs, which accounts for 1.9% of the average headcount. The number of employees whose employment was terminated in the reporting period is 2,124.

The percentage of employees who are managers at all levels is 10% of the total headcount, 15% (2022: 18%) of them are female and 85% (2022: 82%) are male.

The 2023 turnover rate for KMG Group was 4.5% (2022: 6%).

[1] Includes employees from consolidated companies with an ownership interest of 51% or above.

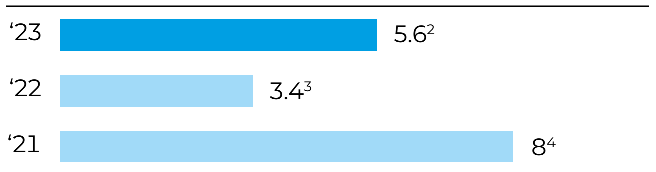
Development of the Company's regions of operation

KMG contributes to social and economic development in its regions of operation. We actively cooperate with local authorities, maintain an ongoing dialogue with key stakeholders, and focus on training and development of young skilled talent. We also run social initiatives for KMG Group's employees and are committed to supporting domestic producers through off-take agreements. Among other things, KMG Group companies invest in the development of socially important facilities, construction of sports complexes, and regional social and economic development under subsoil use contracts and the Comprehensive Development Plan.

The subsoil use contracts signed by KMG subsidiaries provide for significant investment in developing the regions of operation and social support to vulnerable population groups. The Company's subsidiaries and associates also provide funds to local executive bodies, which are further distributed in line with the needs of local communities under agreements and memoranda concluded with the akimats of the respective regions.

- OMG allocated KZT 1.7 bln to finance the development of social infrastructure in Zhanaozen and the Karakiya District of the Mangistau Region.
- EMG contributed KZT 783 mln for the construction of a kindergarten for 280 children in Bisekty, Atyrau Region.
- MMG transferred KZT 140 mln to the Mangistau Region's akimat to support the development of the regional social and economic infrastructure.
- KGM allocated KZT 2.3 bln to finance the construction of a Schoolchildren Palace for 350 people in the Kyzylorda Region.
- KBM contributed KZT 230 mln for the development of infrastructure in the Mangistau Region.
- KOA contributed KZT 206 mln to the social, economic, and infrastructure development of the Aktobe Region, with another KZT 189 mln coming from KTM; KZT 85 mln were donated to sponsor the development of the Mangistau Region.

Funds transferred to local executive bodies (under subsoil use contracts), KZT bln



North Caspian Operating Company N.V. (as part of the North Caspian Project) sponsors the following ongoing social projects worth about KZT 30 bln:

- construction of a Schoolchildren Palace in Aktau worth KZT 12 bln (the project timeframe is 15 March 2021–14 May 2024);
- construction of a 100-bed dormitory in Fort-Shevchenko (Tupkaragan District, Mangistau Region) for the amount of KZT 1.9 bln (the project timeframe is 1 June 2023–31 May 2024);
- construction of a vocational guidance and arts school for 260 students in Fort-Shevchenko (Tupkaragan District, Mangistau Region) for the amount of KZT 1.3 bln (the project timeframe is 26 May 2023–25 November 2024);
- construction of a secondary school for 100 students in Beki (Mangistau Region) for KZT 699.7 mln (the project timeframe is 26 April 2023–25 April 2024);
- construction of a 50-bed family outpatient clinic in the Bereke microdistrict, Atyrau for KZT 591.2 mln (the project timeframe is 21 February 2022–20 August 2023);
- construction of a kindergarten for 160 children in the Orleu residential area (Taskala-2) in Atyrau for KZT 625.2 mln (the project timeframe is 15 September 2022–14 June 2024);
- construction of an 80-bed annex to the regional children rehabilitation centre in Atyrau worth KZT 512.8 mln (the project timeframe is 15 September 2022–14 June 2024);
- construction of three-storey 60-apartment blocks of flats in Makhambet for KZT 1.1 bln (the project timeframe is 1 December 2022–31 May 2024);
- construction of a three-storey 60-apartment block of flats in Akkystau for KZT 1.1 bln (the project timeframe is 1 December 2022–31 May 2024);
- construction of a three-storey 60-apartment block of flats in Miyaly for KZT 1.5 bln (the project timeframe is 15 September 2022–14 March 2024);
- construction of a three-storey 60-apartment block of flats in Dossor for KZT 1.4 bln (the project timeframe is 17 August 2023–6 February 2025);
- construction of a three-storey 60-apartment block of flats in Kadyrka (Kurmangazy District) for KZT 1.3 bln (the project timeframe is 7 August 2023–6 February 2025);
- construction of a KZT 6.1 bln park in Atyrau (the project timeframe is 10 November 2023–9 February 2025).

[2] Excluding funds from Kashagan.
[3] Including funds under subsoil use contracts of KMG's subsidiaries and associates and excluding more than KZT 8 bn transferred by North Caspian Operating Company N.V. (Kashagan) to finance social projects. Respective figure in KMG's 2022 Annual Report was KZT 11.7 bn, as it included Kashagan funds.
[4] This amount includes KZT 5 bln transferred to local executive bodies and KZT 3 bln allocated under the Zhanaozen Comprehensive Development Plan

Working conditions for employees

The Company makes a continuous effort to improve employees' working and leisure conditions. KMG's subsidiaries and associates have employees' living and catering conditions reflected in their plans to improve social stability. They developed their own road maps for five years (2023–2027) to improve employees' working and leisure conditions. In 2023, KMG subsidiaries and associates plan to build over 40 social infrastructure facilities (canteens, administrative and production buildings, accommodation camps, etc.) and overhaul 115 social infrastructure facilities.

Charity and sponsorship

Samruk-Kazyna Trust Social Development Foundation, Samruk-Kazyna Group's unified charity operator, is responsible for the Company's charitable and sponsorship activities.

Samruk-Kazyna Trust's charitable initiatives focus on assisting people and communities in the social and medical sectors, developing media and cultural communities, fostering human resources, enhancing labour and inter-ethnic relations, investing in sustainable development, and supporting regional business initiatives.

The 2023 budget covered 46 projects totalling KZT 7.2 bln, of which four projects were completed taking into account KMG's needs:

1. IQanat Educational Foundation – an IQanat-Zharkyn Bolashak project totalling KZT 300 mln; 50 students of Zhanaozen's schools received educational grants to study at IQanat High School Burabai;
2. Bilim Foundation – a Zharkyn Bolashak project worth KZT 378.3 mln; 177 students from Zhanaozen received educational grants to study in colleges across the country; two graduates of the project were employed;
3. Mangistau Local Initiatives Centre – a project to upgrade the infrastructure and equipment of the outpatient clinic in Akshukur (Tupkaragan District, Mangistau Region) by purchasing an X-ray machine worth KZT 36.5 mln;
4. Construction of 21 children's sports grounds in Zhetybai and Zhanaozen (Mangistau Region) in 2022 and 2023 for KZT 1 bln.

In addition, KMG subsidiaries, namely, OMG, KBM, MMG, KOA, KGM, Pavlodar Refinery, and PKOP provided charitable assistance to local communities in the Atyrau, Mangistau, Aktobe, Kyzylorda, Turkestan, and Pavlodar regions for a total amount of KZT 1.1 bln.

In 2023, KMG, through Ak Su KMG, started construction of a KZT 19.3 bln multifunctional sports and recreation complex in Uralsk in furtherance of the order from Kazakhstan's President. The construction is slated for completion in December 2024.

Student and young talent engagement

KMG actively works and cooperates with young specialists and students. The Company runs dual training and internship programmes for students aimed at engaging and supporting young specialists.

Dual training programmes are implemented annually in KBM, EMG, KPI Inc., Pavlodar Refinery, and Atyrau Refinery.

In addition, MMG continues to run an educational programme featuring intensive training. Launched jointly with Yessenov State Engineering and Technology University, it seeks to ensure the stability of social, labour, and economic relations and to achieve KMG's strategic goals and objectives in sustainable development, namely, to reduce unemployment in the Mangistau Region. The programme is aimed at preparing candidates for vacant positions. It was successfully completed by 194 candidates from vulnerable population groups of the Mangistau Region.

During the Development Day, KMG Engineering held a workshop for young specialists titled "New Life of Mature Fields". The talent pool also received a hands-on training in kaizen fundamentals.

Production training was arranged at KMGE School for 18 students participating in a programme of KMG Engineering to train the most in-demand specialists.

In addition, KMG Group cooperates with Kazakhstan's universities and vocational schools to organise and conduct field and pre-graduation internships for students.

Unified internal communications system

KMG places a special focus on the internal community-oriented programmes. Their primary goal is to create favourable conditions for the Company's personnel. These include financial incentives, retention and professional development initiatives, labour safety measures. Special attention is paid to the prevention of social tension, labour disputes and conflicts.

To this end, there is an ongoing dialogue with employees and their representatives. The unified internal communications system is set to increase the feedback efficiency. All enterprises hold mandatory scheduled meetings between the management and employees to discuss social, day-to-day, and operational matters.

The internal communications system serves to timely inform employees about goals and objectives of activities carried out at subsidiaries and associates, communicate the current situation in the organisation to the staff, and to listen to employees and their needs.

All KMG's production assets have internal documents in place enabling each employee to address their questions to the management and receive a timely response via internal communication tools (biannual reporting meetings of subsidiaries' CEOs with personnel). At the meetings, CEOs inform employees about the current situation as regards economics, work scopes, production targets, occupational health and safety, HR, and social issues, and answer their questions. 2023 saw 101 reporting meetings covering 14,000 employees of KMG's subsidiaries and associates with over 500 questions asked. Common questions raised by employees at the meetings were wage increases, the employment of personnel's children, specific questions on health care, and those related to improving working conditions, including the need to repair or construct buildings and facilities. All questions were answered and relevant decisions were made.

In addition, to create and maintain effective mechanisms for direct communications between employers and employees in subsidiaries and associates, timely inform employees about the goals and objectives of the company's operations, communicate the current situation in the enterprise to employees, create a positive image of the company among employees, and monitor the corporate social and psychological climate, subsidiaries' CEOs hold meetings with employees on personal matters; each subsidiary and associate has in place a CEO blog, corporate information website, screen for video announcements in order to inform employees about corporate updates. Information boards are used for ad-hoc messages and announcements.

On a quarterly basis, management meets with the trade union of subsidiaries and associates to discuss the most pressing issues related to the implementation of the collective bargaining agreement, labour discipline, employees' requests, occupational health and safety issues, social benefits and compensations, and other socially important issues.

Trade unions

The Company interacts with trade unions on the basis of social partnership principles governed by labour laws at the industry and regional levels. At the industry level, interaction areas are defined in the Industry Agreement in the Oil and Gas, Oil Refining and Petrochemical Sectors of Kazakhstan developed jointly with representatives of KMG and its enterprises. These areas comprise social guarantees, labour management, remuneration, employment, gender and youth policy, occupational health and safety, prevention and resolution of labour conflicts, etc.

There are 42 trade unions at KMG protecting the interests of 44,430 employees.

At the regional level, there are regional social partnership commissions; in addition to regional employment and health and safety issues, they also consider specific collective labour disputes. All KMG companies have reconciliation commissions up and running.

KMG together with its subsidiaries and associates is an active member of the Industry Commission for Social Partnership and Regulation of Social and Labour Relations in the Oil and Gas, Oil Refining and Petrochemical Sectors. The commission tackles issues related to companies' working climate, HR development in the oil and gas, oil refining and petrochemical industries, creates industry qualification frameworks and professional standards. In its activities, KMG is compliant with the Industry Agreement in the Oil and Gas, Oil Refining and Petrochemical Industries for 2023–2025.

The Company complies with the key provisions of the Agreement on improving employees' social protection, enhancing the role of trade unions, ensuring safe working conditions, health and safety, etc. As far as industry-specific remuneration principles are concerned, KMG's subsidiaries and associates established minimal coefficients between different working categories and a minimal monthly wage rate for a first-class worker.

In 2023, more than 166 reports from employees of KMG's subsidiaries and associates and citizens were considered. The Mangistau Region was responsible for a sizeable chunk of requests from those asking for employment at KMG. Special attention was paid to reports on the violation of KMG Group employees' rights. They were carefully reviewed by the HR Management Department, with verifying if the decisions made were substantiated and compliant with the country's laws and internal documents of the enterprise in question. Those submitting reports were provided with appropriate answers, while enterprises were given practical recommendations on HR and social management.

Social support for employees

KMG Group has a Standard Collective Bargaining Agreement Form for Group companies that defines the types of social support for employees of KMG subsidiaries and associates and rules for providing it.

In 2023, collective bargaining agreements were in place at 25 enterprises of KMG Group. The number of employees covered by collective bargaining agreements was 50,163, or 96% of the actual headcount. These agreements guarantee safe working conditions, recreation, and health resort treatment.

KMG offers its employees a guaranteed social package: health improvement benefits paid together with annual leave, pregnancy and childbirth payments, monthly payments to employees on maternity leave, compensation upon employment termination in case of inability to transfer to another job, compensation due to general inability to work or disability, one-time payment in connection with the death of an employee (for funeral arrangements), one-time payment to the family of an employee deceased as a result of a workplace accident.

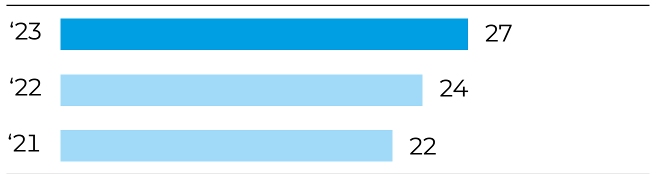
The Company also provides social guarantees for voluntary medical insurance in case of employees' illness, as well for recreation of employees and their children. Financial assistance is also rendered in the form of anniversary / retirement age benefits, in case of marriage, short-term leave upon marriage, childbirth, death of relatives (with the same wage level guaranteed), medical treatment / surgery, to disabled employees, employees' disabled children, employees in special need, to those buying school supplies for the start of the school year, etc.

According to KMG Group collective bargaining agreements, there are more than 50 types of key social benefits. In the reporting period, all the terms and conditions of collective bargaining agreements were met and maintained across all KMG enterprises, regardless of their financial and economic situation.

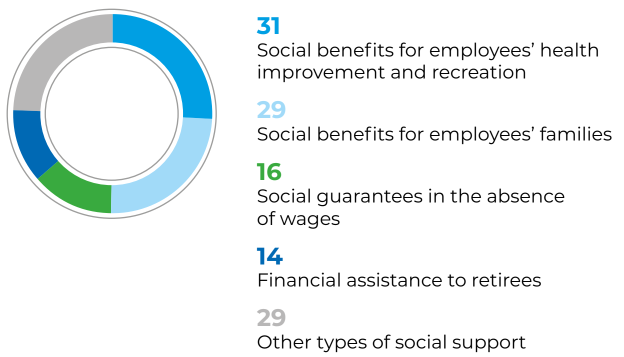
In 2023, the collective bargaining agreements of MMG, KTO, Caspi Bitum, Oil Services Company, Pavlodar Refinery, and KOA were updated to include increased social benefits as per the current standards for KMG Group.

In the reporting year, a new collective bargaining agreement was signed for the first time between the management and employees of Kazakhstan Petrochemical Industries, Inc. and KMG-Security. In 2023, KMG Group companies spent approximately KZT 27 bln on social support for their employees.

Social support for employees, KZT bln



Distribution of social support for employees of KMG Group, %



In 2023, 1,396 employees of KMG received state, departmental and other awards and benefits as part of significant dates' celebrations, including 626 employees to mark the Day of Kazakhstan Oil and Gas Industry Workers. A quota of 311 awards to commemorate the Day of the Republic of Kazakhstan was approved.

KMG Group developed and approved the Corporate Standard on Mandatory Medical Examinations. It was forwarded to KMG's subsidiaries and associates for implementation. The standard governs compulsory medical examinations and control over employees with chronic diseases, and sets out uniform requirements for medical service providers. A meeting was held with subsidiaries and associates of the Mangistau Region to discuss the launch of the corporate standard, implementation issues, and medical services for employees as a whole. The Company collected and consolidated data received from all subsidiaries and associates as regards the standard implementation status and analysed the distribution of medical support services for employees across each enterprise. We kicked off a project to draft a Corporate Wellness Programme at KMG Group.

Subsidiary and associate interaction with contractors

KMG approved regulations on interactions with contractors to ensure labour guarantees for their employees.

To make contractors deliver on their labour commitments, 21 KMG subsidiaries and associates included the regulations' requirements in their contractual obligations

In 2023, a special group of employees of KMG, KMG Representative Office in Aktau, OMG, MMG, KBM, as well as specialists from oilfield service subsidiaries of the Mangistau Region (a total of 60 people) embarked on its mission in Zhanaozen. The group is tasked with inspecting and analysing the operations of contractors engaged by OMG and KMG's oilfield service subsidiaries (Water Production and Transportation Department, Ken-Kurylys-Service, OzenMunayService, KMG EP-Catering).

43 contractors were inspected, including 29 engaged by OMG and 14 by KMG's oilfield service subsidiaries.

The inspection covered two key areas:
1) compliance with labour law requirements, working, sanitary and living conditions, occupational health and safety, and medical care. Particular attention was paid to internal communications between the company's management and its employees (meetings of the managers with the staff, consideration of employees' reports and personal issues);
2) delivery of contractual obligations, including targeted use of funds allocated under the contract (payment of production bonuses, year-end bonuses, one-time holiday bonuses, health improvement benefits paid together with annual leave, guaranteed minimum benefits package).

The inspections revealed 572 violations. OMG and KMG's oilfield service subsidiaries were recommended to send instructions to the contractors for them to eliminate the identified violations within the deadline specified.

Company-wide events

KMG Group holds various events every year. For example, we organise a corporate sports competition and the Uzdyk Maman competition to promote a healthy lifestyle and professional development.

Uzdyk Maman professional skills competition

KMG Group has been holding the Uzdyk Maman professional skills competition at the company-wide level since 2016.

In the reporting year, it took place from 13 to 17 September in Aktau, at KBM's production site. The competition involved some 300 people representing 20 subsidiaries and associates of KMG and specialising in 17 areas: oil and gas production operators, well testing operators, reservoir pressure maintenance operators, oil treatment operators, well workover and servicing teams, process equipment repair and maintenance technicians, electric and gas welders, electricians, chemical analysis laboratory technicians, process plant operators, compressor operators, lathe operators, TsA-320 cementing truck operators, motor-vehicle drivers, instrumentation and control technicians, process pump operators.

The competition consisted of two stages: the first stage was held at the level of KMG subsidiaries and associates and involved 2,470 employees. The second stage of the competition at the company-wide level involved 157 people from 19 KMG enterprises who won first places during the first stage. First, the contestants took an online theory test organised by Samruk Business Academy. Then, the participants got their practical skills tested at the competition sites of the Karazhanbas field. The closing ceremony took place in Rixos Water World, where the winners were awarded medals, diplomas, and enjoyed a special show staged by employees of KMG's subsidiaries and associates. A representative of KGM also won the Uzdyk Maman 2023 competition run by Samruk-Kazyna.

In addition, representatives of Pavlodar Refinery were invited by Gazpromneft to participate in the Best in Profession 2023 competition in the Process Plant Operator and Compressor Operator categories. The contest hosted by Gazpromneft-ONPZ took place from 28 to 30 August 2023 in Omsk. Representatives of various companies participated in the competition, including Gazpromneft-ONPZ, Slavneft-YANOS, Gazpromneft-MNPZ, NIS, Poliom, Atyrau Refinery, SIBUR, etc. Contestants were given various tasks: they completed professional tests, demonstrated their knowledge of HSE guidelines, dealt with a practical case study on computer simulators, performed gas hazardous works, carried out first aid, solved practical professional tasks, and competed in a firefighter relay race. Representatives of the teams performed in pairs, but there was a personal scoring. Despite the lack of experience with this kind of competition, our team performed well, just a little behind its rivals, and took fourth place in each nomination.

In August 2023, KTO entered the Best in Profession international professional skills competition among representatives of Transneft and Gomeltransneft Druzhba's key professions. These included production operators, line pipefitters, electric and gas welders, chemical analysis laboratory technicians, process equipment (plants) repair technicians, control and automation technicians, electricians; oil pumping station operators.

KMG sports competition

In 2023, KMG Group held its annual corporate sports competition for team building purposes.

This year, the event took place from 10 to 14 July 2023 and was dedicated to the 60th anniversary of MMG. Over 500 employees from more than 20 KMG subsidiaries and associates participated in the competition. All of them had previously passed the qualifying stage featuring eight groups with some 3,000 employees from over 30 KMG's subsidiaries and associates. Contestants competed for awards in 11 categories: minifootball, volleyball, football, chess, table tennis, swimming, arm wrestling, Toguz Kumalak, Arkan Tartu, Assyk Atu, cyber sports.

From 18 to 20 August 2023 Astana served as a venue for the superfinal of the 8th Spartakiad among employees of Samruk-Kazyna enterprises; this year, it was timed to coincide with the Fund's 15th anniversary. This major event totalled 845 participants in 11 individual and team sports.

KMG got the first place in the team event. The Super Cup of the Spartakiad among the Fund's portfolio companies was awarded to KMG for the second year in a row.

One Team – One Goal motto is a reflection of the event's core message, that is, fostering corporate culture and strengthening team ties, encouraging all participants to work as one to achieve superior results.

Most subsidiaries and associates of KMG Group created conditions for employees to do sports (rent of halls, availability of gyms at the fields, etc.), which yields positive results. Intra- and inter-workshop sports competitions are held on a regular basis.

Environmental campaign

14 October 2023 saw a corporate environmental campaign to plant trees in the capital of Kazakhstan. KMG supported the initiative of President Kassym-Jomart Tokayev to plant 2 bln trees within five years.

The event was attended by Chairman of KMG's Management Board Magzum Mirzagaliyev, Astana Akim Zhenis Kassymbek and Vice Minister of Ecology and Natural Resources Nurken Sharbiyev. The event's idea was to promote environmental responsibility and care for the environment, as well as to make the city greener.

Today, the World Cleanup Day is an environmental initiative that takes place all over the world. Millions of people come together to care for nature by cleaning up waste.

Volunteers of KMG Group, including Kumkol, KTO and KMG Corporate Centre, stepped in to clean up Borovoye.

As part of the event, KMG volunteers collected rubbish, installed bins and information signs.

Corporate culture development

In 2023, the Company embarked on a mission to update and develop its corporate culture. The corporate culture was analysed using three methods: online survey, in-depth interviews with top management, and focus group discussions. Based on the results, the current and target corporate culture profile was determined, employee engagement and commitment to the Company and its values were assessed, and feedback on improving business processes was collected. Based on the obtained data and feedback from employees, recommendations were given on the development of corporate culture and a plan of measures for 2023 and 2024 for the transition from the current to the target culture profile.

To establish a feedback mechanism within the Company, the management met with the employees of the Corporate Centre to discuss the strategy implementation and development of the corporate culture; work is underway to implement changes in the corporate environment, create favourable working conditions, and establish internal communications. A strategic session was held with the Company's top management on the implementation of the corporate culture, as well as a series of strategic sessions on the Company's values. As a result, four values (safety, efficiency, responsibility, team) were proposed and are being agreed upon by the Company's management. All these initiatives are aimed at increasing employee engagement in activities pertaining to the Company's development and driving efficiency in achieving its strategic goals.

In 2024, we plan to acquaint our employees with the Company's values and behaviour patterns, as well as run a pilot project to promote corporate culture in OMG and EMG.

Priority areas of our social policy

Personnel development is key for KMG Group's success.

The main objective of the Company's personnel development and training programmes is to ensure the progressive success of KMG by promoting employee efficiency improvements based on the knowledge, skills and competencies that fully meet corporate needs and contribute to the Company's strategic goals.

Training and professional development programmes

KMG promotes professional development in line with international standards. In 2023, for employees to obtain international qualifications and certifications under DipIFR, ACCA, IPMA, CIMA, PMP, CFA, CIA and other certification programmes, we trained 61 employees of KMG Corporate Centre and 188 employees of subsidiaries and associates.

In 2023, KMG teamed up with Samruk-Kazyna to run module training in PR School, HR School and IR for 96 employees of KMG Group.

Leadership Training Programme

The Company is proceeding with its MANSAP project to develop the Succession Plan for Key Positions within KMG Group.

The development programmes for A and B pool positions were implemented.

In 2023, the Leaders School development programme for C pool positions was developed and launched. The programme features seven different modules and four inter-module master classes, with three of them carried out in 2023: Effective Communication, Safety Culture, Planning and Resource Allocation. Budgeting, as well as an inter-module master class on feedback culture.

In 2023, a mentor training and development programme Succession in Action was drafted and launched for those enlisted in the talent pool for C pool positions to learn from the unique leadership experience of employees included in the talent pool for A and B pool positions.

Mandatory safety training

Safety is one of the pillars of the Company's sustainable operations.

To this end, our employees undertake continuous mandatory training in industrial safety, occupational health and safety, fire safety basics, well blowout safety, RoSPA defensive driving, counter-terrorist security, H_2S gas safety, radiation safety at enterprises, etc.

In 2023, based on Vision Zero, a global zero accident concept to which KMG adheres, we rolled out training in safety culture with the aim of creating and nourishing a culture of workplace safety. The training was attended by more than 16 thous. employees. In 2023 and 2024, it is planned to train each and every KMG Group's blue-collar worker.

Sustainability training

KMG pays special attention to meeting ISO requirements in such areas as quality, environment, health and safety, energy efficiency, sustainable development, and management systems.

For example, training sessions titled "Internal Auditor of Integrated Management System in accordance with ISO 9001, ISO 14001, ISO 145001 and OHSAS" were attended by 12 employees of the Corporate Centre and 271 employees of subsidiaries and associates. We also held training sessions on risk assessment skills for 51 employees of the Corporate Centre and 1,175 employees of subsidiaries and associates.

Today, one of the main strategic goals of KMG is to reduce emissions and save energy. To deliver on this goal, our employees are actively trained in this area. In 2023, 80 employees of the Corporate Centre and subsidiaries and associates received training in methane emissions in the oil and gas sector; energy saving, renewable energy sources, and low-carbon development.

New Procurement and Supply Management Procedures at Samruk-Kazyna and E-Procurement IT System 2.0

As part of its transparency policy, the Company pays special attention to procurement activities. To enhance the competencies of procurement professionals at KMG Group's Corporate Centre and subsidiaries, we launched a dedicated programme – New Procurement and Supply Management Procedures at Samruk-Kazyna and E-Procurement IT System 2.0.

So far, the programme has covered over 594 employees from 28 KMG companies.

Electronic library of production equipment and process documents

To create a unified database of technically sophisticated devices and equipment and provide information support, we delivered a joint project together with KMG Engineering to put in place an electronic QR-code-based library of production equipment and process documents. Our employees can now benefit from free remote access to the database of sophisticated devices and their specifications through the use of QR codes, which are scanned by image processing devices to obtain the necessary information on the availability of equipment at enterprises. One can easily generate a QR code to get information on technically sophisticated devices at enterprises in no time without making enquiries to the dedicated divisions of KMG's subsidiaries and associates.

For more details on employee training, see KMG's Sustainability Report

Supplier relations

Procurement system

Ensuring efficient procurement while striving to comply with sustainability principles is an integral part of KMG's activities, which contributes to the achievement of strategic and operational goals.

The key principles of KMG Group's procurement activities include compliance with laws and internal requirements, transparency of procurement procedures, promotion of fair competition, and provision of equal opportunities for counterparties. At the same time, KMG implements a number of initiatives in procurement to support domestic manufacturers as part of the Programme to Promote the Modernisation of Existing and Creation of New Production Facilities.

Procurement management at KMG companies is governed by two documents:

- Law of the Republic of Kazakhstan No. 47-VII ZRK On Procurement by Certain Quasi-Public Sector Entities dated 8 June 2021 (the "Law"), which became effective on 1 January 2022. The Law sets out the key principles and conditions of procuring goods, works, and services required for the business and statutory operations of companies from the quasi-public sector, including those owned by Samruk-Kazyna;
- Procedure for Carrying out Procurements by Joint-Stock Company Sovereign Wealth Fund Samruk-Kazyna and Companies Where JSC Samruk-Kazyna Directly or Indirectly Holds Fifty or More Percent of Voting Stock (Equity Stake) on the Right of Ownership or Trust Management (the "Procedure"), approved by Resolution of the Fund's Board of Directors No. 193 dated 3 March 2022. The Procedure was developed in furtherance of the Law's Article 14 and sets out key procurement principles and approaches, the general procurement management procedure, procurement management competence of the Fund and the Fund's operator for procurement, main requirements for procurement processes, the definition of applicable procurement methods, and grounds for the application of single-source procurement, while also specifying the procurement processes[1] related to procurement category management, procurement planning, supplier selection and management, and management of supply contracts.

To maintain and enhance transparency and efficiency in line with the most advanced international procurement standards and technologies, KMG Group uses the E-Procurement IT System portal (the "E-Procurement IT System") providing unhindered access (with certain exceptions, primarily related to state secrets) to procurement information to all stakeholders and ensuring equal opportunities for all participants in the procurement process.

The E-Procurement IT System enables automation and standardisation of all procedures within the procurement cycle (from planning to contract management) to cut the time needed to perform relevant tasks and reduce human factor. E-procurement facilitates market access and thus contributes to improved efficiency, increased competition and reduced administrative burden and operating expenses.

In addition to the public dissemination of information on procurement procedures and procurement contracts, including details of invitations to bid and the terms and conditions of contracts, the E-Procurement IT System envisages the advance establishment of requirements for participation in a competitive procurement, including selection criteria, bidding rules and publication thereof, while ensuring an efficient internal control system, including challenging the results of procurement in case of non-compliance with the rules or procedures established by regulations.

Sustainable procurement

KMG's sustainability principles are reflected in its interactions with counterparties based on legitimacy and transparency, compliance with contract terms, incorruptibility, and intolerance of corruption in any form, and selection of counterparties based on a mix of factors: best price, quality and terms, as well as the counterparty's business reputation.

[1] Among other things, the specifications include applicable terms and requirements for the applicable documents and procedures.

KMG, in turn, imposes on its counterparties obligations to comply with the sustainable development (ESG) principles:
1) environmental responsibility (E) – environmental protection in line with applicable laws of the Republic of Kazakhstan;
2) social responsibility (S) – fair treatment of employees, no child labour, safe working conditions;
3) corporate governance (G) – compliance with laws and quality management systems, adherence to other principles of ethical conduct.

These conditions are included in contracts signed by KMG with its counterparties to guarantee respect of labour rights and create favourable working conditions for citizens of the Republic of Kazakhstan, protect children's rights and ensure environmental safety. KMG believes that these measures help reduce the number of cases of illegal activities at companies cooperating with KMG.

When procuring goods, KMG also establishes requirements for potential suppliers to provide quality management system certificates.

Total procurement volume

The total procurement volume in 2023 under the annual procurement plan amounted to KZT 1,231 bln, net of VAT.

Reducing supplies from a single source and increasing the share of competitive procurement play an important role in KMG's procurement activities. Competitive procurement includes open tenders, requests for quotations, e-procurement, and commodity exchanges. In 2023, competitive procurement under KMG Group's annual procurement plan amounted to KZT 622 bln. Over the past three years, the share of competitive procurement has reached 51%, which demonstrates KMG's commitment to fair competition and sustainable development goals. Non-competitive, single-source procurement is made in exceptional cases where it is impossible to procure goods on a competitive basis.

Competitive procurement, KZT bln, net of VAT[1]

Year	Goods		Works and services		Total	
	Total amount	Share, %	Total amount	Share, %	Total amount	Share, %
2019	169	12	326	23	495	36
2020	168	15	252	23	420	38
2021	162	15	285	27	447	42
2022	237	23	275	26	512	49
2023	302	25	320	26	622	51

The total volume of goods, works and services supplied, including long-term procurement contracts, and the share of in-country value

Year	Goods		Works and services		Total[2]	
	Total amount, KZT bln	Share of in-country value, %	Total amount, KZT bln	Share of in-country value, %	Total amount, KZT bln	Share of in-country value, %
2021	273	57	943	85	1,216	78
2022	410	58	1,290	90	1,700	82
2023	606	50	1,580	88	2,186	77

The year-on-year 8% decrease in the share of in-country value for goods in 2023 was caused by the purchase of imported diesel fuel worth KZT 64 bln to meet the needs of the domestic market. The 2% decrease in works and services was due to the construction of the 2nd line of the Astrakhan–Mangyshlak water pipeline worth KZT 99 bln, with a low share of in-country value for tubular products. The low share of in-country value for tubular products can be explained by the fact that the sole manufacturer, ArcelorMittal Tubular Products Aktau, lacks the production capacity to cover the entire project scope.

¹ Competitive procurement includes open tenders, requests for quotations, e-procurement, and competitive negotiations.
² The share of in-country value factors into procurement conducted under special procedures.

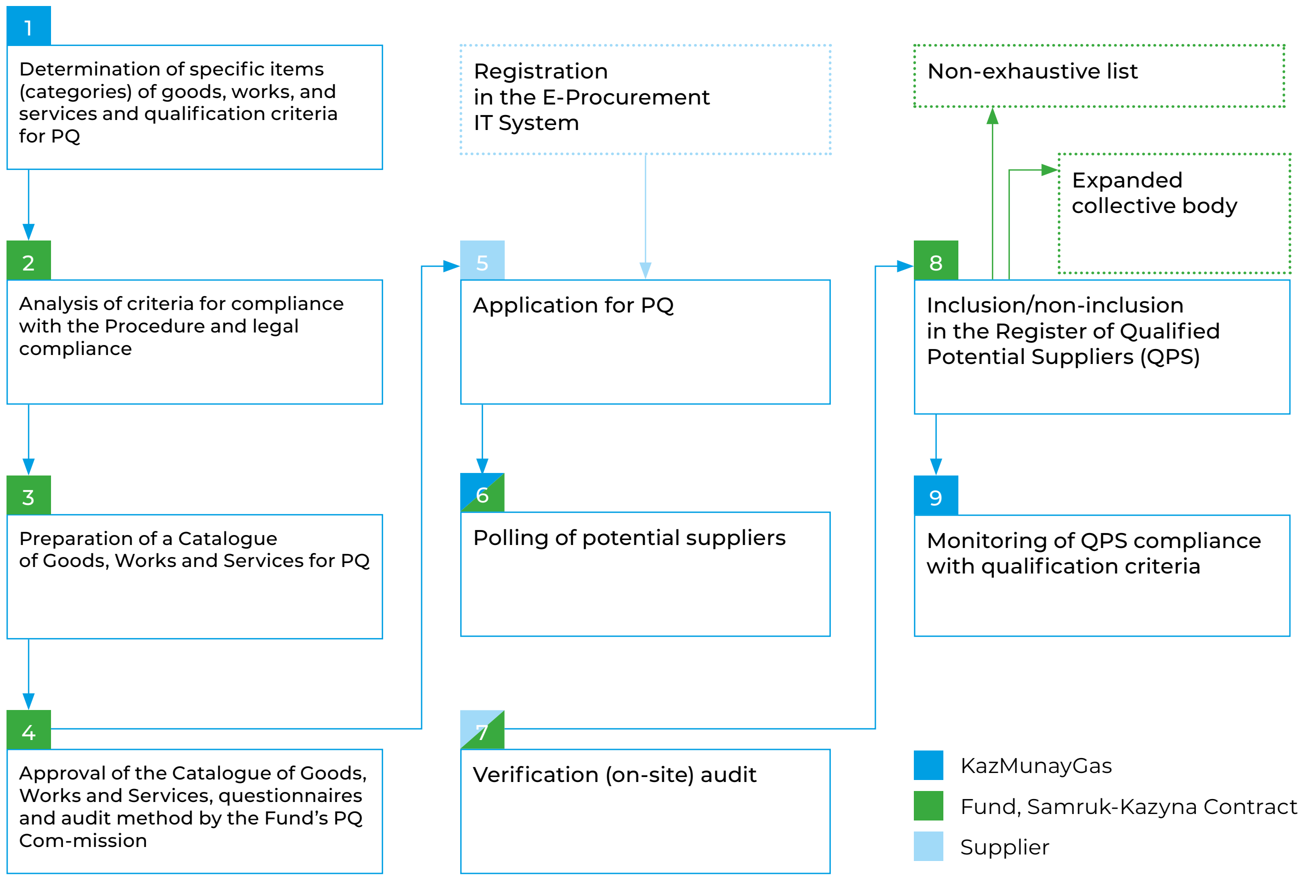
Pre-qualification of potential suppliers

Continuous improvement in procurement with a focus on the requirements and standards applied in Kazakhstani and international practices is one of KMG's priorities. Pre-qualification of potential suppliers is an effective tool for addressing this need.

Pre-qualification (PQ)[3] is the questionnaire- and audit-based process of evaluating potential suppliers for compliance with the qualification requirements defined in accordance with the Procurement Procedure.

The key objectives of PQ are to identify qualified suppliers selected on the basis of formal criteria, and to improve procurement efficiency with respect to the goods, works, and services sourced for the needs of the Fund's portfolio companies[2].

PQ procedure



From 2020 to 2023, the Fund's PQ Commission approved 24 categories of goods, works, and services that can be procured by KMG's subsidiaries and associates through open tenders held among bidders pre-qualified in line with the PQ procedure.

Additionally, in 2023 KMG drafted and submitted to the qualification body the PQ qualification criteria for 16 categories of goods, works, and services. These categories are currently being harmonised and approved by the Fund's PQ Commission.

³ After completion of the PQ procedure and subject to the approval by the qualification body's commission, potential suppliers are included in the Register of Qualified Potential Suppliers publicly available at Samruk-Kazyna's procurement portal.

Category-based procurement

Procurement category management is the process of developing a comprehensive approach to reducing costs associated with procurement and the use of goods, works, and services included in priority categories.

Categorisation implies combining goods, works and services into procurement categories on the basis of common characteristics of procurement items and/or a single market of potential suppliers. Categories may include one or more items of goods, works, and services. Categories characterised by a high cost, criticality, savings potential, and manageability are identified as priorities.

Category-based management helps increase the potential for savings through a more detailed analysis by developing and approving a category-based procurement strategy. This strategy determines an optimal approach to purchasing goods, works, and services based on maximisation of benefits in the long or short term. Category-based procurement should contain goals and objectives, internal and external environment analysis, approaches to procurement category management, requirements for supplier development, calculation of benefits, and an implementation plan.

Category-based management results in significant reduction of the cost of purchase and use of goods, works, and services through strategic planning, a detailed analysis of goods and services to be purchased, and calculations of the total cost of ownership, as well as cross-functional interaction with various business units. This method of procurement is effective in that it provides both quality and a transparent price by engaging reliable manufacturers and suppliers.

Procurement category management includes:
- categorisation of goods, works, and services to be purchased and identification of priority procurement categories;
- development (update) and approval of category-based procurement strategies for priority categories;
- implementation of category-based procurement strategies;
- monitoring of the implementation of category-based procurement strategies;
- supplier development.

Category-based procurement volume and benefits by year, 2018–2023, KZT mln

Indicator	2018	2019	2020	2021	2022	2023
Category-based procure-ment volume	13,948.38	41,531.68	49,716.04	109,447.54	93,618.92	115,545.23
Category-based procure-ment benefits	1,565.01	4,101.81	7,011.23	13,109.53	8,435.32	7,534.63

Import substitution

As a company representing the interests of the government in the oil and gas industry, KMG is actively working to promote import substitution in procurement under Law of the Republic of Kazakhstan No. 47-VII ZRK On Procurement by Certain Quasi-Public Sector Entities dated 8 June 2021 (Procedure for the Conclusion and Execution of Off-take Agreements (Programme to Promote the Creation of New Production Facilities) (the "Programme"). The Programme's primary objective is to support private entrepreneurs who launch new production facilities (especially in the regions of operation) and undertake technological upgrades to manufacture currently imported products sought by Samruk-Kazyna Group.

For reference:

Year	Number	Amount, KZT mln
2019	10	270
2020	41	686
2021	49	388
2022	56	791
2023	64	1,687
Total	**220**	**3,031**

Off-take agreements provide for the implementation of import substitution projects with a condition precedent stipulating the purchase and delivery of goods to be manufactured in Kazakhstan as a result of the project.

As of 31 December 2023, KMG's subsidiaries and associates entered into **64** off-take agreements for a total of **KZT 1.68 bln**

In 2023, under paragraph 6 of the Nationwide Action Plan to implement the Address of the Head of State to the people of Kazakhstan "Economic Course of Fair Kazakhstan" delivered on 1 September 2023, approved by Presidential Decree No. 353 dated 16 September 2023, new KPIs were developed and approved for KMG enterprises to achieve "the share of off-take agreements in the procurement of goods" in the amount of 10% in 2024.

Digitalisation and cyber security

Digitalisation

In line with KMG's Development Strategy until 2031, digitalisation is to focus on specific operational business tasks in production, ultimately yielding direct financial gains which will result in improved automation and digitalisation of corporate business processes, with a view to improving efficiency and achieving ever higher KPIs.

In order to successfully implement automation and digitalisation tools, the Company analyses existing business processes by describing them, identifying bottlenecks, and developing target business processes with digitalisation in mind.

As an example, implementation of a pilot project titled "Travel Management" at EMG in 2023 resulted in the project's ongoing rollout at OMG, KBM, and MMG. It is aimed at fostering a safe driving culture, improving transport safety and simplifying the workflow for owners of the transport management process.

In the reporting year, transport management was analysed at OMG, MMG, Oil Services Company, Oil Transport Corporation, KTO (Atyrau and Zhezkazgan Oil Pipeline Departments), and KMG-Security.

Results of the review and recommendations on how to improve the processes were submitted to the executive management of respective subsidiaries. Work is underway to develop standalone action plans to rectify non-compliances identified during the review.

In December 2022, KMG approved a programme for developing field digitalisation. The new tool is aligned with a much-needed comprehensive approach to digitalising all of KMG Group's upstream assets and introduction of unified systems for data collection and analysis across all fields.

Also, 2023 saw the approval of road maps to develop digitalisation and automation of EMG and OMG for 2023–2027.

EMG successfully ran a pilot project for a digital system of electronic work permits in order to improve the process and enhance employee safety.

EMG also introduced a speech recognition module as part of efforts to digitise work acceptance certificates for well servicing with a view to improving business processes and automating document flow. Relying on machine learning algorithms, the module enables conversion of audio records into electronic text, which will help to considerably simplify the process of preparing and submitting daily reports while also contributing to greater automation in creating work acceptance certificates for well servicing operations.

Work is also underway to implement an advanced process control (APC) system at Atyrau Refinery's units. The APC system automatically adjusts process parameters to achieve consistent output of oil products and prevent any emergency shutdowns by eliminating human error. To date, the APC system has been introduced at the ADU-2 primary oil refining unit and AVDU-3 atmospheric crude distillation unit.

In order to ensure transparency of processes and remove red tape in approving and signing work acceptance certificates, efforts began to roll out the Online Work Acceptance Certificate project at OMG, KBM, MMG, and Atyrau Refinery.

OMG also initiated work under the Electronic Job Order project to create and edit job orders, automatically check all completed fields, have a unique number automatically assigned to each order, and arrange for multi-level coordination and approval of job orders with many process participants. With this project, users will get notifications about the status of and changes to job orders and will be able to build reports incorporating various metrics linked to job orders. The solution is expected to be rolled out across other subsidiaries and associates.

Digital KMG

For the first time ever, KMG Group organised Digital KMG, a practical forum on digitalisation. The forum served as a platform for businesses to share their experience in digitalisation, discuss approaches to implementing digital solutions, identify corporate needs for IT products, and create a concept for digital development.

The event brought together around 100 managers and personnel of departments for automation, information technology and digitalisation of KMG's Corporate Centre, subsidiaries engaged in oil exploration, production and transportation, and oilfield services companies.

The forum discussed the impact that digital trends have on the oil and gas industry, along with ongoing and potential projects in digitalisation and comprehensive IT infrastructure for companies. The event's programme featured a session on design thinking, resulting in a list of open questions related to digitalisation of KMG's subsidiaries and associates.

LSS forum

During the year, KMG held the 6th Conference on Lean Six Sigma for the Upstream and Downstream business segments.

The conference aimed to engage employees of KMG Group into operational optimisation and efficiency improvement efforts, instil a process of continuous improvement at all levels of the Company, and host an annual contest for the best Lean Six Sigma project of the year.

The event's programme included training for executive sponsors of Lean Six Sigma chosen from among KMG managers, work in groups, and presentation of the best Lean Six Sigma projects by EMG, MMG, KGM, Pavlodar Refinery, Atyrau Refinery, PKOP, and Caspi Bitum.

Atyrau Refinery's project to optimise consumption of chemically treated water at the EDD-AVDU-3 unit, run by Medet Zinulliev, won the top prize as the Best Lean Six Sigma Project among KMG's Subsidiaries and Associates.

Siemens memorandum

As part of an official visit of Kazakhstan's President Kassym-Jomart Tokayev to Germany, KMG signed a memorandum of understanding with Siemens AG.

The document aims to foster collaboration in the areas of automation, digitalisation, optimisation, recording and control of production processes. Under the memorandum, the parties will be teaming up in training and upskilling personnel, creating digital models and digital twins to model operational processes, handling data collection and processing tasks, and rolling out best in class technologies at KMG's production assets.

As part of cooperation with Siemens, work is underway to deploy COMOS software at the Akshabulak field of KGM.

Cyber security

In cybersecurity, KMG aims to protect information from external and internal threats, prevent potential losses and minimise damage from cyberattacks and unauthorised actions to ensure undisrupted full-fledged operations of KMG and its subsidiaries and associates.

Ensuring information security is an ongoing process that combines legal, organisational and technical measures of protection. Important components here are regular analysis, audits, and penetration tests, as large-scale information systems are most often used in geographically distributed infrastructure environments of large oil and gas production sites with continuous process cycles. Unauthorised access to KMG's protected networks and systems may have a devastating impact on infrastructure and consumers as well as the country as a whole.

To ensure its information security, KMG strictly complies with Kazakhstan's respective laws and adheres to international approaches and ISO/IEC 27001 standard on information security management systems.

Information security includes organisational and technical measures to protect IT infrastructure of KMG's information systems, critical ICT components and automated process management systems.

On an ongoing basis, the Company assesses information security risks to identify and prevent respective threats.

Information security is a special focus for KMG's management.

Strong information security management as a rule contributes to the Company's ongoing development by protecting it from threats, ensuring legal compliance, securing its reputation and fostering the uptake of innovations. Integrating information security aspects into the business strategy is now a major part of corporate governance efforts.

TCFD-aligned disclosure

As part of activities to improve international ratings on climate risk management and sustainability, in 2023 KMG teamed up with the European Bank for Reconstruction and Development for a project to develop an action plan for corporate climate governance and disclosure aligned with the TCFD recommendations.

The project consisted of four stages.

The first one was initial diagnostics, which provided for an analysis of KMG's current business processes in the area of decarbonisation and sustainability to assess their alignment with the TCFD recommendations. A benchmarking exercise was conducted to identify and present best industry practices on TCFD-aligned disclosure, including compilation of a list of climate-related risks for a detailed scenario analysis of their impact on KMG's business model in the short, medium, and long term (until 2030, 2045, and 2060 respectively).

The second stage focused on risk assessment, climate change scenario, analysis, and stress tests, and aimed to review the Company's value chain so as to deep dive into its segments and assess their exposure to climate-related risks.

For each segment of the value chain (upstream, midstream and downstream), including the Company's foreign assets, the assessment helped identify 25 strategic assets (of 17 subsidiaries and associates) for subsequent scenario analysis. At the next stage, the assets underwent scenario analysis to gauge their exposure to climate-related risks at various scenarios of temperature changes and shifts in a regulatory environment.

The results were used to calculate the risks' financial impact on the key financial metrics of the Company's subsidiaries and associates and its consolidated financial highlights such as net profit and EBITDA margin. Afterwards assets of KMG and its subsidiaries and associates were classified based on their exposure to key climate-related risks. The analysis also reflected opportunities associated with the energy transition as well as respective decarbonisation projects planned by KMG as part of its LCDP.

At the third stage of the project, KMG's decarbonisation measures were analysed to better understand the Company's current plans. This review resulted in recommendations on a methodology for ex-ante and ex-post quantification of progress under prioritised climate actions. Ex-ante quantification will be used for strategic planning and prioritisation of climate actions for implementation, and ex-post quantification will be leveraged for the purposes of KMG's climate reporting. The quantification methodologies rely on international standards for tracking greenhouse gas emissions, such as GHG Protocol. They also provide recommendations to revise KMG's existing goals (target level for GHG emissions for 2031 and low-carbon projections for 2060), including analysis of discrepancies with:

a) international standards (for example, the Science Based Targets initiative (SBTi) recommends that near-term targets should have a target year of 5–10 years from the date the target is set, and long-term targets should have a target year of 2050 or sooner); and
b) greenhouse gas emissions standards (such as GHG Protocol), including boundaries and completeness of data.

Recommendations also concern ways in which KMG's climate goals can be better aligned with international standards (including as regards inclusion of Scope 3 emissions in line with the SBTi recommendations). In addition, KMG was advised to add new measures to its decarbonisation list, namely steps aimed at climate change mitigation and adaptation in order for the Company to achieve its climate goals, reduce risks, and capitalise on climate-related opportunities. The list mostly include energy and resource saving measures as well as implementation of, or investment in, renewables already identified by KMG.

The final fourth stage of the project leveraged the previous stages and assessment to develop a Corporate Climate Governance Plan.

TCFD table

Recommended disclosures		Sections of the Annual Report
Corporate governance Disclose the organisation's governance around climate-related risks and opportunities.	a) Describe the board's oversight of climate-related risks and opportunities.	▪ Ensuring Sustainable Development, p. 138 ▪ Climate Change and Greenhouse Gas Emissions, p. 183 ▪ Corporate Risk Management System, p. 263
	b) Describe the management's role in assessing and managing climate-related risks and opportunities.	▪ KMG's Development Strategy (Strategic Goal 4), p. 50 ▪ Ensuring Sustainable Development, p. 138 ▪ Sustainable Development KPIs of KMG's Management, p. 166 ▪ Corporate Risk Management System, p. 263
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material.	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	▪ Market Overview, p. 30 ▪ Key risks, p. 267
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	▪ Market Overview, p. 30 ▪ KMG's Development Strategy (Strategic Goal 4), p. 50 ▪ Commitment to UN Global Compact Principles and 17 Sustainable Development Goals (Goal 13), p. 160 ▪ Low-Carbon Development Programme, p. 167 ▪ Climate Change and Greenhouse Gas Emissions, p. 183 ▪ Key risks, p. 267
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2 °C or lower scenario.	A Corporate Climate Governance Plan was developed to include climate-related scenarios.
Risk management Disclose how the organisation identifies, assesses, and manages climate-related risks.	a) Describe the organisation's processes for identifying and assessing climate-related risks.	▪ Commitment to UN Global Compact Principles and 17 Sustainable Development Goals (Goal 13), p. 160 ▪ Low-Carbon Development Programme, p. 167 ▪ Climate Change and Greenhouse Gas Emissions, p. 183 ▪ Key risks, p. 267
	b) Describe the organisation's processes for managing climate-related risks.	▪ Climate Change and Greenhouse Gas Emissions, p. 183 ▪ Key risks, p. 267
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	▪ Climate Change and Greenhouse Gas Emissions, p. 183
Metrics and targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	▪ KMG's Development Strategy (Strategic Goal 4), p. 50 ▪ Commitment to UN Global Compact Principles and 17 Sustainable Development Goals (Goal 13), p. 160 ▪ Climate Change and Greenhouse Gas Emissions, p. 183 ▪ Low-Carbon Development Programme, p. 167 ▪ Energy Saving and Energy Efficiency Programmes, p. 180 ▪ Sustainable Development KPIs of KMG's Management, p. 166
	b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	▪ Climate Change and Greenhouse Gas Emissions, p. 183
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and actual performance against targets.	▪ KMG's Development Strategy (Strategic Goal 4), p. 50 ▪ Commitment to UN Global Compact Principles and 17 Sustainable Development Goals (Goal 13), p. 160 ▪ Climate Change and Greenhouse Gas Emissions, p. 183 ▪ Low-Carbon Development Programme, p. 167

IN 2023, KMG CONTINUED TO PURSUE ITS AMBITIOUS STRATEGIC GOALS, WHILE STAYING SUFFICIENTLY RESILIENT AND ROBUST

p. 216
Corporate governance framework

p. 282
The highest dividends paid to shareholders

p. 280
KMG share price increase since the IPO

02 CORPORATE GOVERNANCE

CORPORATE GOVERNANCE FRAMEWORK

KMG's corporate governance framework represents the totality of processes ensuring management and oversight of KMG's activities and a system of relations between the shareholders (Samruk-Kazyna, Ministry of Finance (Kazakhstan National Fund) and the National Bank of Kazakhstan), Board of Directors, Management Board and stakeholders.

The roles of KMG's governing bodies are clearly delineated and set out in KMG's Charter.

KMG's corporate governance structure

General Meeting of Shareholders

Board of Directors

	Nomination and Remuneration Committee	Strategy and Portfolio Management Committee	Audit Committe	Health, Safety, Environment and Sustainable Development Committee
YERNAT BERDIGULOV, Chairman				
UZAKBAY KARABALIN		○		○
PHILIP HOLLAND	◇	○	○	○
ASKAR SHAKIROV	○	○		
SAYA MYNSHARIPOVA	○	○	○	
YELZHAS OTYNSHIYEV		○		
ARMAN ARGINGAZIN	○		◇	○
ARMANBAI ZHUBAYEV		◇	○	◇
MAGZUM MYRZAGALIEV				

Committee Chairman ◇
Committee member ○

Corporate Secretary

Compliance Service

Ombudsman

Internal Audit Service

Management Board

Magzum Myrzagaliyev, Chairman of the Management Board	**Dastan Abdulgafarov,** Deputy Chairman of the Management Board	**Bulat Zakirov,** Deputy Chairman of the Management Board	**Vassily Lavrenov,** Deputy Chairman of the Management Board
Nurseyit Soyunov, Deputy Chairman of the Management Board	**Dmitriy Makeyev,** Deputy Chairman of the Management Board	**Diana Aryssova,** Deputy Chairman of the Management Board	**Serikkali Brekeshev,** Deputy Chairman of the Management Board
Kuanysh Khudaibergenov, Deputy Chairman of the Management Board			

The Company's corporate governance framework comprises:

- **Supreme body** – General Meeting of Shareholders;
- **Governing body** – Board of Directors reporting to the General Meeting of Shareholders;
- **Executive body** – Management Board reporting to the Board of Directors;
- **Internal Audit Service** – a centralised body that directly reports to the Board of Directors, controls financial and business operations of the Company and other KMG Group entities related to the Fund pursuant to the Law of the Republic of Kazakhstan on the Sovereign Welfare Fund, appraises internal control and risk management systems, oversees implementation of corporate governance regulations and advises on enhancing KMG's and KMG Group's performance;
- **Corporate Secretary** – a permanent and independent employee who is neither a member of the Board of Directors, nor a member of the Company's executive body. Corporate Secretary is appointed by and reports to KMG's Board of Directors, and ensures implementation of corporate documents and control over KMG's corporate governance framework within their scope of responsibilities;
- **Compliance Service** reports to the Board of Directors and aims to ensure compliance with mandatory regulations and global best practices in pursuing anti-corruption policies and building a corporate culture across KMG Group to foster transparency and integrity among its employees, as well as to create a business environment aligned with global best practices, internal policies, and Kazakhstan's laws;
- **Ombudsman** – an appointee of KMG's Board of Directors, whose role is to advise KMG employees upon request and assist in resolving social and labour disputes, conflicts and issues, as well as to ensure compliance with business ethics principles among KMG employees.

KMG's corporate governance framework is based on respect for the rights and legitimate interests of KMG's shareholders and key stakeholders – the state, KMG's strategic partners and counterparties (suppliers and customers), investors, and employees, as well as municipalities, local communities, and residents in KMG's regions of operation.

KMG's corporate governance framework is continuously improving to reflect the evolving requirements and standards of national and international corporate governance practices.

DEVELOPMENT OF THE CORPORATE GOVERNANCE FRAMEWORK

As a corporate centre that shapes and implements the development strategy, in particular by engaging in operations of subsidiaries through a divisional management structure, the Company is committed to best corporate governance practices and recognises high corporate governance standards and transparency as key drivers of investment appeal and operational efficiency, boosting confidence among potential investors, counterparties, and other stakeholders, mitigating the risk of inefficient use of corporate resources and increasing KMG's market value and wealth.

The Company's Board of Directors oversees the quality of KMG's corporate governance, and the Corporate Secretary coordinates its continuous improvement.

The KMG Corporate Governance Code (the "Code") adopted by resolution of Samruk-Kazyna's Management Board dated 27 May 2015 is the core document underpinning KMG's corporate governance framework and efforts to improve it. The Code was developed in accordance with Kazakhstan's laws and Samruk-Kazyna's internal documents to incorporate best national and global corporate governance practices, as well as the principles set out in Samruk-Kazyna's Transformation Programme.

The Code sets out the principles underlying the Company's corporate governance framework, which are identical to the corporate governance principles of the Samruk-Kazyna Group. The Board of Directors and the Audit Committee monitor compliance with the Code's regulations at KMG.

According to the Code, the Corporate Secretary annually reviews KMG's compliance with the Code's provisions and principles using a "comply or explain" approach. At present, most of the Code's provisions have been complied with. Isolated instances of partial non-compliance with certain provisions of the Code have been listed in the Corporate Governance Code Compliance Report, along with the reasons for non-compliance. For KMG's 2023 Corporate Governance Code Compliance Report, see the Appendix to this Annual Report.

Over a course of several years, the Company's Corporate Secretary Office has carried out consistent and systematic work coordinating KMG's efforts to improve its corporate governance practices. Since 2016, the Company has used the review methodology for corporate governance in legal entities in which 50% or more of the voting shares are owned directly or indirectly by Samruk-Kazyna (the "Methodology") to set goals and track the progress of improvements in corporate governance.

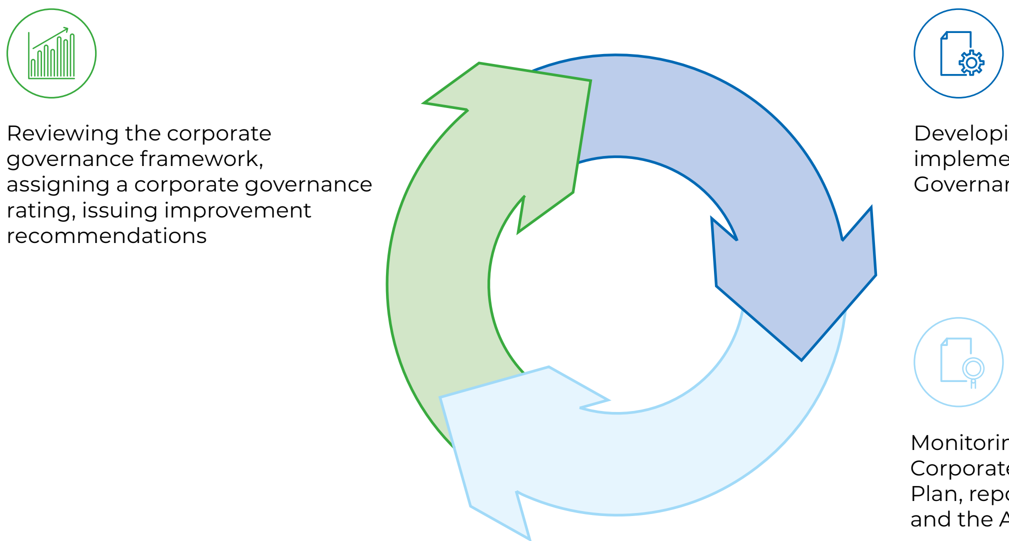
The Methodology involves the assignment of a rating to the Company based on the results of its corporate governance review (audit) by an independent party, which is carried out on a regular basis.

As required by the Methodology, the Corporate Secretary Office uses the review findings to develop a Corporate Governance Improvement Plan, with relevant progress against it regularly reported to the Company's Board of Directors and the Audit Committee.

Following the 2021 independent review of the Company's corporate governance by PricewaterhouseCoopers in line with the Methodology, KMG was assigned a BBB corporate governance rating (upward revision from the BB rating assigned in 2018), which testifies to the Company's progress in developing its corporate governance framework, ensuring its compliance in all material respects with most established criteria, and providing sufficient evidence to demonstrate its efficiency.

KMG followed the recommendations presented by the independent consultant following the 2021 corporate governance review and included them in the Corporate Governance Improvement Plan to further enhance its corporate governance practices in 2023 across such areas as transparency, shareholder rights, risk management, internal control and audit, performance of the Board of Directors and the executive body, and sustainable development. In accordance with the established practice, the Corporate Secretary monitors progress against the Corporate Governance Improvement Plan on a regular basis, with progress reports reviewed by the Audit Committee and the Board of Directors and feedback provided to KMG's management.

In general, the Company's efforts to enhance its corporate governance are continuous and cyclic, and the key objective of the process is assigning a rating and issuing respective improvement recommendations by an independent party.



General Meeting of Shareholders

The General Meeting of Shareholders is the supreme body of KMG. The General Meeting of Shareholders scope of competencies and meeting convocation, holding and summarising procedures are set forth in laws and the Company's Charter. General Meetings of Shareholders can be annual and extraordinary. KMG's Annual General Meeting of Shareholders is convened by the Board of Directors. An Extraordinary General Meeting of Shareholders can be convened by either the Board of Directors or any shareholder of KMG.

The meeting's agenda is set by the Board of Directors and presents a comprehensive list of explicitly stated matters for discussion. In 2023, KMG held five General Meetings of Shareholders, deliberating on 14 matters, with five pertaining to the composition of KMG's Board of Directors:

1. On 6 April 2023, the Extraordinary General Meeting of Shareholders (Minutes No. 1\2023) of KMG terminated early the powers of Gibrat Auganov, a representative of Samruk-Kazyna, and Assel Khairova, an independent director.
2. At the Extraordinary General Meeting of Shareholders of KMG held on 6 April 2023 (Minutes No. 1\2023), Yernat Berdigulov was elected to the Board of Directors as a representative of Samruk-Kazyna, and Armanbai Zhubayev was elected to the Board as an independent director.
3. Furthermore, at the meeting dated 6 April 2023, resolutions were passed regarding the number of members and tenure of the Counting Commission of KMG's General Meeting of Shareholders, and its members were elected.
4. On 14 August 2023, by the resolution of the Extraordinary General Meeting of Shareholders (Minutes No. 4/2023) of KMG, Saya Mynsharipova was elected to the Board of Directors of KMG as an independent director.

The Annual General Meeting of Shareholders also addressed the approval of KMG's consolidated and standalone annual financial statements for 2022, discussed KMG's 2022 net profit distribution procedure and dividend per ordinary share, and reviewed shareholder submissions regarding KMG's and its officials' actions during the year.

Additionally, in 2023, a new version of KMG's Charter was approved along with a new version of the Regulations on KMG's Board of Directors, which subsequently saw more amendments.

For more details on interactions with minority shareholders and their rights, see the Shareholder and Investor Relations section

BOARD OF DIRECTORS

The Board of Directors is responsible for general supervision of KMG's activities. Resolutions of the Board of Directors are adopted in line with the procedure set forth in the applicable laws and KMG's Charter. Even though the applicable laws and KMG's Charter allow the Board of Directors to adopt resolutions as long as a quorum is achieved and a certain majority of votes is cast in favour, KMG endeavours to have the most important resolutions adopted at meetings held in person and to have all Board members take part in the voting. KMG makes every effort to prepare and coordinate resolutions in such a way that the opinions of all Board members are taken into account.

In addition, the Board of Directors determines KMG's business priorities and approves its development strategy; considers and makes resolutions on potential acquisitions and other significant financial issues, including the terms of bonds and derivatives issued by KMG; approves major and interested-party transactions; approves acquisitions and transfers (assignments) of subsoil use rights; approves conclusion of partnership contracts (agreements) with strategic partners for joint implementation of subsoil use projects; approves investment projects funded by KMG or its subsidiaries; oversees the effectiveness of the Company's corporate governance practices.

The Board of Directors reports the Company's results to shareholders. At the annual General Meeting of Shareholders, the Chairman of the Board of Directors presents the shareholders (members) with the report on the performance of the Board of Directors and its committees in the reporting period, including measures taken by the Board to increase long-term business value and sustainability, key risk drivers, material events, items considered, the number, format and attendance of meetings, along with other relevant data. The Board's report is part of the Company's Annual Report.

The Company's Board of Directors is guided by the Company's Charter, Corporate Governance Code and Regulations on the Board of Directors and follows the annual activity plan and meeting schedule, taking a rational and efficient approach. The Board of Directors can also review matters beyond its activity plan, if necessary.

Chairman of the Board of Directors and his role

Chairman of the Board of Directors is responsible for providing overall leadership for the Board of Directors, ensuring that the Board of Directors fully and effectively fulfils its main roles and builds a constructive dialogue between Board members, major shareholders and the Management Board. The Chairman of the Board of Directors is a representative of the Fund.

Independent directors and their role

Independent directors play a significant part in the activities of the Board of Directors – they represent the majority of Board committee members and chair the committees. Independent directors meet all statutory independence criteria, as well as the requirements of the Guidelines on Forming Boards of Directors at Companies of Samruk-Kazyna and the Code.

According to the Corporate Governance Code, an independent director is a person with professional expertise and independence sufficient to have their own opinions and make fair unbiased judgements that are not influenced by the Company's shareholders, executive body or other stakeholders. Independent directors shall take active part in discussions of issues involving potential conflicts of interest (preparing financial and non-financial reporting, making interested-party transactions, nominating candidates to the executive body, setting remuneration for members of the executive body). An independent director shall monitor any circumstances which may lead to a potential loss of their independence and notify the Chairman of the Board of Directors in advance if they arise. If any circumstances affecting the independence of a member of the Board of Directors arise, the Chairman of the Board of Directors shall immediately inform the shareholders accordingly in order to make a relevant decision.

In line with global best practices, the Company seeks to ensure that its independent directors meet high standards, and thereby declares that there are no other circumstances which are likely to impair, or could appear to impair, its directors' independence.

Succession planning for the Board of Directors, induction and development

The Company developed and adopted the Succession Policy and Succession Plan for Members of KMG's Board of Directors. Following the corporate governance review performed at KMG in 2021, the independent consultant PricewaterhouseCoopers LLP issued a number of recommendations regarding the succession planning and terms of office for members of KMG's Board of Directors, which were implemented in 2023. The Corporate Governance Improvement Plan for KMG presented by PwC includes the following recommendations:

- consider extending the term of shareholder representatives and independent directors on the Company's Board of Directors and discussing it with shareholders. It is necessary to look into aligning the term of shareholder representatives on the Board of Directors with the Company's strategy horizon to secure the Company's advantages associated with the continuity of corporate memory and the Company's reputation amongst the investment community, if the Company has plans to be listed on international stock exchanges;
- consider developing a formalised succession plan for the Board of Directors, including a list of candidates, their expertise, potential interest in appointment, preferred remuneration and potential tenure based on the tenure of current directors and the required skills matrix.

KMG has in place an Induction Programme for New Members of the Board of Directors (the "Programme") approved by the Board of Directors in 2017. In June 2020, the Board of Directors resolved to supplement the Programme with the requirement to hold meetings with heads of the Company's functional units, as well as meetings with Board committee chairs. The Corporate Secretary monitors the Programme implementation, i.e. the actual completion of all relevant procedures by new members of the Board of Directors. The Programme regulations are updated on an ongoing basis. In 2023, newly elected members of KMG's Board of Directors Armanbai Zhubayev, Yernat Berdigulov, Arman Argingazin, Yelzhas Otynshiyev, Saya Mynsharipova and Askar Shakirov completed the induction course under the Programme.

By its resolution dated 6 April 2022 (Minutes No. 6/2022, agenda item 16), the Board of Directors approved amendments to the Succession Plan for Members of KMG's Board of Directors for 2021–2024, approved by resolution of the Board of Directors dated 8 April 2021 (Minutes No. 5/2021, agenda item 20). Furthermore, members of the Board of Directors continuously improve their qualifications and provide information about completed trainings to be posted on the Company's website.

Term of office

Members of the Board of Directors are elected for a three-year term. Through a special consideration procedure, a member of the Board of Directors with a six-year continuous tenure may be re-elected for a new term, in each case considering the need for the Board to be effectively refreshed. As an exception, a member of the Board of Directors with a nine-year tenue may be re-elected (for independent directors, a detailed and compelling case needs to be prepared, to be disclosed by the Company to all stakeholders).

Following an independent corporate governance review conducted in 2021, the Company received a recommendation to consider extending the term of shareholder representatives and independent directors on the Company's Board of Directors and discussing this with the shareholders. Another recommendation was to look into aligning the term of shareholder representatives on the Board of Directors with the Company's strategy horizon. In view of the independent consultant, these steps would benefit the Company, with individual directors' tenure of five to six years and their rotation in different years ensuring continuity of knowledge over the Company's operations and its corporate governance processes. Longer tenure on the Board of Directors helps to improve directors' performance and accountably for the Company's progress against its strategy.

Membership of the Board of Directors

KMG complies with the Code standards requiring more than 50% of the Board members should be independent directors.

In 2019, the Board had nine members, whose tenure expired on 28 June 2020.

By the resolution of the Management Board of Samruk-Kazyna dated 17 August 2020 (Minutes No. 30/20), a new composition of the Board of Directors was elected, with three independent directors out of the total seven.

In 2023, the composition of the Board of Directors changed as follows:

- By the resolution of the General Meeting of Shareholders of KMG dated 6 April 2023 (Minutes No. 1/2023), the powers of the member of the Board of Directors representing Samruk-Kazyna Gibrat Auganov and independent director Assel Khairova were terminated early, while Yernat Berdigulov and Armanbai Zhubayev were elected to the Board of Directors as a member representing Samruk-Kazyna and an independent director, respectively.
- By the resolution of the General Meeting of Shareholders of KMG dated 30 May 2023 (Minutes No. 2/2023), the powers of independent director Timothy Miller as a member of the Board of Directors were terminated early, while Arman Argingazin was elected to the Board of Directors as an independent director.
- By the resolution of the General Meeting of Shareholders of KMG dated 27 June 2023 (Minutes No. 3/2023), the powers of the member of the Board of Directors representing Samruk-Kazyna Yernar Zhanadil, while Yelzhas Otynshiyev was elected to the Board of Directors as a member representing Samruk-Kazyna.
- By the resolution of the General Meeting of Shareholders of KMG dated 14 August 2023 (Minutes No. 4/2023), a new composition of the Board of Directors was elected, with four independent directors out of the total eight. By the same resolution, Saya Mynsharipova was elected to the Board of Directors as an independent director.
- By the resolution of the General Meeting of Shareholders of KMG dated 6 November 2023 (Minutes No. 5/2023), the composition of the Board of Directors was determined as comprising nine members, while Askar Shakirov was elected to the Board of Directors as an independent director.

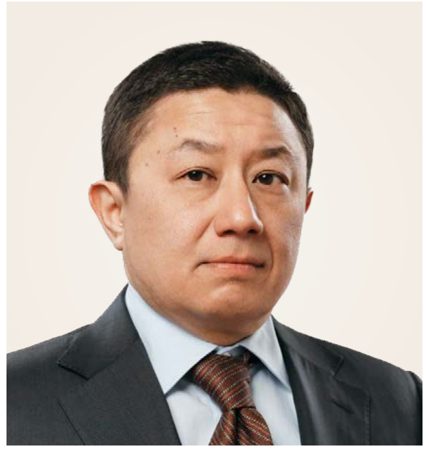
As a result, as of 31 December 2023, the Board of Directors comprised nine members. The Chairman of the Board of Directors is a member representing Samruk-Kazyna.

YERNAT BERDIGULOV
Chairman of KMG's Board of Directors, representative of Samruk-Kazyna

MAGZUM MYRZAGALIEV
Member of KMG's Board of Directors, Chairman of KMG's Management Board

PHILIP HOLLAND
Member of KMG's Board of Directors, Independent Director

ARMANBAI ZHUBAYEV
Member of KMG's Board of Directors, Independent Director



ARMAN ARGINGAZIN
Member of KMG's Board of Directors, Independent Director

UZAKBAY KARABALIN
Member of KMG's Board of Directors, representative of Samruk-Kazyna

YELZHAS OTYNSHIYEV
Member of KMG's Board of Directors, representative of Samruk-Kazyna

SAYA MYNSHARIPOVA
Member of KMG's Board of Directors, Independent Director

ASKAR SHAKIROV
Member of KMG's Board of Directors, Independent Director

Membership of the Board of Directors as of 31 December 2023

YERNAT BERDIGULOV

Chairman of KMG's Board of Directors, representative of Samruk-Kazyna

Member of KMG's Board of Directors since April 2023

Date of birth: 3 September 1987

Education

- Harvard Business School (Boston, Massachusetts, USA) Leadership Development Programme (for executives), 2022–2023
- University of Warwick (Coventry, UK), Master of Business Administration (distance programme), 2015–2018
- University of Toronto (Toronto, Canada), Public Policy and Global Affairs (major in Political Economy), 2007–2010
- Al-Farabi Kazakh National University (Almaty, Kazakhstan), International Relations Department, major in Regional Studies, 2004–2007 (completed three academic years, after which continued his studies under the Bolashak scholarship programme)
- Marysville Pilchuck High School (Marysville, Washington, USA) Future Leaders Exchange Programme (FLEX), 2004–2005

Experience

- 2010–2011: Semyzbay-U (subsidiary of NAC Kazatomprom), Almaty, Kazakhstan – Chief Expert, Business Administration
- 2011–2012: Sovereign Wealth Fund Samruk-Kazyna, Astana, Kazakhstan – Project Manager, Management Reporting System (MRS) Implementation PMO
- 2016–2018: Samruk-Energy, Astana, Kazakhstan, Advisor to the Chairman of the Management Board (Finance and Economics):
  - 2016–2016: Samruk-Energy, Head of Analytical Support
  - 2014–2016: Samruk-Energy, Advisor to the Chairman of the Management Board
  - 2013–2014: Samruk-Energy, Head of Strategic Development
  - 2013–2013: Samruk-Energy, Head of Project Management
- 2018–2019: Sovereign Wealth Fund Samruk-Kazyna, Astana, Kazakhstan – Analyst, Asset Management Department
- 2019–2021: Whiteshield Partners (consulting services in the public sector), Astana, Kazakhstan – Project Manager (started off as Senior Analyst and got promoted to the position of Consultant in February 2020 and the position of Project Manager in February 2021)
- 2021–2022: Co-Managing Director for Strategy, Sustainability and Digital Transformation
- 2022 – present: Sovereign Wealth Fund Samruk-Kazyna, Astana, Kazakhstan – Managing Director for Strategy and Asset Management

Joint appointments and membership in other boards of directors

- Chairman of the Board of Directors at KEGOC
- Chairman of the Board of Directors at QazaqGaz
- Member of the Board of Directors at NAC Kazatomprom
- Member of the Board of Directors at NC Kazakhstan Temir Zholy

Government awards and honorary titles

- Order of Kurmet (Order of Honour) awarded by the Government of Kazakhstan, 2022
- Member of Kazakhstan's Presidential Youth Personnel Reserve, 2021
- Jubilee Medal "30 Years of Independence of the Republic of Kazakhstan", 2021
- Acknowledgement of the Assistant to the President – Secretary of the Security Council of the Republic of Kazakhstan for meaningful contributions to the work of the Expert Council under Kazakhstan's Security Council and assistance in preparation of strategic and analytical papers on national security, foreign policy and economic growth, 2020
- Acknowledgement from the Deputy Head of the Presidential Administration of the Republic of Kazakhstan for contributions to strategic and analytical papers on foreign policy and economic growth, 2020
- Member of the Presidential Youth Personnel Reserve, December 2019

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

MAGZUM MYRZAGALIEV

Member of KMG's Board of Directors, Chairman of KMG's Management Board

Member of KMG's Board of Directors since April 2022

Date of birth: 7 November 1978

Education

- Zhautykov Republican Physics and Mathematics School
- Economics, Turan University
- International Relations, Diplomatic Academy of the Ministry of Foreign Affairs of the Republic of Kazakhstan
- Oil and Gas Engineering, Caspian State University of Technology and Engineering

Experience

- Magzum Myrzagaliev joined KMG Group more than six years ago. He has worked in senior executive positions at KMG for three years.
- At different stages in his career, he worked as Technical Safety and Production Manager, Engineer for Drilling Fluids at M-I Drilling Fluids International (Schlumberger) at the Tengiz field and the fields of Western Siberia, CEO of TenizService LLP, Managing Director for Service Projects, Deputy Chairman of the Management Board for Innovative Development and Service Projects at KMG, Kazakhstan's Vice Minister of Oil and Gas, Minister of Ecology, Geology and Natural Resources, Minister of Energy, Advisor to Kazakhstan's President.
- Chairman of KMG's Management Board since April 2022.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

PHILIP HOLLAND

Member of KMG's Board of Directors, Independent Director

Member of KMG's Board of Directors since August 2020

Date of birth: 25 December 1954

Education

- Bachelor of Science in Civil Engineering, University of Leeds (UK)
- Master of Science in Engineering/ Construction Management, Cranfield Institute of Technology (UK)

Experience

- Philip graduated from the University of Leeds in 1976. After working for some time in the United Kingdom and Saudi Arabia, he joined Bechtel Corporation in 1980 and managed major oil and gas projects in a wide range of international locations.
- In 2004, he joined Shell as Vice President of projects, Shell Global Solutions.
- In 2009, Philip became Executive Vice President for Downstream Projects in Shell's newly formed projects and technology business.
- In 2010, he was appointed as Project Director for the Kashagan Phase 2 project in Kazakhstan and subsequently the Shell/QP Al Karaana petrochemicals project.
- Since 2013, he has operated as an independent project management consultant. Philip is the Chairman of the Board of Directors at Velocys PLC, and Non-Executive Director and Chairman of the Safety, Climate and Risks Committee at EnQuest plc

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

ARMANBAI ZHUBAYEV

Member of KMG's Board of Directors, Independent Director

Member of KMG's Board of Directors since April 2023

Date of birth: 28 January 1977

Education

- Duquesne University (Pittsburgh, USA), Bachelor of Science in Business Administration (BSBA), 1997–1999
- Oxford University (UK), Master of Science in Comparative Social Policy, 2002–2003
- The University of California, Berkeley (USA), MBA, 2005–2007
- Certified Financial Analyst (CFA), since 2012

Experience

- 2006–2008: SAP (USA), Marketing Expert
- 2009–2010: McKinsey (Moscow, Russia), Consultant
- 2010–2012: Polymetal (Kazakhstan)
- 2012–2013: KPMG (Kazakhstan), Senior Manager
- 2013–2020: PwC (Kazakhstan), Senior Manager, Director
- 2020 – present: StrategyLab, a consulting firm, founder

Other businesses/positions

- Member of the Board of Directors at NAC Kazatomprom
- Member of the Board of Directors at Kazakhtelecom
- Member of the Board of Directors at Samruk-Energy

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

ARMAN ARGINGAZIN

Member of KMG's Board of Directors, Independent Director

Member of KMG's Board of Directors since June 2023

Date of birth: 1 December 1978

Education

Boston University School of Management (Boston, USA), Bachelor of Science in Business Administration, major in Corporate Finance, the dean's list (for academic excellence).

Experience

- 2000–2000: Halyk Bank, Financial Analyst
- 2001–2003: HSBC Bank Kazakhstan (Almaty), Relationship Manager, Staff Officer, Deputy Head of Business Development
- 2004–2006: ABN AMRO Bank Kazakhstan (Astana), Manager of a representative office in Astana / Deputy Vice President for Commercial Banking
- 2006–2006: ABN AMRO Bank Kazakhstan (Astana), Manager of a representative office in Astana / Head of Metals and Mining
- 2006–2012: RBS Kazakhstan (Almaty), Head of Corporate Banking, member of the Management Board, Executive Director
- 2012–2021 UBS AG Representative Office (Almaty), Managing Director

Other businesses/positions

- NAC Kazatomprom, Independent Director, Chairman of the Board of Directors
- Kazakhstan Investment Development Fund, member of the Board of Directors

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

UZAKBAY KARABALIN

Member of KMG's Board of Directors, representative of Samruk-Kazyna

Member of KMG's Board of Directors since February 2016

Date of birth: 14 October 1947

Education

- Mining Engineering, the Gubkin Russian State University of Oil and Gas
- Postgraduate programme at the Gubkin Russian State University of Oil and Gas
- Candidate of Technical Sciences
- Doctor of Technical Sciences
- Academician of the National Engineering Academy of the Republic of Kazakhstan

Experience

Uzakbay Karabalin held various positions at Kazneftegazorazvedka's administration office (the South Emba oil and gas prospecting expedition), Kazakh Scientific Research Geological Exploration Oil Institute, Prikaspiygeologiya's regional administration office, the Guryev branch of Kazakh Polytechnic Institute named after V. I. Lenin, the Industry Department of the Administration Office of the President and of the Cabinet of Ministers of the Republic of Kazakhstan. At different periods, he was Head of the Main Oil and Gas Department at the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan, Deputy Minister of Energy and Fuel Resources of the Republic of Kazakhstan, Deputy Minister of Oil and Gas Industry of the Republic of Kazakhstan, First Vice President and Acting President of NOGC Kazakhoil, President of KazTransGas, Vice Minister of Energy and Mineral Resources of the Republic of Kazakhstan, President of KMG, CEO of Mangistaumunaigaz, CEO of the Kazakh Institute of Oil and Gas, Minister of Oil and Gas of the Republic of Kazakhstan, and First Deputy Minister of Energy of the Republic of Kazakhstan. Uzakbay Karabalin was also Chairman of the Boards of Directors at KazTransOil, NC Oil and Gas Transportation, NC KazMunayGas and KazMunayGas Exploration Production, Chairman of the Coordination Council and Deputy Chairman of KAZENERGY Association, a member of the Supervisory Board at KazRosGas, a member of National Investors' Council under the President of the Republic of Kazakhstan, Chairman of the Board of Directors of the Atyrau University of Oil and Gas, and a member of the Board of Directors (Independent Director) of the Kazakh Institute of Oil and Gas.

Holds 9,655 ordinary shares in KazTransOil.

YELZHAS OTYNSHIYEV

Member of KMG's Board of Directors, representative of Samruk-Kazyna

Member of KMG's Board of Directors since June 2023

Date of birth: 1 April 1987

Education

- Moscow Institute of Physics and Technology, Department of General and Applied Mathematics, major in Applied Mathematics and Physics (Master's Degree), 2008–2010
- Moscow Institute of Physics and Technology, Department of General and Applied Mathematics, major in Applied Mathematics and Physics (Bachelor's Degree), 2004–2008

Experience

- 2007–2008: Ernst & Young (Moscow), Audit and Consulting Services, Technology and Security Services, positions: from Analyst to Senior Analyst
- 2008–2009: Ernst & Young (Moscow), Evaluation and Business Modelling, Analyst
- 2009–2012: NMC Tau-Ken Samruk, Investment Projects, Financial Institutions, positions: from Manager to the Head of Department
- 2012–2014: Samruk-Kazyna, Investment Projects, Chief Manager
- 2014–2016: Samruk-Kazyna Invest (seconded to Samruk-Kazyna), Head of Project Analysis for the Fund's Investment Operations
- 2016–2018: Samruk-Kazyna, Head of Project for the Department of New Project Development (management of growing portfolio companies)
- 2018–2019: Samruk-Kazyna, Head of Mining Assets Development, Department of Assets Development
- 2019–2019: Kazakhstan Investment Development Fund (KIDF) Management Company, Senior Analyst / VP, Private Equity
- 2019–2021: PlanetCare Management, Deputy CEO for Investments and Development
- 2021–2023: Kazakhstan Investment Development Fund (KIDF) Management Company, Deputy Chairman of the Management Board
- 2023 – present: Samruk-Kazyna, Co-Managing Director for Strategy and Asset Management

Other businesses/positions

- Since June 2023: member of the Board of Directors at NAC Kazatomprom
- Since May 2023: member of the Board of Directors at NC QazaqGaz
- Since June 2023: member of the Board of Trustees of the Construction Company corporate foundation

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

SAYA MYNSHARIPOVA

Member of KMG's Board of Directors, Independent Director

Member of KMG's Board of Directors since August 2023

Date of birth: 19 October 1970

Education

- Kazakh State University of Economics (Almaty), 1987–1992
- Lomonosov Moscow State University Business School (Moscow), Executive MBA, 2008–2010

Experience

- 1995–2008: Auditor, Chief Accountant in commercial organisations
- 2008–2015: Head of Audit and Control at Sovereign Wealth Fund Samruk-Kazyna
- 2015–2018: Deputy Chair of the Management Board at NC Kazakhstan Engineering
- 2018–2023: Head of Tax Policy at AIFC Authority

Other businesses/positions

- Member of the Board of Directors at NC QazaqGaz, independent director
- Member of the Board of Directors at NC Samruk-Kazyna Construction, independent director

Government awards and honorary titles

- Certified Independent Director, IoD Certificate, Institute of Directors, UK
- Auditor, state licence No. 0000174 issued by the Ministry of Finance of the Republic of Kazakhstan
- Tax Consultant, 1st Category

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

ASKAR SHAKIROV

Member of KMG's Board of Directors, Independent Director

Member of KMG's Board of Directors since November 2023

Date of birth: 2 February 1956

Education

- Institute of Asian and African Studies of Lomonosov Moscow State University, 1973–1978
- Candidate of Legal Sciences, 1985

Civil service rank

- Ambassador Extraordinary and Plenipotentiary

Experience

- 1978–1987: research fellow, postgraduate, senior inspector at the Academy of the USSR Ministry of Internal Affairs in the working group supporting the USSR representative to the UN Committee on Crime Prevention and Control
- 1987–1989: Desk officer, Foreign Relations Department of the USSR Ministry of Internal Affairs
- 1989–1992: Head of Kazakhstan Section at the All-Union Research and Development Institute of the USSR Ministry of Internal Affairs
- 1992–1995: Supervisor of Legal and Contracting, Deputy Head, Head of Legal and Contracting in the Ministry of Foreign Affairs of the Republic of Kazakhstan
- 1995–1996: Chargé d'affaires ad interim of the Republic of Kazakhstan in the Republic of Korea
- 1996–1996: Ambassador-at-Large of the Ministry of Foreign Affairs of the Republic of Kazakhstan
- 1996–1998: Deputy Minister of Foreign Affairs of the Republic of Kazakhstan
- 1998–2004: Ambassador Extraordinary and Plenipotentiary of the Republic of Kazakhstan to the Republic of India
- 2004–2006: Deputy Minister of Foreign Affairs of the Republic of Kazakhstan
- 2006–2007: Chairman of the Customs Control Committee under the Ministry of Finance of the Republic of Kazakhstan
- 2007–2019: Human Rights Commissioner in the Republic of Kazakhstan
- 2021–2023: Deputy Chairman of the Parliamentary Assembly of the Organisation for Security and Cooperation in Europe (OSCE PA), Special Representative of the OSCE PA on Sustainable Development Goals

Elected and parliamentary offices held

- Since 2019, Senator of the Parliament of the Republic of Kazakhstan
- 2019–2023: Deputy Chairman of the Senate
- 2020–2022: Chairman of the Board of Directors in the Foreign Policy Research Institute under the Ministry of Foreign Affairs of the Republic of Kazakhstan
- 2023–2023: Chairman of the Senate's Committee on International Relations, Defence and Security

Government awards and honorary titles

- Orders: Kurmet, Parasat
- Medals: 22, including Yeren Enbegi Ushin (Medal for Distinguished Labour)

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

Membership of the Board of Directors as of 31 December 2023

Independent directors	Philip Holland	2020
	Armanbai Zhubayev	2023
	Arman Argingazin	2023
	Saya Mynsharipova	2023
	Askar Shakirov	2023
Representatives of Samruk-Kazyna	Uzakbay Karabalin	2016
	Yernat Berdigulov, Chairman	2023
	Yelzhas Otynshiyev	2023
Executive director (Chairman of the Management Board)	Magzum Myrzagaliev	2022
Tenure expired	Assel Khairova	2023
	Gibrat Auganov	2023
	Timothy Miller	2023
	Yernar Zhanadil	2023
	Christopher Walton	2023

Out of nine members of the Board of Directors, eight are citizens of Kazakhstan and one is a UK national.

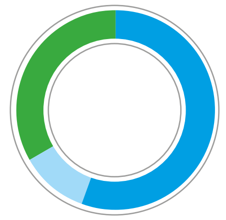
As of 31 December 2023, the Board of Directors comprised nine members, including:

- five independent directors;
- three representatives of Samruk-Kazyna;
- one executive director (Chairman of the Management Board).

53 years

Average age of Board members

The Board of Directors' breakdown by age:



Nomination and selection procedure

The procedure for nominating and selecting candidates to the Board of Directors is set out in KMG's Charter and other regulatory documents. Board members are elected by the General Meeting of Shareholders, supported by the Chairman of the Board of Directors and the Nomination and Remuneration Committee chair. The recruitment and hiring process is driven by transparency, impartiality, and meritocracy.

Members of the Board of Directors are elected from the candidates nominated as representatives of shareholders and other entities. Candidates to the Board of Directors are expected to possess the knowledge, skills and experience required to perform their functions and support the creation of KMG's long-term business value and sustainable growth, as well as to have an impeccable business reputation.

The Chairman of the Board of Directors is elected by the General Meeting of Shareholders.

Independent directors are elected in accordance with the Guidelines on Forming Boards of Directors at Companies of Samruk-Kazyna, approved by the resolution of the Management Board of Samruk-Kazyna dated 26 September 2016 (Minutes No. 35/16).

Breakdown of the Board of Directors by expertise

	Member of the Board of Directors	Key areas of expertise
1	Yernat Berdigulov	Strategy, corporate governance, asset management, finance
2	Magzum Myrzagaliev	Oil & gas
3	Philip Holland	Oil & gas, project assessment, occupational health and safety
4	Armanbai Zhubayev	Finance
5	Saya Mynsharipova	Audit, finance, compliance
6	Uzakbay Karabalin	Oil & gas, strategy
7	Yelzhas Otynshiyev	Investments, asset management, strategy
8	Arman Argingazin	Corporate finance, audit
9	Askar Shakirov	Legal, global affairs

KMG belives that the Board of Directors is well-balanced across all areas in terms of its skills and expertise.

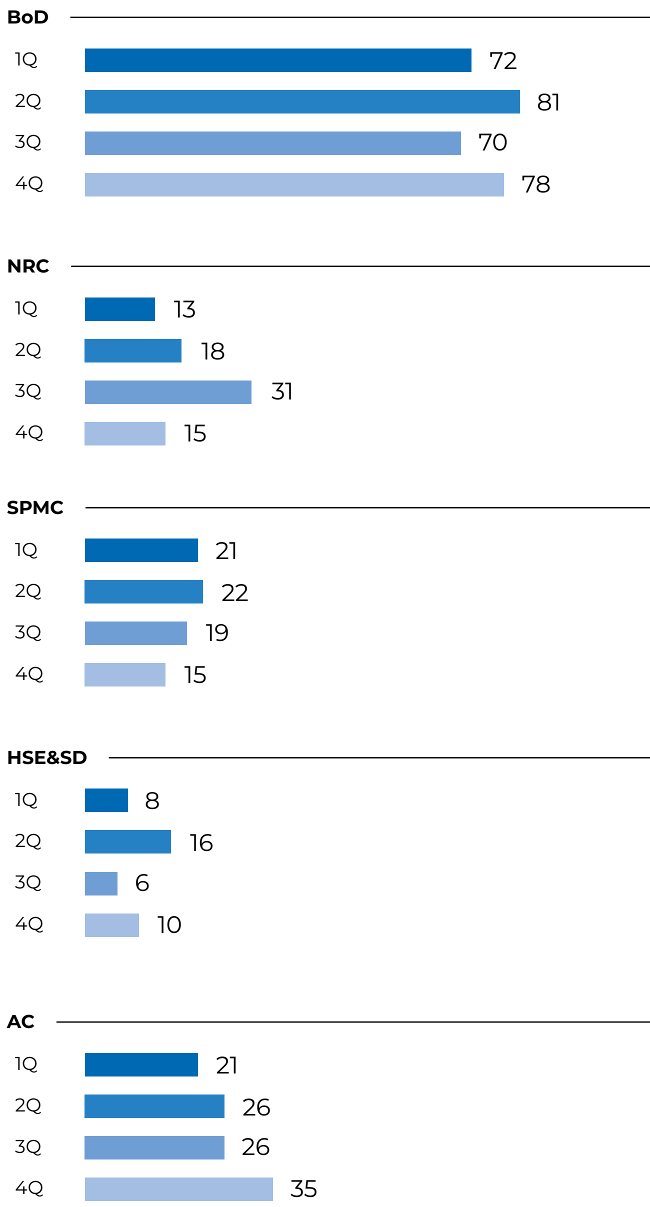
Board activities during 2023

In 2023, the Board of Directors held 24 meetings and reviewed 300 matters.

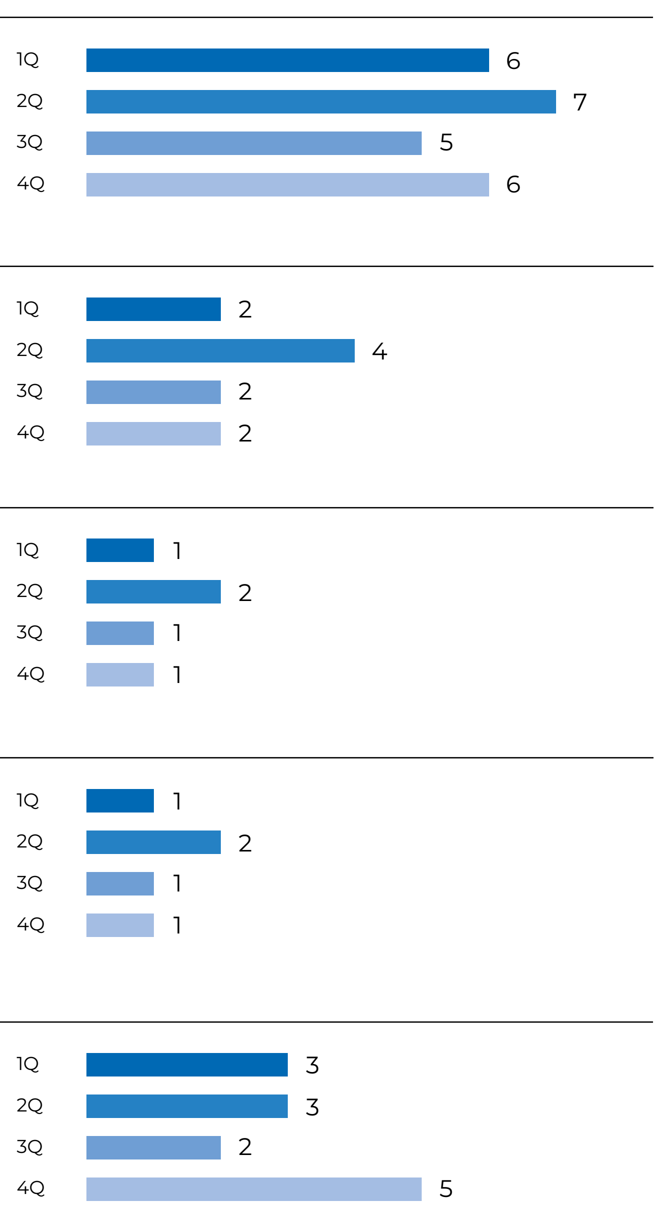
Breakdown by committee:

- Strategy and Portfolio Management Committee (SPMC): 5 meetings, 77 matters
- Nomination and Remuneration Committee (NRC): 10 meetings, 77 matters
- Audit Committee (AC): 13 meetings, 108 matters
- Health, Safety, Environment and Sustainable Development Committee (HSE&SD): 5 meetings, 40 matters.

Number of matters reviewed



Number of meetings



In 2023, the Board of Directors placed particular focus on ensuring financial stability, overseeing investment project management and sustainability issues, internal audit and risk management, developing management KPIs, as well as safety and well-being of employees.

Matters reviewed by the Board of Directors in 2023, by category

Reports	▪ Report by the Chairman of KMG's Management Board on key changes in KMG's operations ▪ Information on KMG's HSE activities ▪ Information on the impact of sanctions on KMG's operations ▪ Updates on KMG's interim financial and operating results ▪ Information on the status of implementation of KMG Group's investment projects ▪ Reports by Board committee chairs ▪ Information on committees' performance in 2022 ▪ Financial status of KMG International and KazMunayGas Trading ▪ Report on messages received via the hotline ▪ Report on interested-party transactions entered into by resolution of KMG's Management Board ▪ Quarterly risk and financial risk report ▪ Follow-up report on resolutions/instructions of the Board of Directors ▪ Information on changes in the government strategy or policy ▪ 2022 Progress Report on KMG's Consolidated Development Plan for 2022–2026
Strategic matters	▪ Transfer of subsoil use rights ▪ Preliminary approval of KMG's standalone annual financial statements for 2022 ▪ Consolidated business plan of KMG for 2024–2028 ▪ Approval of KMG's corporate KPIs and their target values ▪ Approval of the organisational structure of KMG's headquarters ▪ KMG Development Strategy ▪ FY2022 and 1H 2023 Report on the Implementation of KMG's Development Strategy for 2022–2031 ▪ Issues related to the implementation of investment projects ▪ Approval of motivational KPI scorecards for KMG managers and KPI targets ▪ Signing of oil procurement agreements and oil products sale and purchase agreements by KMG ▪ KMG's bond issue and determination of its terms and conditions ▪ Buyback by Coöperatieve KazMunaiGaz U.A. of 50% of shares in KMG Kashagan B.V. from Samruk-Kazyna ▪ Matters related to cybersecurity ▪ KMG's bond issue and determination of terms and conditions for KMG's bonds ▪ Guarantees provided by KMG to secure performance of obligations ▪ Early redemption (buyback) of Global Medium-Term Notes due 2025 and determination of the early redemption (buyback) price ▪ KMG's bond issue and determination of terms and conditions for KMG's bonds ▪ Procedure for the distribution of KMG's 2022 net profit and the amount of dividend per ordinary share of KMG ▪ Approval of comprehensive measures to be taken at refineries to prevent oil product shortages in the country ▪ Approval of the Roadmaps to Divest from KMG's Non-Strategic Assets, approval the List of KMG's Non-Strategic Assets ▪ Relevance of KMG's Development Strategy for 2022–2031 ▪ Consolidated Development Plan of NC KazMunayGas for 2024–2028
Corporate governance matters	▪ Convening of the General Meeting of Shareholders of KMG ▪ Results of performance self-evaluation of the Board of Directors of KMG for 2022 ▪ Approval of the Board of Directors' and the committees' activity plan and the schedule of meetings of the Board of Directors and the committees ▪ Composition of the Board committees ▪ Shareholder queries regarding the Company's and its officers' actions in 2022 and corresponding responses ▪ Approval of KMG's 2022 Annual Report ▪ Approval of KMG's 2022 Sustainability Report ▪ Approval of the Report on Progress against the Transformation Programme in 2018–2021 ▪ Approval of a new version of the KMG Charter ▪ Approval of the Action Plan to Improve KMG's ESG Rating ▪ Sustainable development framework and ESG risk rating of KMG ▪ Progress against the Low-Carbon Development Programme ▪ Approval of the professional development programme for members of KMG's Board of Directors
Transaction matters	▪ Approval of interested-party transactions ▪ Approval of major transactions

Matters related to subsidiaries and associates	▪ Election and termination of powers of managers, members of supervisory boards of subsidiaries and associates ▪ Participation of NMSC Kazmortransflot in the incorporation of Caspian Integrated Maritime Solutions Ltd with a 49% share in the authorised capital (jointly with International Maritime Investments Ltd) ▪ Incorporation of Kalamkas-Khazar Operating Limited Liability Partnership ▪ Incorporation of privately owned Karaton Operating Ltd. ▪ Amending articles of associations of subsidiaries and associates ▪ Approval of subsidiaries and associates' corporate KPIs ▪ Acquisition and disposal of stakes in subsidiaries and associates ▪ Information on root causes of interruptions in the operation of Atyrau Refinery amid power supply disruptions ▪ Lessons learned from the implementation of the KPI project and their applicability to the KLPE project, commissioning progress at KPI ▪ The financial and operating performance of Ozenmunaigas in the replacement of tubing, sucker rod pumps and rods, progress made in this respect by other production companies of the Group ▪ Lending to Atyrau Refinery, Ozenmunaigas ▪ Ad hoc audit of Karazhanbasmunai's contractors conducted by the Internal Audit Service and the Management Board of KMG
Approval of internal regulations	▪ Approval of amendments to the Rules for Rendering Social Support to the Managers and Employees of the Internal Audit Service, Corporate Secretary Office, Compliance Service and Ombudsman Office of NC KazMunayGas ▪ Approval of KMG's internal documents, including approval of the Regulations on the Management Board, approval and revocation of KMG's Internal Control Rules for Granting Access Rights to Insider Information and Preventing Information Misuse by Insiders, amendments to the Rules for Rendering Social Support to the Managers and Employees of the Internal Audit Service, Corporate Secretary Office, Compliance Service and Ombudsman Office of NC KazMunayGas, NC KazMunayGas Internal Control System Policy, the Internal Control System Regulations of NC KazMunayGas, the Rules on Preparing and Submitting Materials for the Meetings of the KMG Board of Directors and/or its Committees, and the Regulations on the Board of Directors of NC KazMunayGas
Appointments and compensation	▪ Approval of KMG's headcount ▪ Early termination of powers and election of members of KMG's Management Board, determining the salaries payable to members of KMG's Management Board, remuneration terms, bonuses and social benefits ▪ Determination of the salary, remuneration terms, bonuses and social benefits payable to the Chairman of KMG's Management Board ▪ Imposition and lifting of disciplinary actions against the Chairman of the Management Board and the Deputy Chairman of the Management Board
Matters related to divisions of the Board of Directors	▪ Reports by the Corporate Secretary Office, Compliance Service, Internal Audit Service and the Ombudsman ▪ HR matters of the Corporate Secretary Office, Compliance Service, Internal Audit Service and the Ombudsman ▪ Consideration and approval of the 2023–2025 Strategy for KMG's Internal Audit Service ▪ Approval of the 2023 compliance programme and activity plan for the Compliance Office ▪ Review of proposals to take a tougher approach to violations identified as part of audits conducted by KMG's Internal Audit Service ▪ Review of information on the operations and role of the centralised Internal Audit Service of KMG ▪ Approval of the 2024 Activity Plan for the Compliance Office and Ombudsman of KMG

Strategic session in 2023

As part of the scheduled session held on 26 June 2023, the Board of Directors reviewed relevance of the KMG Development Strategy for 2022–2031, analysis of external factors and the status of KMG's strategy with respect to major oil and gas assets.

Board of Directors' meeting on sustainability

On 6 October 2023, the Board of Directors held its annual meeting on sustainable development and discussed the following important matters:

- the sustainable development framework and ESG risk rating of KMG;
- TCFD disclosures and new financial reporting standards at KMG;
- progress update of the Low-Carbon Development Programme of KMG.

Follow-up on KMG's key matters

To oversee the implementation of KMG's strategic initiatives and ensure timely corrective actions, KMG's Board of Directors requires that the Chairman of KMG's Management Board report regularly on key changes in the Group's operations and give other updates on HSE matters, interim financial and operating results, interested-party transactions approved by the Management Board, progress on the implementation of the Group's strategy, KPIs achievement, investment projects implementation, as well as follow-up reports on KMG's consolidated Development Plan, reports from the Board committee chairs, follow-up reports on resolutions of the Board of Directors, and performance reports submitted by units reporting to the Board of Directors.

At every meeting, the Board of Directors' Strategy and Portfolio Management Committee considers and discusses progress reports on major oil and gas projects (Kashagan, Karachaganak and Tengiz), as well as on transformation and privatisation programmes.

Actual attendance by Board members at Board and committee meetings in 2023[1]

Member of the Board of Directors	Board and committee meetings in 2023				
	Board of Directors	Audit Committee	Nomination and Remuneration Committee	Strategy and Portfolio Management Committee	Health, Safety, Environment and Sustainable Development Committee
Christopher Walton	17/17		4/4	3/3	3/3
Uzakbay Karabalin	24/24			5/5	5/5
Magzum Myrzagaliev	24/24				
Philip Holland	23/24	12/12	6/6	5/5	
Timothy Miller[2]	12/12	5/5		2/2	2/2
Assel Khairova[3]	7/7	4/4	3/3		2/2
Gibrat Auganov[4]	5/6		2/3		
Yernar Zhanadil[5]	13/13			2/2	
Yernat Berdigulov[6]	16/17		0/1		
Armanbai Zhubayev[7]	17/17	8/8		3/3	3/3
Arman Argingazin[8]	8/12	7/7	3/3		3/3
Yelzhas Otynshiyev[9]	10/11			0/3	
Saya Mynsharipova[10]	5/5	3/4	2/2	2/2	
Askar Shakirov[11]	2/2				

[1] The first figure shows the number of meetings attended by a member of the Board of Directors, and the second figure is the total number of meetings they were entitled to attend.
[2] Stepped down from KMG's Board of Directors on 30 May 2023.
[3] Stepped down from KMG's Board of Directors on 6 April 2023.
[4] Stepped down from KMG's Board of Directors on 6 April 2023.
[5] Stepped down from KMG's Board of Directors on 27 June 2023.
[6] Elected to KMG's Board of Directors on 6 April 2023.
[7] Elected to KMG's Board of Directors on 6 April 2023.
[8] Elected to KMG's Board of Directors on 30 May 2023.
[9] Elected to KMG's Board of Directors on 27 June 2023.
[10] Elected to KMG's Board of Directors on 14 August 2023.
[11] Elected to KMG's Board of Directors on 6 November 2023.

Performance evaluation of the Board of Directors

In accordance with the Code, the Board of Directors, its committees and members of the Board of Directors should be evaluated every year as part of a structured process approved by the Board of Directors. This process needs to be in line with Samruk-Kazyna's relevant methodology. In addition, at least once every three years the performance evaluation process is run with the involvement of an independent professional organisation.

In 2021, eleven portfolio companies of Samruk-Kazyna, including KMG, were subject to an independent corporate governance review for the period from 1 January 2020 to 31 May 2021 conducted by PricewaterhouseCoopers LLP. The review assessed corporate governance in the following five areas: performance of the Board of Directors and the executive body; risk management, internal control and audit; sustainable development; shareholders' rights; and transparency. For this reason, no separate independent evaluation of the Board of Directors' performance was conducted in 2022.

In accordance with the Code's requirements, in 2023, members of the Board of Directors conducted a self-evaluation through questionnaires about their performance in 2022. The self-evaluation questionnaire was developed by the Chairman of the Nomination and Remuneration Committee in cooperation with the Chairman of the Board of Directors. The questionnaire comprised two sections (Composition and Processes, Behaviour and Actions) and featured 30 questions. The self-evaluation results were previewed by the Nomination and Remuneration Committee, which recommended that the Chairman of the Board of Directors together with the Chairman of the Nomination and Remuneration Committee review the following aspects as part of the Board of Directors meeting when discussing the results of the self-evaluation of the Board of Directors' performance in 2022:

- diversity in all aspects;
- succession plan and procedure for electing members of the Board of Directors;
- KMG's strategy;
- professional development and training.

The report on self-evaluation of the Board of Directors' performance in 2022 (the "2022 Report") was presented and discussed at a closed meeting of the Board of Directors attended only by members of the Board of Directors and the Corporate Secretary. The discussion included an analysis of the Board members' self-evaluation results and a review of the skills and competencies scored below four points (out of a maximum of five) (the "areas for improvement"). Furthermore, the Board of Directors developed a Plan to Improve the Board of Directors' Performance (the "Plan") to enhance the quality of its work across the areas for improvement and reviewed progress in implementing the previously adopted Plan.

In December 2023, the Board of Directors reviewed the matter of the Board of Directors' 2023 performance evaluation. Following the discussion, the KMG Board of Directors decided to evaluate its 2023 performance through self-evaluation with a view to identifying aspects of the Board's activities that require improvement and comparing the results with the self-evaluation scores obtained earlier. Furthermore, the Board of Directors decided to add new questions to the questionnaire to cover the Action Plan to Improve KMG's ESG rating, for example: 1) The Board of Directors takes decisions based on their alignment with: KMG's Strategy; the UN Sustainable Development Goals that were classified by KMG as priority ones; KMG's KPIs, including in the ESG area; 2) The composition of the Board committees is sufficiently balanced to allow for the submission of objective and unbiased recommendations to the Board of Directors and protect them from the influence of the majority shareholder or KMG's management.

The self-evaluation of the Board of Directors' performance in 2023 was completed in 1Q 2024 in line with the above methodology. The report on self-evaluation of the Board of Directors' performance in 2023 (the "2023 Report") containing both the self-evaluation results for 2023 compared to those for 2022 and the plan to improve the same across the areas for improvement so identified was previewed by the Nomination and Remuneration Committee. The 2023 Report was then discussed at a meeting of the Board of Directors attended only by members of the Board of Directors and the Corporate Secretary. With this in mind, the KMG Board of Directors will further discuss improvements to its activities.

Corporate Secretary

The Corporate Secretary's main role is ensuring regular communication between KMG and its shareholders as well as between shareholders and the Board of Directors, the Internal Audit Service, the Compliance Service, the Ombudsman, the Management Board and other bodies within KMG.

The Corporate Secretary's responsibilities include providing full support to the Board of Directors and its committees, assisting shareholders in making timely, high-quality corporate decisions; acting as an adviser to the Board members on any matter related to their roles or the applicability of the Code's provisions, and monitoring the implementation of the Code. The Corporate Secretary is responsible for improving corporate governance practices at KMG. The Corporate Secretary is a Company employee acting independently and reporting to the Board of Directors.

DAMIR SHARIPOV

Nationality: Republic of Kazakhstan

Date of birth: 22 January 1980

Education:

- Al-Farabi Kazakh National University (International Relations Department), majoring in international law;
- Russian Presidential Academy of National Economy and Public Administration, MBA programme, majoring in Management;
- Certified Corporate Secretary, certified trainer in corporate governance for corporate secretaries, trainer at Samruk Business Academy

Experience

- Between 2001 and 2007, he held various jobs working at the Tengiz field in the Atyrau Region. From 2007 to 2012, he worked at Development Bank of Kazakhstan, and from 2012 to 2014, he served in different capacities at KMG and KazTransGas.
- Since 5 January 2015, he has been Corporate Secretary at KMG.
- On 1 February 2019, Damir Sharipov was elected to the Corporate Secretaries Committee of the National Council for Corporate Governance at the Presidium of the National Chamber of Entrepreneurs of the Republic of Kazakhstan Atameken

COMMITTEES OF THE BOARD OF DIRECTORS

Members of the Board of Directors involved in the activities of the Board committees focus on an in-depth review and analysis of allied functions, issues and areas. Committee meetings involve invited experts, business leaders, and other stakeholders. Committees make recommendations to the Board of Directors to support its decision making. They are made up of non-executive directors, and the majority of members are independent directors. The committees are chaired by independent directors.

Roles and responsibilities of the Board committees

Committee	Responsibilities
Strategy and Portfolio Management Committee	The Committee assists the Board of Directors by considering and making recommendations on: ▪ the development strategy and investment policy, including priority areas; ▪ improving investment appeal; ▪ effective financial and business planning at KMG; ▪ monitoring KMG's transformation
Nomination and Remuneration Committee	The Committee assists the Board of Directors by considering and making recommendations on: ▪ succession planning for the Board of Directors and the Management Board; ▪ conducting ongoing, objective performance evaluations of the Board of Directors, Management Board, Corporate Secretary, and other employees; ▪ pursuing effective HR, pay and remuneration policies, social support, and providing professional development and training opportunities for KMG officers and employees
Audit Committee	The Committee assists the Board of Directors by considering and making recommendations on: ▪ implementing effective controls over KMG's financial and business operations; ▪ monitoring the reliability and effectiveness of internal controls and risk management, as well as the implementation of corporate governance regulations; ▪ overseeing external and internal audit functions; ▪ reviewing the Company's annual and quarterly financial statements; ▪ monitoring KMG's compliance arrangements
Health, Safety, Environment and Sustainable Development Committee	The Committee assists the Board of Directors by considering and making recommendations on: ▪ ensuring HSE compliance; ▪ embedding sustainability in strategic planning and social and economic development at KMG; ▪ KMG's social commitments and programmes under subsoil use contracts; ▪ monitoring KMG's environmental performance

Nomination and Remuneration Committee

In 2023, the Nomination and Remuneration Committee held 6 meetings and reviewed 56 matters.

Members as of 31 December 2023:

1. Philip Holland – Chairman of the Committee since September 2020;
2. Arman Argingazin – member of the Committee since June 2023;
3. Saya Mynsharipova – member of the Committee since August 2023.

Personnel management is essential to the Company's operational efficiency. The Nomination and Remuneration Committee makes recommendations to the Board of Directors on the matters within its remit relating to the appointment, remuneration, training and development of the Company employees. The key appointment principles require that candidates possess strong qualifications to perform their roles successfully and have the skills needed to pursue the Company's strategic goals in their area of responsibility.

Key matters reviewed by the Committee in 2023

Succession planning	▪ Efforts targeting employees included in the Succession Plan for Key Positions within KMG Group (talent pools for A, B and C levels) (MANSAP) ▪ Status of candidates to CEO-1 positions ▪ Appointment of the Deputy Chairman of KMG's Management Board ▪ Appointment of the Director of Health, Safety, and Environment Department of KMG ▪ Election of members of the Supervisory Board of NMSC Kazmortransflot ▪ Approval of appointment (election) of the CEO (Chairman of the Management Board) of KMG Engineering ▪ Early termination of office and election of the chairman and members to KMG Engineering's Supervisory Board ▪ Early termination of office and election of members to KMG Engineering's Supervisory Board ▪ Election of members to KMG Karachaganak's Supervisory Board ▪ Considering the option of drafting a diversity policy for KMG's Board of Directors and potential inclusion of women to the senior management of KMG, including the Board of Directors of KMG ▪ Considering the advisability of removing the shareholder's representatives and increasing the number of independent directors on the Nomination and Remuneration Committee of KMG's Board of Directors ▪ Meeting with the most promising employees included in the talent pool (not more than five people) ▪ Approval of a new version of the job description of the Head of the Compliance Service of KMG
Ongoing and effective performance evaluation	▪ Results of the self-evaluation of KMG's Board of Directors in 2022 ▪ Procedure for establishing and reviewing employee salaries at KMG ▪ Actual performance against KPIs and motivational KPI scorecards for KMG executives for 2022 ▪ Remuneration payment to KMG executives for 2022 ▪ Monitoring of performance against corporate KPIs and motivational KPI scorecards for KMG executives ▪ KMG's adjusted corporate KPIs as well as motivational KPI scorecards and KPI targets for KMG's executives for 2023 ▪ Approval of KMG's corporate KPIs as well as motivational KPI scorecards and KPI targets for KMG's executives for 2024 ▪ Approval of an updated 2024 motivational KPI scorecard and targets for the Ombudsman

Maintenance of an effective HR policy and an effective pay and remuneration framework	▪ Approval of the organisational structure of KMG's headquarters ▪ Progress in implementing the grading system at KMG Group ▪ Determining the salary of members of KMG's Management Board ▪ Appointment of the Ombudsman – Head of KMG's Ombudsman Office ▪ Considering the possibility of disclosing remuneration of each member of the Board of Directors and Chairman of the Management Board of KMG with detailed breakdown ▪ Determining the salary of members of KMG's Management Board ▪ Approval of the professional development programme for members of KMG's Board of Directors for 2023–2024

Attendance of the Committee's meetings by its members in 2023

Meeting No. and date	1/2023 31.01	2/2023 13.02	3/2023 04.04	4/2023 25.07	5/2023 03.10	6/2023 05.12	Participation, %
Length of meeting	11:00–12:11 (71 minutes)	16:00–17:40 (100 minutes)	11:05–12:06 (61 minutes)	11:04–13:00 (116 minutes)	11:00–11:56 (56 minutes)	11:00–12:55 (115 minutes)	
Committee member							
Philip Malcolm Holland	+	+	+	+	+	+	100
Christopher Walton	+	+	+	+	Resigned from the Committee		
Gibrat Auganov	+	+	-	Resigned from the Committee			
Assel Khairova	+	+	+	Resigned from the Committee			
Yernat Berdigulov				-	Resigned from the Committee		
Arman Argingazin				+	+	+	100
Saya Mynsharipova					+	+	100

Strategy and Portfolio Management Committee

In 2023, the Strategy and Portfolio Management Committee held five meetings and reviewed 63 matters.

Members as of 31 December 2023:

1. Armanbai Zhubayev – member of the Committee since June 2023, Chairman of the Committee since August 2023;
2. Philip Holland – member of the Committee since June 2022;
3. Uzakbay Karabalin – member of the Committee since August 2017;
4. Yelzhas Otynshiyev – member of the Committee since July 2023;
5. Saya Mynsharipova – member of the Committee since August 2023.

Key matters reviewed by the Committee in 2023

Development strategy, including priority areas	▪ The 2022 Progress Report on JSC NC KazMunayGas Development Strategy for 2022–2031 ▪ The 1H 2023 Progress Report on JSC NC KazMunayGas Development Strategy for 2022–2031
Improving investment appeal	▪ Progress in implementing KMG Group's investment projects in 2022 ▪ Approval of Silleno's transactions resulting in the (potential) disposal of property with a value exceeding one hundred ten million US dollars (USD 110,000,000) denominated in tenge at the exchange rate set in the macroeconomic forecast (baseline scenario) for the relevant period: offtake agreement (CIS) between Silleno and SIBUR Holding, offtake agreement between Silleno, SIBUR International GmbH and SIBUR Holding, and offtake agreement between Silleno, Sibur International Trading (Shanghai) Co., Ltd and SIBUR Holding ▪ Incorporation by KMG of privately owned Karaton Operating Ltd. ▪ Approval of KMG's entering into an interested-party transaction: joint venture agreement between KMG, Samruk-Kazyna, Total Eren S.A. and Aktas Energy
Effective financial and business planning	▪ Progress in implementing the privatisation and divestment programme across KMG Group ▪ Entering into interested-party transactions: agreement on assignment of rights and obligations under a compensation agreement between KMG, Samruk-Kazyna and Tengizchevroil; agreement on assignment of rights and acceptance of obligations between KMG, Samruk-Kazyna and Tatneft ▪ Transfer of subsoil use rights under Contract No. 5238-UVS-SP dated 21 June 2023 for exploration and production of hydrocarbons at Karaton Subsalt in the Atyrau and Mangistau regions, signed between Kazakhstan's Ministry of Energy and KMG for the benefit of the privately-held Karaton Operating Ltd.; amendments to said Contract by entering into Addendum No. 1 thereto; KMG's entering into an interested-party transaction; approval the acquisition by Karaton Operating Ltd. of subsoil use rights under Contract No. 5238-UVS-SP dated 21 June 2023 for exploration and production of hydrocarbons at Karaton Subsalt ▪ Specific proposals to bring oil production at Ozenmunaigas back to target levels

Attendance of the Committee's meetings by its members in 2023

Meeting No. and date	1/2023 31.01	2/2023 04.04	3/2023 25.07	4/2023 03.10	5/2023 05.12	Participation, %
Length of meeting	13:06–15:41 (155 minutes)	13:04–14:45 (101 minutes)	13:04–16:47 (223 minutes)	13:00–16:00 (180 minutes)	13:15–17:15 (240 minutes)	
Committee member						
Christopher Walton	+	+	+	Resigned from the Committee		
Philip Malcolm Holland	+	+	+	+	+	100
Timothy Miller	+	+	Resigned from the Committee			
Uzakbay Karabalin	+	+	+	+	+	100
Yernat Zhanadil	+	+	Resigned from the Committee			
Armanbai Zhubayev			+	+	+	100
Yelzhas Otynshiyev			-	-	-	0
Saya Mynsharipova				+	+	100

Audit Committee

In 2023, the Audit Committee held 12 meetings and reviewed 111 matters.

Members as of 31 December 2023:
1. Arman Argingazin – Chairman of the Committee since June 2023;
2. Philip Holland – member of the Committee since September 2020;
3. Armanbai Zhubayev – member of the Committee since May 2023;
4. Saya Mynsharipova – member of the Committee since August 2023.

Key matters reviewed by the Committee in 2023

Internal audit	▪ Approval of the 2023–2025 Strategy for KMG's Internal Audit Service ▪ Ensuring the independence of KMG's Internal Audit Service when establishing its budget, and alignment of the budgeting process with the process of developing the budget and Development Plan of KMG in general ▪ Review and preliminary approval of quarterly reports on the Internal Audit Service's performance ▪ Designation of Internal Audit Service officers to take part in a pre-trial investigation of Ozenmunaigas ▪ Review of the report on the execution of the Internal Audit Service's budget for 2022 ▪ Review of the Internal Audit Service's performance report for 2022 and the list of KMG companies that failed to fulfil post-audit recommendations from the Internal Audit Service ▪ Amendments to the Annual Audit Plan of the Internal Audit Service for 2023 ▪ Review of information on the operations and role of the centralised Internal Audit Service of KMG; ▪ Review of information on ad hoc audits by the Internal Audit Service in 2023 ▪ Approval of the 2022 actual performance of the Head of the Internal Audit Service against motivational KPIs ▪ Determining the 2022 salary of the Head of the Internal Audit Service ▪ Review of proposals to take a tougher approach to violations identified as part of audits conducted by KMG's Internal Audit Service ▪ Determining the salary of the Internal Audit Service employees ▪ Establishing additional pay to the Internal Audit Service employees for filling in for temporarily absent team members ▪ Early termination of powers of the Internal Audit Service staff ▪ Ad hoc audit of Karazhanbasmunai's contractors conducted by the Internal Audit Service and the Management Board of KMG ▪ Approval of the Annual Audit Plan of the Internal Audit Service for 2024 ▪ Approval of the Internal Audit Service's budget for 2024 ▪ Approval of KPIs for the Head of the Internal Audit Service for 2024
Accounting and external audit	▪ Progress of the audit of financial statements for the year ended 31 December 2022 of KMG and its subsidiaries ▪ Review and preliminary approval of KMG's interim financial statements ▪ Action plan (approved by order of the Chairman of the Management Board No. 121 dated 24 May 2023) to fulfil recommendations issued by KMG's independent auditor EY following the audit of the Company's consolidated and standalone financial statements for 2022 ▪ Approval of consolidated financial statements for the year ended 31 December 2022 of KMG and its subsidiaries ▪ Approval of the information about audit and non-audit services rendered by EY and Ernst & Young Global Limited companies to KMG and its subsidiaries in 2022 and non-audit services which Ernst & Young Global Limited can render and rendered to KMG and its subsidiaries without obtaining consent from the Audit Committee in 2022 ▪ Approval of the list of KMG Group companies to take part jointly with KMG and Samruk-Kazyna in choosing a single auditor for 2025–2027 ▪ Discussion of the EY report on the management letter prepared following the audit of KMG's consolidated financial statements for 2022 (issue date: 24 March 2023) ▪ External auditor's report on the progress of review of KMG's financial statements for 2Q 2023 ▪ Approval of non-audit services provided by KMG Group's external auditor ▪ Progress against recommendations issued by KMG's external auditor EY following the audit of the Company's consolidated financial statements for 2022 as of 30 June 2023 ▪ Report for planning the audit of KMG's consolidated financial statements for the year ended 31 December 2023
Internal control and risk management	▪ Progress in implementing internal controls and a business continuity management system at KMG and its subsidiaries (on a quarterly basis) ▪ Approval of the Joint Internal Control Improvement Plan for KMG ▪ Approval of KMG's risk appetite statement, risk register and risk management action plan, risk map, risk tolerance levels, and register of key risk indicators for 2023 ▪ Approval of KMG's quarterly risk reports ▪ Approval of KMG's financial risk reports ▪ Review of a report by the Head of the Risk Management and Internal Control Service on performance of internal controls of KMG and its subsidiaries ▪ Information to include additional KMG Group companies into the scope of the internal control system ▪ Approval of KMG's risk appetite statement, risk register and risk management action plan, risk map, risk tolerance levels, and register of key risk indicators for 2024 ▪ Setting KMG's internal limits on balance sheet and off balance sheet liabilities for partner banks for 2024
Corporate governance	▪ Approval of the report on compliance with the principles and provisions of KMG's Corporate Governance Code for 2022 ▪ Update on the preparation for KMG's annual General Meeting of Shareholders ▪ Preliminary approval of KMG's 2022 Annual Report ▪ The Audit Committee's performance report for 2022 ▪ Amendments to the Rules on Preparing and Submitting Materials for the Meetings of the KMG Board of Directors and/or its Committees ▪ Review of the report on progress under item 2.1 (IT architecture) of the Action Plan on Risks and Recommendations Based on Comprehensive IT Review of KMG ▪ Determining qualification requirements for the Head of the Compliance Service ▪ Report on KMG's cyber security efforts to date ▪ Approval of the Audit Committee's activity plan for 2024 ▪ Review of information on IT expenditure across KMG Group
Compliance	▪ Performance report of the Compliance Service for 2022 ▪ Quarterly reports on submissions received via the hotline ▪ Approval of the compliance programme and activity plan of the Compliance Service for 2023 ▪ Approval of the activity plan of the Compliance Service for 2024 ▪ Approval of a motivational KPI scorecard and targets for 2024 for the Head of the Compliance Service
Review of the reports of local authorities (including tax authorities), external and internal auditors and KMG's management on compliance with laws	Information on investigations and/or checks of KMG's subsidiaries and/or associates and/or their employees initiated by government agencies with respect to corruption offences and/or crimes

Attendance of the Committee's meetings by its members in 2023

Meeting No. and date	1/2023 30.01	2/2023 20.02	3/2023 06.03	4/2023 03.04	5/2023 19.05	6/2023 24.07	7/2023 18.08	8/2023 31.08	9/2023 02.10	10/2023 30.10	11/2023 17.11	12/2023 04.12	Participation, %
Length of meeting	13:30–17:23 (233 min)	15:00–16:00 (60 min)	15:00–16:03 (63 min)	13:30–16:14 (164 min)	15:00–16:00 (60 min)	13:25–15:33 (130 min)	16:00–17:00 (60 min)	16:00–17:08 (68 min)	13:00–15:15 (135 min)	15:05–17:37 (152 min)	16:30–16:58 (28 min)	13:35–16:10 (155 min)	
Committee member													
Assel Khairova	+	+	+	+	Resigned from the Committee								
Philip Malcolm Holland	+	+	+	+	+	+	+	+	+	+	+	+	100
Timothy Miller	+	+	+	+	+	Resigned from the Committee							
Armanbai Zhubayev					+	+	+	+	+	+	+	+	100
Arman Argingazin						+	+	+	+	+	+	+	100
Saya Mynsharipova									+	+	-	+	75

Health, Safety, Environment and Sustainable Development Committee

In 2023, the Health, Safety, Environment and Sustainable Development Committee held five meetings and reviewed 31 issues.

Members as of 31 December 2023:
1. Armanbai Zhubayev – Chairman of the Committee since June 2023;
2. Uzakbay Karabalin – member of the Committee since May 2019;
3. Arman Argingazin – member of the Committee since June 2023.

Key matters reviewed by the Committee in 2023

Health, Safety and Environment	▪ Health, safety and environment report ▪ Progress against activities under KMG's Low-Carbon Development Programme for 2022–2031
Sustainable development and ESG ratings	▪ KMG's ESG (Environmental, Social, Governance) score ▪ Approval of an action plan to improve KMG's ESG rating ▪ Progress report on implementing a sustainability system and including relevant principles in KMG's key business processes ▪ KMG's contribution to the achievement of sustainable development goals ▪ Progress against the project to develop and action plan for corporate climate governance and disclosure aligned with the TCFD recommendations

Attendance of the Committee's meetings by its members in 2023

Meeting No. and date	1/2023 30.01	2/2023 03.04	3/2023 24.07	4/2023 02.10	5/2022 04.12	Participation, %
Length of meeting	11:00–12:30 (90 min)	11:07–12:32 (85 min)	11:04–12:32 (88 min)	11:00–12:17 (77 min)	11:00–13:28 (148 min)	
Committee member						
Timothy Miller		+	Resigned from the Committee			
Christopher Walton	+	+	+	Resigned from the Committee		
Uzakbay Karabalin	+	+	+	+	+	100
Assel Khairova	+	+	Resigned from the Committee			
Armanbai Zhubayev			+	+	+	100
Arman Argingazin			+	+	+	100

MANAGEMENT BOARD PERFORMANCE REPORT

The Management Board's activities are regulated by the Law of the Republic of Kazakhstan On Joint Stock Companies, with due consideration of the specifics established by the Law of the Republic of Kazakhstan for the Sovereign Wealth Fund, KMG's Charter, and the Regulations on the Management Board. The Management Board may pass resolutions on any matters relating to KMG's operations not referred by regulations of the Republic of Kazakhstan and KMG's Charter to the remit of KMG's other bodies and officials. KMG's Management Board is headed by the Chairman of the Management Board appointed (elected) by the General Meeting of Shareholders. KMG's Board of Directors is responsible for appointing other members of the Management Board.

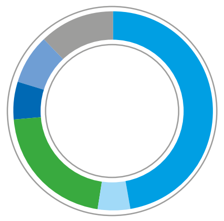
The most significant matters within the remit of the Management Board are:

- implementing KMG's Development Strategy and KMG's Development Plan;
- carrying out KMG's day-to-day financial and business operations, including execution of the business plan and implementation of investment projects;
- implementing sustainability efforts at KMG and its subsidiaries and associates;
- monitoring any conflicts of interest and corporate conflicts and contributing to their settlement;
- passing resolutions on matters related to activities of KMG's subsidiaries and associates, other than those reserved exclusively to KMG's Board of Directors pursuant to KMG's Charter;
- increasing KMG's liabilities and acquiring or disposing of property in line with the established materiality threshold.

KMG's Management Board is formed by the Board of Directors based on proposals of the Chairman of the Management Board. As of 31 December 2023, the Management Board comprised nine key executives of KMG. Meetings of the Management Board are held in person and in absentia and are convened as necessary.

In 2023, the Management Board held a total of **59 meetings** and passed 572 resolutions.

Meeting agenda of the Board of Directors, %



47
Internal activities[1]

5
Matters reserved exclusively to the general meeting of founders of subsidiaries and associates

21
Interested-party transactions

6
Investment projects exceeding the materiality threshold

8
Investment-related matters in line with Samruk-Kazyna's corporate standard

12
Reports on internal activities[2]

154 out of all matters addressed in the Management Board resolutions passed at in-person meetings in 2023 were submitted to the KMG's Board of Directors in accordance with the established procedure.

In 2023, the Management Board passed 33 resolutions on KMG's interested-party transactions[3].

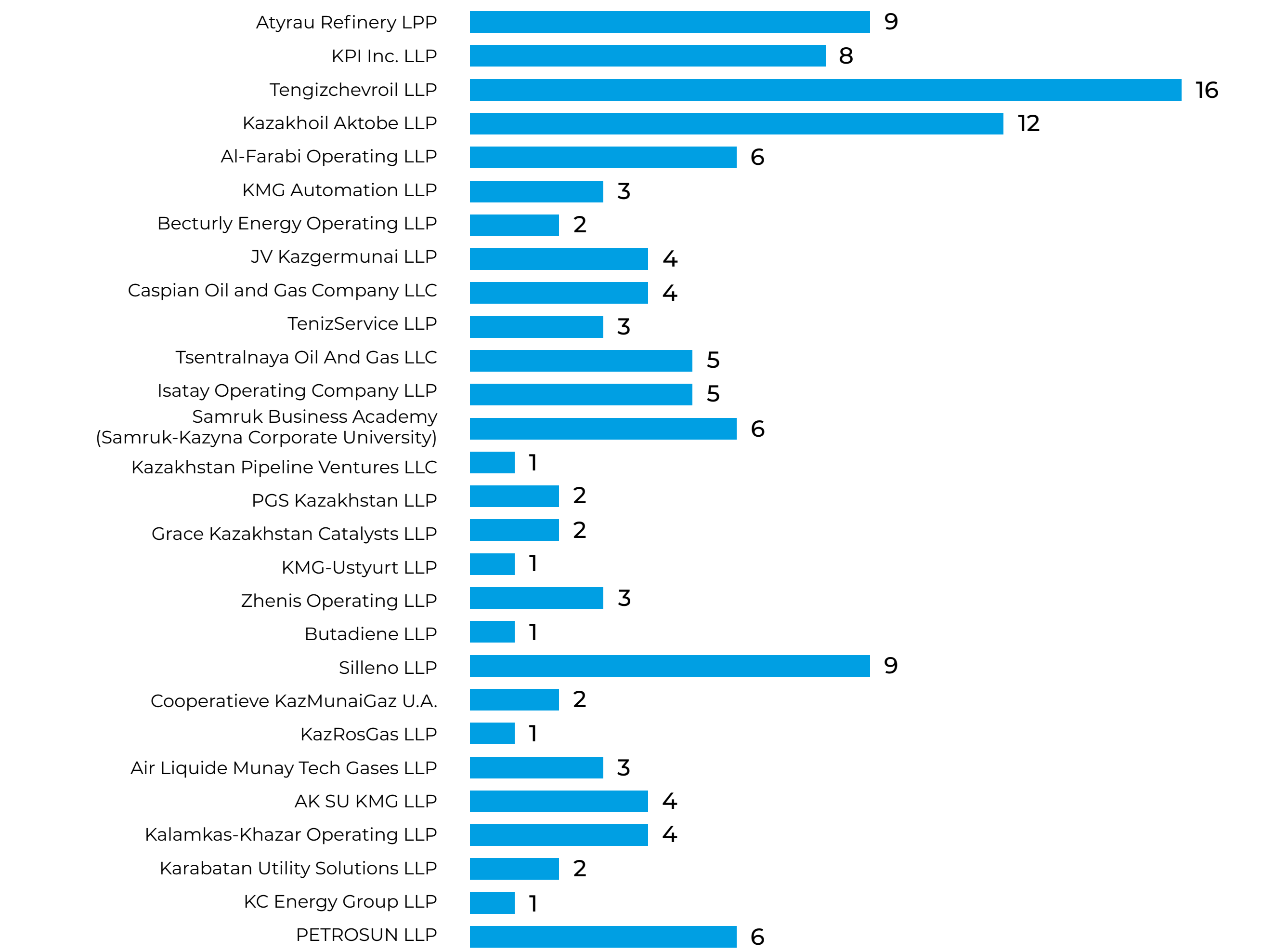
In January–December 2023, the Management Board also approved:

- the Information Disclosure Policy of JSC NC KazMunayGas;
- the Site Closure and Land Reclamation Policy for Exploration Sites and Fields of JSC NC KazMunayGas;
- the Corporate Tax Accounting Policy of JSC NC KazMunayGas Group;
- the Tax Accounting Policy of JSC NC KazMunayGas;
- the Employee Health Management Programme of JSC NC KazMunayGas Group;
- base tariffs for 2023 at selected entities of JSC NC KazMunayGas Group;
- the 2023–2027 HSE Improvement Roadmap;
- the consolidated business plan of KMG for 2024–2028;
- the adjusted budget of JSC NC KazMunayGas for 2023;
- the budget of JSC NC KazMunayGas for 2024;
- the rules for compiling and approving the list of goods, works and services to be purchased from a single source to maintain and/or restore social stability.

In addition, the Management Board passed **36 resolutions** to amend some of KMG's internal documents. Within the remit covering the matters reserved exclusively to the General Meetings of the Shareholders (Participants) of subsidiaries and associates, as part of its responsibility to determine the Company's voting position at the General Meetings of Shareholders (Participants), the Management Board passed:

10 resolutions – acting as a shareholder/trustor:

125 resolutions to determine KMG's position as a participant / trustee manager of a stake in the authorised capital:

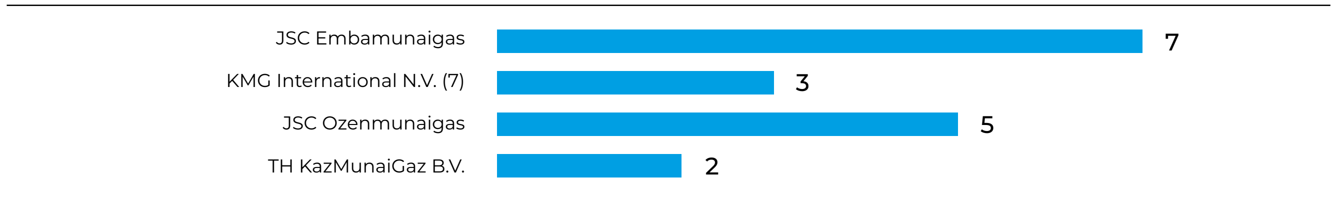


[1] Key matters of KMG's internal activities included preliminary approval of KMG's consolidated and standalone annual financial statements for 2022 and subsequent discussion of KMG's 2022 net profit distribution, execution and pricing of early redemption of the 2025 Eurobonds, approval of the Regulations on the Management Board, conclusion of hydrocarbon exploration and production contracts for the Kalamkas-Sea–Khazar–Auezov block and Karaton Subsalt, transfer of the subsoil use right and subsequent disposal of a stake in the authorised capital, approval of the consolidated Development Plan of JSC NC KazMunayGas for 2024–2028, etc.

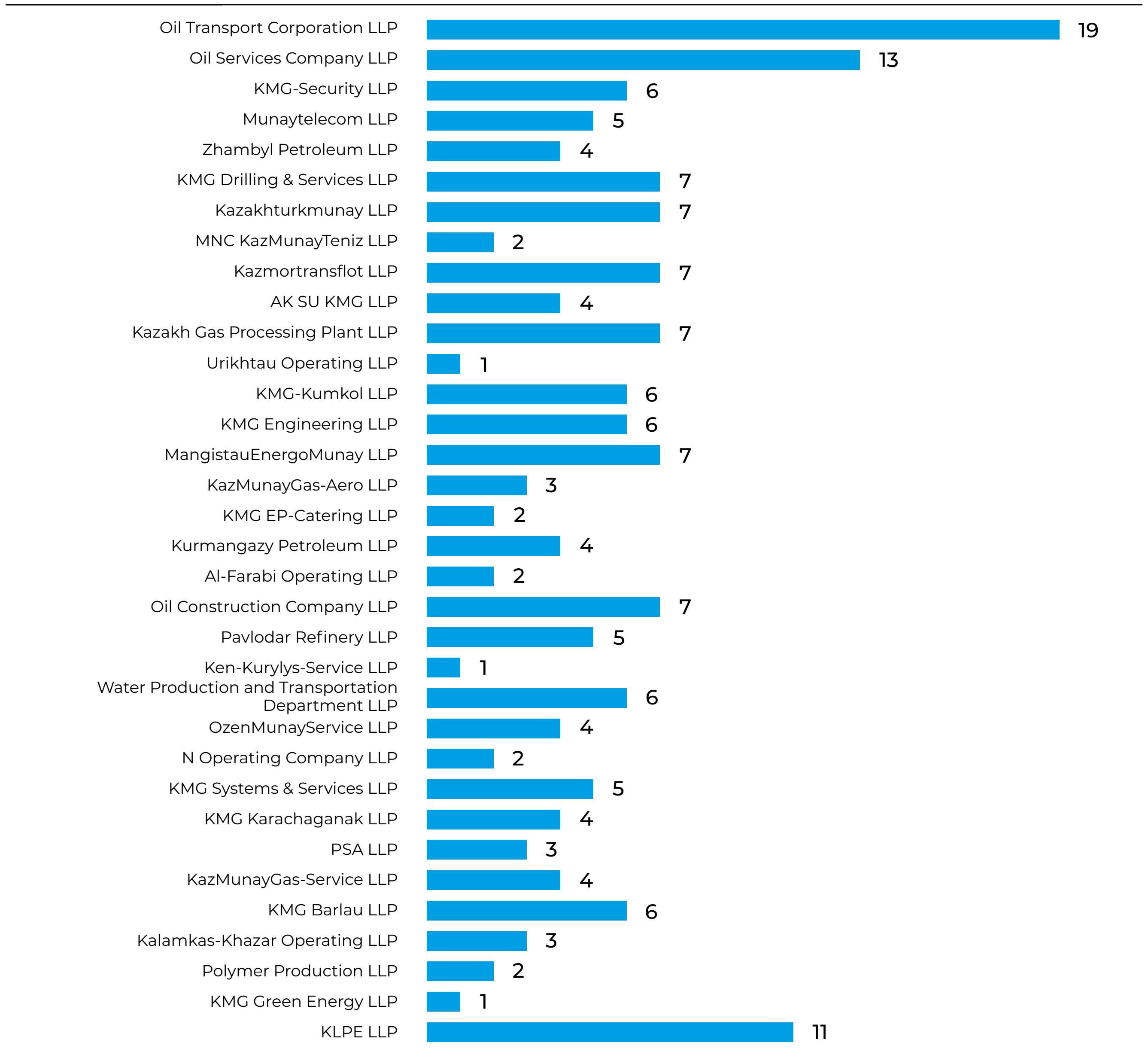
[2] Reports on risks; interested-party transactions with relevant resolutions passed by the Management Board; implementation of the development strategy for 2022–2031; sustainable development; KMG's semi-annual report for 2023, etc.

[3] KMG's Charter sets a materiality threshold differentiating whether certain items are to be referred to the Management Board or the Board of Directors.

Along with the above, the Management Board passed 17 resolutions as the sole shareholder / the holder of 100% of voting shares in KMG's subsidiaries, including:



169 resolutions were passed by the Management Board as the sole shareholder / the sole founder / the holder of a 100% stake in KMG's subsidiaries, including:



Membership of the Management Board

MAGZUM MYRZAGALIYEV
Chairman of the Management Board

NURSEYIT SOYUNOV
Deputy Chairman of the Management Board

KUANYSH KHUDAIBERGENOV
Deputy Chairman of the Management Board

SERIKKALI BREKESHEV
Deputy Chairman of the Management Board

BULAT ZAKIROV
Deputy Chairman of the Management Board

DMITRY MAKEYEV
Deputy Chairman of the Management Board

VASSILIY LAVRENOV
Deputy Chairman of the Management Board

DIANA ARYSSOVA
Deputy Chairman of the Management Board

DASTAN ABDULGAFAROV
Deputy Chairman of the Management Board

MAGZUM MYRZAGALIYEV

Member of KMG's Board of Directors, Chairman of KMG's Management Board

Member of KMG's Board of Directors and Management Board since April 2022

Date of birth: 7 November 1978

Education

- Zhautykov Republican Physics and Mathematics School
- Economics, Turan University
- International Relations, Diplomatic Academy of the Ministry of Foreign Affairs of the Republic of Kazakhstan
- Oil and Gas Engineering, Caspian State University of Technology and Engineering

Experience

Magzum Myrzagaliyev joined KMG Group more than seven years ago. He has worked in senior executive positions at KMG for four years.

At different stages in his career, he worked as Technical Safety and Production Manager, Engineer for Drilling Fluids at M-I Drilling Fluids International (Schlumberger) at the Tengiz field and the fields of Western Siberia, CEO of TenizService, Managing Director for Service Projects, Deputy Chairman of the Management Board for Innovative Development and Service Projects at KMG, Kazakhstan's Vice Minister of Oil and Gas, Minister of Ecology, Geology and Natural Resources, Minister of Energy, Advisor to Kazakhstan's President.

Chairman of KMG's Management Board since April 2022.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

NURSEYIT SOYUNOV

Deputy Chairman of the Management Board

A member of the Management Board since February 2024

Date of birth: 26 July 1978

Education

- Yessenov Aktau State University, Oil and Gas Field Development and Exploitation, 2001
- Master of Oil and Gas Business Management, 2012
- MBA in Economics, 2013

Experience

- 2001: start of career at Ozenmunaigas, positions held include an operator, foreman, lead engineer, process engineer, deputy head and head of oil and gas production
- 2010–2015: KMG EP, a lead engineer, deputy head and head of oil production
- 2015–2016: Kruz, CEO
- 2016–2018: OzenMunayService, CEO
- 2018–2019: Ural Oil and Gas, First Deputy CEO
- 2019–2023: Karazhanbasmunai, Deputy CEO for Production
- 2023–2024: Karazhanbasmunai, CEO
- Since 31 January 2024: KMG, Deputy Chairman of the Management Board

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

KUANYSH KHUDAIBERGENOV

Deputy Chairman of the Management Board

A member of the Management Board since February 2023

Date of birth: 24 July 1984

Education

Oil and Gas Field Development and Exploitation; Gubkin Russian State University of Oil and Gas MBA in International Oil and Gas Business; Moscow State Institute of International Relations (2012).

Experience

- Kuanysh Khudaibergenov started his professional career in 2006 at Integra (Russian Federation) where he worked as a controller, assistant driller and drilling engineer (at the well site).
- In 2007–2008, he worked as a technical expert in the Production Department of MNC KazMunayTeniz.
- In 2008–2011, he worked as a drilling engineer in the Production Department of Caspian Meruerty Operating Company B.V.
- In 2011–2012, he worked as a category 1 manager in the Exploration Project Management Department and the Major Oil and Gas Project Development Department of KMG.
- In 2012–2015, Kuanysh Khudaibergenov was the Director of the Exploration and Production Department, Deputy CEO for Exploration and Production at Rompetrol S.A. (Romania).
- In 2015–2016, he was the Deputy CEO for Geology and Production at KMG-Kansu Operating.
- In 2016–2017, he served as an advisor to the Chairman of the Senate of Kazakhstan's Parliament.
- In 2017–2021, he headed the Oil Industry Development Department of the Ministry of Energy of the Republic of Kazakhstan.
- In 2021–2023, he worked as the Deputy CEO of Karachaganak Petroleum Operating B.V.
- Deputy Chairman of KMG's Management Board since February 2023..

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

SERIKKALI BREKESHEV

Deputy Chairman of the Management Board

A member of the Management Board since February 2023

Date of birth: 14 October 1972

Education

Oil and Gas Development, Mining Engineer; Aktau Polytechnic Institute.

Experience

- Serikkali Brekeshev started his career at JV Kazakhstan-Russian Trading House.
- In 1997, he worked as an inspector in the Tax Department of Aktau.
- In 1997–1998, he was an engineer in the Special Machinery and Spare Parts Department and the Piping and Metalware Department at Munai-Germes, a procurement and sales branch of Mangistaumunaigas.
- In 1998–2006, he worked at KarakudukMunai as a field engineer, oilfield foreman and field manager.
- In 2007–2010, Serikkali Brekeshev was the Head of Petroleum Project Monitoring, Regulatory and Technical Policy in the Petroleum Industry Department, Deputy Director of the Gas Industry Development Department in the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan.
- In 2010–2014, he was the Director of the Gas Industry Development Department in the Ministry of Oil and Gas of the Republic of Kazakhstan.
- In 2014–2015, he was the Deputy CEO of BNG LTD.
- In 2015–2020, he served in several roles at KazTransGas, including as the Director of the Technical Policy Department, Managing Director for GTP, Managing Director for Technical Policy, Deputy CEO for Resource Development and Technical Policy.
- In 2020–2023, Serikkali Brekeshev was the Vice-Minister, Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan.
- Deputy Chairman of KMG's Management Board since February 2023

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

DMITRY MAKEYEV

Deputy Chairman of the Management Board

A member of the Management Board since May 2023

Date of birth: 10 September 1983

Education

Chemical Technology of Organic Substances, Process Engineering, degree with honours; South Kazakhstan State University MBA; Almaty Management University (Atyrau).

Experience

- Dmitry Makeyev started his career in 2005 as an operator of the hydrogen generation and treatment unit control room before being promoted to senior operator of the hydrogen production and treatment unit and senior operator of the diesel hydrotreatment and hydrodewaxing unit in shop No. 2 of Atyrau Refinery. In 2008–2010, he was promoted to the refinery's Deputy Chief, Chief of the Catalytic Reforming Unit, Deputy Chief, and Chief of the Design and Development Centre.
- In 2010–2011, he was Deputy Manager at the Technical Department of ROMPETROL Petromidia Refinery (Romania).
- In 2011–2019, Dmitry Makeyev continued his career at Atyrau Refinery in the positions of Director of the Project Technical Support Department, Chief Engineer, Deputy Managing Director for Technical Support of the APC and AORC Projects, Head of the Technical Support Department, Chief Process Engineer of the AORC Project, Head of the Production Department – Chief Process Engineer, Director of the Production Department, and Acting Managing Director for Technology.
- In 2020–2022, he was Director of the Technical Development Department, Head of the Technical Development Office, and Director of the Oil Refining and Petrochemicals Department of KMG.
- Deputy Chairman of KMG's Management Board since March 2023

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

BULAT ZAKIROV

Deputy Chairman of the Management Board

A member of the Management Board since May 2022

Date of birth: 16 July 1976

Education

International Monetary and Financial Relations; Kazakh State Academy of Management Oil and Gas Economics; University of Dundee (Scotland).

Experience

- In 1999–2009, Bulat Zakirov worked at KazTransOil as an expert of the Strategic Planning Department, a manager of the Project Management Department, the Chief Manager, the Deputy Director and subsequently the Director of the Transport Logistics Department, the Director of the Advanced Development Department, and the Deputy CEO for Development.
- In 2009–2011, he was the Deputy CEO and CEO of KMG-Transcaspian.
- In 2012–2016, he worked at KazTransOil as the Advisor to the CEO, Managing Director for Production, Deputy CEO for Development, and Managing Director for Assets.
- In 2016–2018, Bulat Zakirov was the Advisor to the CEO of KMG Systems & Services.
- Since 2018, Director of the Oil Transportation Department, Head of Oil Transportation at KMG.
- Since May 2022, Deputy Chairman of KMG's Management Board for Oil Transportation, International Projects and Sary-Arka Gas Pipeline Construction

Holds 100 shares in KMG.

VASSILIY LAVRENOV

Deputy Chairman of the Management Board

A member of the Management Board since May 2022

Date of birth: 17 November 1979

Education

- Law, Kazakhstan's State Law Academy
- International Law, Duke University School of Law (USA) and Kyushu University (Japan)

Experience

- At different stages in his career, Vassiliy Lavrenov worked as Paralegal at Titul Legal Agency (Almaty), Lawyer at GRATA Law Firm (Almaty), Legal Counsel at Kazatomprom, Branch Partner and Coordinator of GRATA Law Firm (Aktobe, Bishkek), Senior Legal Counsel at a branch of BATEMAN Kazakhstan Oil and Gas Company B.V. in Kazakhstan (Almaty), Head of Legal for Kazakhstan at Integra Management (Almaty), General Counsel / Head of Legal Department at Eastcomtrans (Aktau, Almaty), Senior Partner / Legal Counsel at Greenline Services Ltd. (Hungary).
- On 20 May 2022, he was appointed Deputy Chairman of KMG's Management Board.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

DIANA ARYSSOVA

Deputy Chairman of the Management Board

A member of the Management Board since May 2023

Date of birth: 20 March 1979

Education

International Finance; Kazakh State Academy of Management; MBA; Yokohama National University (Japan); degree in Corporate Finance; London Business School (UK).

Experience

- Diana Aryssova began her career in 1999 as Lead Economist of the Currency Regulation and Control Office of the National Bank of the Republic of Kazakhstan.
- In 2004–2005, she was Assistant for Banking Affairs of the European Bank for Reconstruction and Development.
- In 2006–2007, she held the position of Energy Project Coordinator of the British Embassy in the Republic of Kazakhstan.
- During 2007–2012, she held various positions with MNC KazMunayTeniz: Deputy Director, Director of the Corporate Finance Department, and Acting Deputy General Director for Economy and Finance.
- In 2012–2016, Diana Aryssova was Deputy General Director for Economy and Finance and Chief Financial Officer of KMG Drilling & Services.
- In 2016–2023, she was Director of the Oil and Gas Operation Account Examination Department of PSA.
- In April 2023, she was appointed Deputy Chair of KMG's Management Board

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

DASTAN ABDULGAFAROV

Deputy Chairman of the Management Board

A member of the Management Board since February 2020

Date of birth: 16 December 1974

Education

- Zhautykov Republican Physics and Mathematics School
- International Law, Kazakhstan's University of Law and International Relations
- International Economics and Law, Diplomatic Academy of the Ministry of Foreign Affairs of the Republic of Kazakhstan
- Master's degree in Oil Business, Eni Corporate University (Milan, Italy)
- Executive MBA (Finance and Investment), Moscow School of Management SKOLKOVO

Experience

Dastan Abdulgafarov has been with KMG Group for more than 18 years, including 14 years in which he held senior executive positions.

At different stages in his career, he worked as Lawyer at the International Contract Department, Chief Manager and Director of the New Project Development Department, Deputy Director and then Director of the New Offshore Project Development Department, Head of the Project Management Group at KMG and MNC KazMunayTeniz. He was Advisor to the CEO, Managing Director for Business Development and Deputy CEO for Economics and Finance at KazMunayGas Exploration Production, Managing Director for Exploration and Production Business Support, Head of Staff and Managing Director for Development at KMG.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

Membership of the Management Board as of 31 December 2023

Magzum Myrzagaliyev	Chairman of the Management Board
Dastan Abdulgafarov	Deputy Chairman of the Management Board
Serikkali Brekeshev	Deputy Chairman of the Management Board
Bulat Zakirov	Deputy Chairman of the Management Board
Dmitry Makeyev	Deputy Chairman of the Management Board
Diana Aryssova	Deputy Chairman of the Management Board
Vassiliy Lavrenov	Deputy Chairman of the Management Board
Dauletzhan Khassanov	Deputy Chairman of the Management Board
Kuanysh Khudaibergenov	Deputy Chairman of the Management Board

Composition of the Management Board as at the time of approving the 2023 Annual Report

Magzum Myrzagaliyev	Chairman of the Management Board
Dastan Abdulgafarov	Deputy Chairman of the Management Board
Serikkali Brekeshev	Deputy Chairman of the Management Board
Bulat Zakirov	Deputy Chairman of the Management Board
Dmitry Makeyev	Deputy Chairman of the Management Board
Diana Aryssova	Deputy Chairman of the Management Board
Vassiliy Lavrenov	Deputy Chairman of the Management Board
Nurseyit Soyunov	Deputy Chairman of the Management Board
Kuanysh Khudaibergenov	Deputy Chairman of the Management Board

REMUNERATION REPORT

Members of the Board of Directors

The Resolution of JSC Samruk-Kazyna's Management Board dated 26 September 2016 approved the Guidelines on Forming Boards of Directors at Companies of JSC Samruk-Kazyna, which provide, inter alia, for a procedure for remuneration payable to members of such Boards of Directors. Remuneration reflects the duties of the respective member of the board of directors, the scale of the company's operations and its long-term goals and objectives. Remuneration is paid to independent directors and Samruk-Kazyna's representatives based on a resolution of the General Meeting of Shareholders.

Total remuneration paid to members of the Board of Directors in 2021–2023

Members of the Board of Directors	2021	2022	2023
Total remuneration paid to members of the Board of Directors in USD	381,944	350,000	196,375
Total remuneration paid to members of the Board of Directors in KZT	18,200,000	29,538,710	97,215,050

Remuneration of the Management Board

KMG's Board of Directors determines the remuneration policy and the procedure for assessing performance of members of KMG's Management Board in line with the Corporate HR Management Standard of JSC Samruk-Kazyna Group, approved by the Resolution of the JSC Samruk-Kazyna's Management Board dated 14 December 2017.

Remuneration paid to members of the Management Board for the reporting period (year) is performance-related to encourage them towards the strategic and priority goals outlined in measurable, interrelated, consistent, and balanced motivational KPI scorecards.

A motivational KPI scorecard outlines corporate and functional KPIs.

The Nomination and Remuneration Committee of the Board of Directors pre-reviews matters related to building an effective and transparent remuneration framework.

The total remuneration paid to members of KMG's Management Board for 2023 amounted to KZT 388,673,641.57 including all salaries and financial benefits (plus taxes and pension contributions) paid by KMG to members of the Management Board for serving on the Board in 2023, under the Remuneration Rules for Members of the Management Board (executives) and Remuneration Rules for the Employees of Internal Audit, Corporate Secretary, Compliance and Ombudsman of KMG, approved by the Resolution of KMG's Board of Directors dated 10 September 2020.

Members of the Management Board	2021[1]	2022	2023
Total remuneration of the Management Board, KZT	575,440,805.94	344,627,124.98	388,673,641.57

[1] The total remuneration paid to members of KMG's Management Board for 2021 amounted to KZT 227,908,251.96, as well as the remuneration paid in 1Q 2021 to members of KMG's Management Board for 2019, which amounted to KZT 347,532,554.00.

RESPONSIBILITY STATEMENT

In line with the Code, the Board of Directors, and the Management Board are responsible for preparing a reliable annual report and financial statements of the Company.

The Board of Directors and each member of the Board of Directors confirm that they recognise their responsibility for preparing and approving the annual report and financial statements, and consider the annual report and financial statements, taken as a whole, to be fair, balanced and understandable and to provide the information necessary for shareholders to assess the Company's position, performance, business model and strategy.

Each member of the Board of Directors confirms that to the best of their knowledge:

- the financial statements, prepared in accordance with IFRS, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the subsidiary undertakings included in the consolidation taken as a whole;
- the Management Board's report includes a fair review of the development and performance of the business and the financial position of the Company and the subsidiary undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties they face.

In line with the Code, the Board of Directors has determined that Philip Holland, Arman Argingazin, Armanbai Zhubayev, Askar Shakirov and Saya Mynsharipova are independent in character and judgement. The Board of Directors has also determined that there are no relationships or circumstances which are likely to affect, or could appear to affect, the directors' judgement.

CORPORATE CONTROL

In the event of corporate conflicts, the parties attempt to settle them by negotiation to efficiently protect the interests of KMG and other stakeholders.

In order to be effectively prevented or addressed, corporate conflicts primarily need to be identified as soon and fully as possible, with all corporate governance bodies to act in a consorted manner.

Corporate conflicts are addressed by the Chairman of the Board of Directors assisted by the Corporate Secretary. If the Chairman of the Board of Directors is involved in a corporate conflict, such cases are addressed by the Nomination and Remuneration Committee.

Internal audit

Internal audits are carried out by KMG's Internal Audit Service (IAS).

The IAS reports and is accountable to KMG's Board of Directors, and is supervised by the Audit Committee of KMG's Board of Directors.

The activities of the IAS are governed by Kazakhstan's laws; KMG's Charter; resolutions of KMG's governing bodies; Regulation on Internal Audit Service; Guidelines for KMG's Internal Audits, and other internal documents of KMG. Also, the IAS carries out its activities in line with the basic principles of the International Professional Standards for Internal Auditing developed by The Institute of Internal Auditors Inc., the Core Principles for the Professional Practice of Internal Auditing, the Code of Ethics and the Definition of Internal Auditing, which establish the fundamental requirements for the professional practice of internal auditing, as well as the principles underlying the assessment of internal audit performance. The IAS focuses on providing the Board of Directors with independent and objective information to ensure the effective management of KMG and its subsidiaries and associates by employing a systematic approach towards improving risk management, internal control and corporate governance processes.

The annual Internal Audit Plan is developed from a consideration of the principal risks confronting KMG, the audit testing cycle and management requests. The Internal Audit Plan also accommodates ad hoc requests from KMG's Audit Committee, Board of Directors and management.

To perform its activities in accordance with the annual audit plan, the IAS:

- assesses the reliability and effectiveness of applicable internal controls and risk management procedures;
- assesses the reliability, completeness and objectivity of the accounting policy as well as financial statements of KMG and its subsidiaries and associates based on such policy;
- assesses the efficiency of resource management at KMG and its subsidiaries and associates and the methods used to ensure asset integrity;
- monitors compliance with Kazakhstan's laws, corporate operational, investment and financial rules and regulations.

The IAS uses audit results to make recommendations on improving KMG's operations. The IAS consistently monitors and oversees the development and execution of measures to implement its recommendations.

Internal audit matters reviewed by the Audit Committee at its meetings include:

- IAS annual performance report;
- IAS quarterly performance reports, including reviews of any material findings identified in audit reports and follow-up on the implementation of internal audit recommendations;
- annual audit plan and amendments thereto;
- KPI scorecards of the IAS head and staff;
- IAS strategic plan;
- IAS budget;
- HR management within the IAS.

The Audit Committee not only monitors the IAS' performance but also facilitates professional development of the IAS employees and the management of its talent pool. These matters are covered by the IAS reports and reviewed by the Audit Committee on a quarterly basis.

The high professional level of the IAS employees is a key performance driver for KMG's internal audit function, therefore training and upskilling are prioritised.

Assessments of the internal audit process performance

As required by the IAS quality assurance and improvement programme, following each audit, the audited entity is required to complete a form assessing the IAS' performance. Results of these assessments are consolidated into the IAS quarterly and annual performance reports reviewed and approved by KMG's Audit Committee and Board of Directors.

An independent external assessment of the Internal Audit Service is performed once every five years in accordance with the International Standards for the Professional Practice of Internal Auditing. In 2020, IAS underwent an independent external assessment of compliance with the International Standards for the Professional Practice of Internal Auditing, international best practices, KMG's Regulation on the Internal Audit Service, the Company's Code of Ethics and other applicable external and internal regulations governing the internal audit function, and was found 100% compliant with the standards.

Therefore, the activities of the IAS were found to be fully compliant with the requirements of the International Standards for the Professional Practice of Internal Auditing.

Compliance Service

KMG conducts its business in a fair and ethical manner, always guided by the principle of legitimacy. We strictly comply with all applicable laws and regulations, take all steps to prevent corruption, care about business reputation, and seek to implement high international standards of ethics.

KMG's compliance system helps make sure all our operations are aligned with the laws, industry standards, and other regulatory requirements. Components of the compliance system are integrated into all aspects of our operations.

The key areas of focus for KMG's Compliance Service are:
- anti-corruption;
- regulatory compliance and adherence to the standard norms of corporate and business ethics;
- insider information management;
- business reputation management;
- management of conflicts of interest.

In line with best global practices of corporate governance, KMG has the following internal documents on compliance:
- Anti-Corruption Policy;
- Confidential Informing Policy;
- Conflict of Interest Management Policy;
- Counterparty Due Diligence Policy;
- Internal Control Rules for Granting Access Rights to Insider Information and Preventing Information Misuse by Insiders;
- Code of Business Ethics.

In order to meet the standards of business conduct and ethics, the Compliance Service carries out due diligence of KMG's counterparties. This practice helps prevent signing contracts with those acting in bad faith while also reducing the risks of contractual violations.

The Compliance Service also screens candidates nominated to fill vacancies related to administrative and organisational functions. This is a way to enable the reliability and professionalism of the Company's management by reducing the possibility of corruption by highly ranked officers. One of the hiring criteria for new employees in the area of procurement is to successfully pass psychology and polygraph (lie detector) tests.

An important anti-corruption effort at KMG Group is internal analysis of corruption risks. Based on analysis results, we adopt action plans to eliminate root causes and conditions conducive to corruption.

Since 2020, the Company requires employees across the board to declare any conflicts of interest. This contributes to the efficiency of conflict of interest management.

Since KMG's securities are listed and traded on stock exchanges, the Compliance Service takes steps to prevent insider information misuse by those classified as insiders under the laws of Kazakhstan.

Reporting tools

In order to quickly identify violations, prevent any negative implications, ensure compliance with applicable laws and internal regulation, maintain strong business reputation and public perception, and foster corporate culture, Samruk-Kazyna Group, including KMG and its subsidiaries and associates, have a centralised hotline in place operated by KPMG, an independent auditor.

Using the hotline, employees can anonymously report known facts of corruption, fraud, discrimination, and any other violations committed by employees and counterparties of KMG and its subsidiaries and associates.

The hotline contacts are available on the websites of KMG and its subsidiaries and associates, with measures taken to raise employee awareness about it.

In 2023, the number of whistleblowing reports via the hotline went up by 23% year-on-year, demonstrating the success of KMG's measures to prevent corruption.

We are aware of the importance of fostering whistleblowing channels as the key sources of information about threatened or actual violations. It is our belief that in order for people to trust whistleblowing tools, all reports so received need to be considered comprehensively, in full, and without any bias.

Compliance training and professional development

As an entity engaged in anti-corruption efforts, KMG closely monitors anti-corruption initiatives in Kazakhstan. Aware of the importance of anti-corruption, we aim to instil respective culture in our employees.

To that end, we provide anti-corruption training and make sure it is continuous, consistent and up-to-date. To increase anti-corruption awareness of the employees of KMG and its subsidiaries and associates, compliance functions and officers across KMG Group hold regular meetings and seminars with executives and employees, covering enforcement of Kazakhstan's anti-corruption laws. Some of the events are attended by officials of the state-run Anti-Corruption Agency.

In 2023, KMG's Compliance Service, with support from the Anti-Corruption Agency, organised a seminar on effective anti-corruption efforts.

The Compliance Service also provided employee training in conflicts of interest. This contributes to the efficiency of conflict of interest management and helps define the requirements for employee conduct to minimise the risks of decision-making affected by personal interests and connections.

The Compliance Service supports the development of professional competencies and expertise of KMG Group's compliance officers. Today, KMG's compliance teams include seasoned professionals certified by international and national compliance organisations.

KMG is committed to high corporate responsibility standards, legitimacy, and impeccable business reputation. The compliance system is a key tool in all regulatory compliance efforts, including compliance with laws and regulations, industry standards, or ethical principles. The variety of activities that KMG is engaged in, including anti-corruption, management of conflicts of interest, and adherence to internal control standards, is a testament to the Company's comprehensive approach to strong governance and transparency of its operations.

Ombudsman Office

One of the key roles of the Ombudsman Office is to make sure that KMG's practices are fair and that the interests of all the Company employees are observed, through early prevention, dispute settlement and conflict resolution, and escalating systemic issues requiring action to relevant bodies and officers, as well as initiating proposals to stabilise conflict situations. KMG's Code of Business Ethics clearly states the principles stipulating that KMG employees and officers shall not tolerate discrimination against anyone on the basis of race, religion, nationality, gender, political or other affiliation, social origin, material position, job, language or other circumstances, as well as the granting of any privileges to individual employees based on the above characteristics.

KMG Ombudsman's activities are guided by Kazakhstan's laws and KMG's internal documents.

After their appointment in July 2023, KMG's new Ombudsman met with the management, heads of departments and representatives of trade unions of KMG subsidiaries and associates – Caspi Bitum, KazTransOil, Kazakhoil Aktobe, Embamunaigas, KazMunayGas-Aero, and KMG Security.

The Ombudsman Office organised work on reviewing and registering reports, including via the Hotline. The Ombudsman reviewed 12 reports addressed specifically to the Ombudsman.

The Ombudsman / Ombudsman Office provided consultations and recommendations on oral reports (by phone, at personal meetings). Action was taken by the Office in response to the reports received to settle the issues, including to restore the violated rights and lawful interests.

In 2023, KMG received 112 reports via the Hotline of the Nysana call centre. KMG's Ombudsman Office monitors their timely review by relevant units.

External audit

In order to independently assess the reliability of KMG Group's accounting (financial) statements, each year the Company engages an external auditor to conduct an audit of financial statements prepared in accordance with the IFRS. The external auditor is approved by the General Meeting of Shareholders following the approval by KMG's Board of Directors.

Appointment of the auditor and its independence

The auditor is selected in line with the procurement procedure for Samruk-Kazyna Sovereign Wealth Fund and organisations with at least fifty percent of voting shares (equity interest) directly or indirectly owned or held in trust management by Samruk-Kazyna.

Selection of the auditor is based on the principles of:
- acquiring high-quality audit services for financial statements and related services;
- ensuring transparency of the selection process, control and responsibility for the decisions made;
- ruling out conflicts of interest and respecting independence.

In order to implement the selection of the external auditor, a Joint Commission consisting of members of the Fund's and KMG's Audit Committees is set up. The Join Commission determines the strategy for selecting the external auditor and implements the procedures for selecting the external auditor for KMG, including its material companies, and the Fund. The Audit Committee assesses the independence of the external auditor on an ongoing basis; the audit firm is rotated every five years. Partners and executives involved in the audit of KMG may not be hired by the Company.

Provision of non-audit services by the external auditor

According to the Auditor Engagement Policy, the external auditor is required to obtain approval from the Audit Committee to provide non-audit consulting services. The total fee for non-audit services rendered by the external auditor to KMG Group for the reporting year must not exceed 50% of the average fee for audit services rendered by the external auditor to KMG Group for three consecutive previous reporting years. KMG annually submits to the Audit Committee for approval the information on non-audit services authorised for the external auditor and the audit and non-audit services provided by the external auditor during the reporting year. Non-audit services rendered by an external auditor in 2023 amounted to 3.4% of the total cost of audit services.

According to the resolution of shareholders represented by the Management Board of Samruk-Kazyna dated 20 January 2022, an independent audit firm Ernst & Young LLP was selected as the external auditor of KMG's financial statements for 2022–2024.

Risk management and internal control

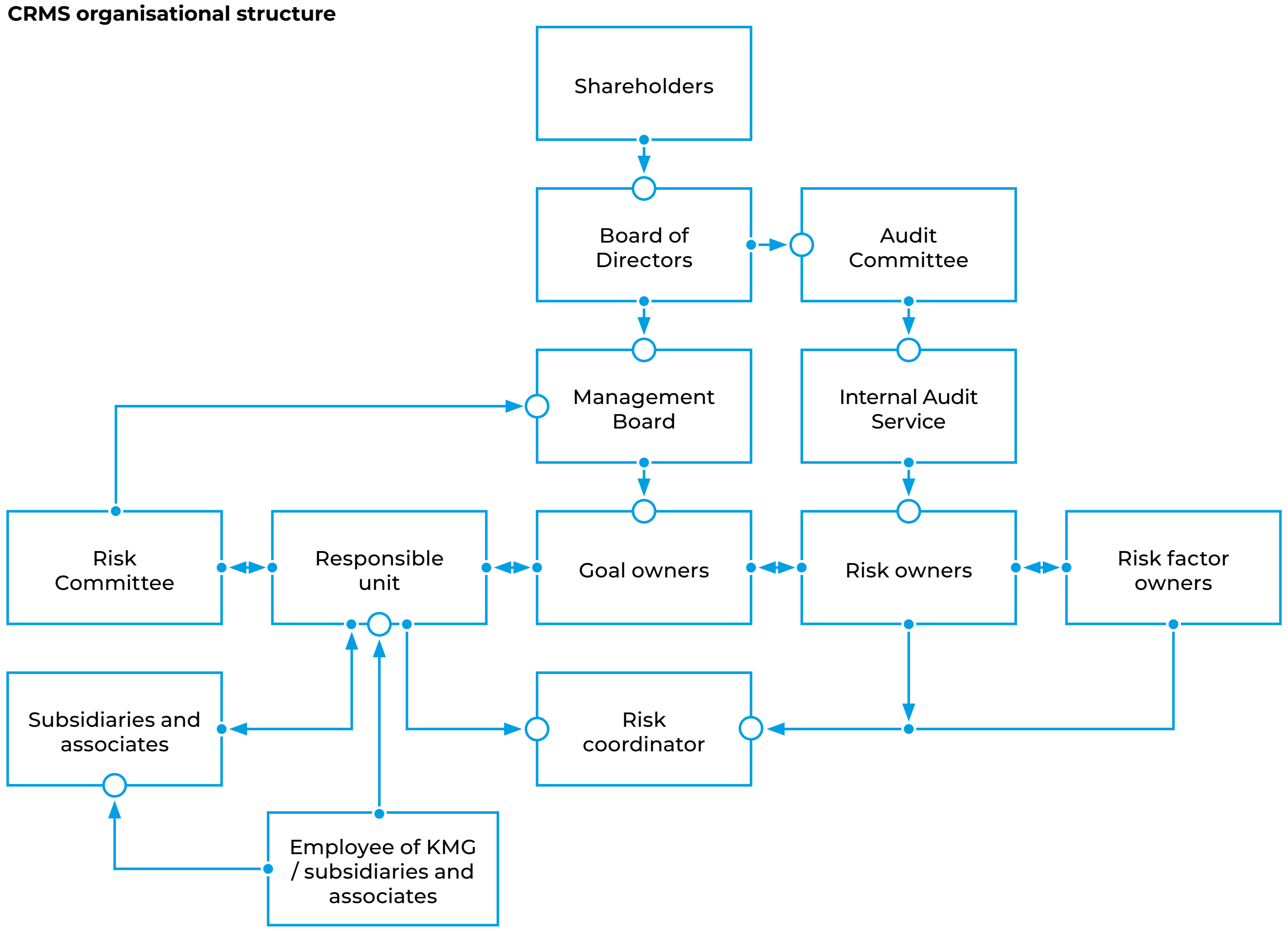
Corporate Risk Management System

KMG has implemented and effectively operates a corporate risk management system (CRMS) that is integrated into its key business and management processes. Its purpose is to ensure an optimal balance between the Company's value growth, profitability, and risks.

The Company's Risk Management Policy relies on the following key principles:
- continuity: functioning on an ongoing basis;
- adaptability: continuous improvement;
- comprehensiveness: addressing all types of risks across all areas of the Company's activities;
- rationality: efficient utilisation of risk management resources;
- active leadership participation: active involvement of and support from the Company's management in implementing and enhancing the risk management system across KMG Group.

The CRMS is a key component of KMG's corporate governance system, which has vertically-structured risk management processes at all governance levels:

CRMS organisational structure



The Board of Directors, supported by the Audit Committee, is in charge of setting the overall risk management direction for the Company to ensure its alignment with KMG's strategic goals as well as timely identification and assessment of key risks and their mitigants. Additionally, the Board reviews reports on the CRMS effectiveness.

The Management Board is responsible for the organisation and effective functioning of the CRMS, timely submission of quarterly risk reports to the Fund, Audit Committee, and Board of Directors, ensuring the CRMS Policy implementation, enhancing KMG's internal risk management regulations, and taking appropriate measures to mitigate risks. The Management Board has a Risk Committee, which serves as a permanent consultative and advisory body tasked with the preliminary review of KMG Group's risk management matters and preparing recommendations to the Management Board to facilitate decision-making. The Risk Committee reviews the Company's risks and the effectiveness of risk management measures, guidelines on risk management, proposals to develop risk management policies, procedures, and structure; new approaches to risk management, and action plans to improve the CRMS.

At KMG, we have established a three lines of defence risk governance model. The first line of defence (business functions) is formed by managers and employees of business units that are responsible for assessing and managing risks at their level and for ensuring efficient operation of the internal control system. The second line of defence (monitoring functions) is formed by managers and employees of business units that are responsible for ensuring and monitoring the implementation of effective risk management practices, internal controls, compliance with legislation and internal documents, and investigating instances of misconduct by KMG employees. The third line of defence (an independent function) is the Internal Audit Service, which provides assurance to the Board of Directors and the Management Board regarding the effectiveness of the Company's management systems and the first and second lines of defence.

The Corporate Risk Management System Policy of KMG and its subsidiaries and associates is available on the Company's website

Improving risk management

Initiatives to develop and improve the CRMS

In 2021, as part of an independent evaluation of corporate governance, KMG's was assigned a BBB rating for its internal audit, risk management, and internal control practices. This is one notch higher than the 2018 level (BB) and serves as a testament to continuous improvements of the Corporate Risk Management System (CRMS), Internal Control System (ICS), and Business Continuity Management System (BCMS). Based on the evaluation results, an action plan for enhancing corporate governance for the years 2022–2023 was developed. By the end of 2023, all activities included the action plan to advance the CRMS, ICS, and BCMS were successfully completed.

KMG has been continuously improving its CRMS and consistently enhancing its risk management framework. To reaffirm its commitment to the continuous development and improvement of CRMS, the Company took a number of measures and steps in 2023:

- The Market Risk Management Rules of the Company were revised, with the updated version approved by KMG's Management Board.
- The Regulations on the Risk Committee were revised, with the updated version approved by KMG's Management Board.
- The composition of the Risk Committee was updated.
- The updated version of the Risk Coordinator Register was approved.
- Monitoring of sanction risks was put in place. The Chairman of the Management Board submits regular reports to the Board of Directors and the Fund providing regular updates and consolidated information on the impact of sanctions.
- The Company's Management Board and Board of Directors are informed in a timely manner on key risks; the risk register, risk map, quarterly risk reports and risk appetite are reviewed. In 2023, the Risk Committee held six meetings, with 28 matters reviewed and corresponding resolutions passed.
- International certification in sustainability and climate risks was obtained to improve the risk assessment of investment projects.
- KMG-Security provided training on the risk management system for its managers and employees (with all regional branches covered).
- Insurance brokers AON Kazakhstan and Willis Towers Watson provided training on the fundamentals of insurance as a risk management tool for employees of KMG's subsidiaries and associates.

Plans to develop the risk management system

- Developing the CRMS (updating the CRMS Policy and standard rules for establishing a risk management process, regulatory and methodological documents).
- Implementing the action plan based on the findings of the internal audit of the CRMS.
- Ensuring timely communication of key risks to the Audit Committee and the Board of Directors.
- Preparing a set of risk management documents for the year 2025.
- Fostering the risk culture.

Internal Control System

The Internal Control System (ICS) is an integral part of CRMS. The COSO (Committee of Sponsoring Organisations)-based system includes five interrelated elements – control environment, risk assessment, controls, information and communication, and monitoring procedures. It is designed to achieve reasonable assurance that KMG will reach its goals across three key areas:

- improving operational efficiency;
- preparing complete and reliable financial statements;
- complying with Kazakhstan's laws and KMG's internal documents.

The ICS focuses on analysing business processes, timely identifying and analysing process-level risks inherent in KMG's operations, as well as defining and analysing controls for managing these risks.

The ICS is integrated into KMG's core and supporting business processes and includes procedures for promptly notifying the appropriate governance level of any material weaknesses and control bottlenecks, together with details of corrective actions that have been or should be taken.

The ICS is organised in line with the Internal Control System Policy, which sets out the goals, operating principles and components of the ICS and the Control System Guidelines, which define powers and responsibilities, operating procedures, internal control structure, performance criteria and forms of records.

KMG annually approves the ICS operation schedule based on the criticality ranking of business processes as well as recommendations by external and internal auditors. The schedule specifies when business processes will be formalised/updated and controls design analysed. Formalisation means the design and update of the existing risk flowcharts and matrices, along with business process controls. Improvement recommendations and areas for improvement are defined following the analysis of controls design performance. Similar activities are performed by subsidiaries and associates. The results of these ICS activities are from time to time communicated to business process owners, IAS, the external auditor, Management Board, and the Board of Directors of KMG.

ICS-related meetings and training sessions for employees of KMG and its subsidiaries and associates, which feature workshops, experience sharing, discussions of issues and their solutions, take place annually.

In 2023, KMG Risk Management and Internal Control Service continued its work to further implement and improve internal controls. Efforts were made jointly with business process owners to formalise internal controls for eleven business processes. Areas for improvement were identified and recommendations for the improvement of controls were prepared. To date, the ICS was successfully formalised for more than 40 business processes. The ICS methodology was updated. Work is underway in line with the action plan to improve the ICS and BCMS at subsidiaries and associates. Subsidiaries receive assistance and methodological support in developing the ICS documents (identification and prioritisation of business processes for the ICS formalisation, analysis and comments/recommendations on draft flowcharts and risk and control matrices, review of reports).

In 2024, KMG's Risk Management and Internal Control Service will continue to improve the ICS. The Company plans to continue formalising and analysing the controls design, providing recommendations on control procedures, carrying out internal control in line with the SAP S4/HANA project, conducting training for CEOs and heads of departments of KMG subsidiaries, strengthening its risk culture, and organising joint audits of IAS and RMICS (as agreed) at subsidiaries and associates subject to availability of risk matrices and controls for the respective business processes. In addition, RMICS specialists are engaged in the audit of financial and economic activities of subsidiaries and associates in order to verify self-assessment of internal controls.

KMG is aware of the importance of internal controls for the preparation and review of financial statements. This process involves providing reasonable assurance as to the reliability of financial statements and their conformity with applicable accounting standards. To this end, in addition to methodological documents defining the approach to the accounting of transactions and the preparation of financial statements, KMG group companies formalised and implemented an internal control process, including a risk matrix and controls over financial reporting. The effectiveness of internal controls over financial reporting is subject to regular review by independent auditors. On top of that, the following measures to prevent potential risks in preparing financial statements are in effect:

- annual approval of KMG's consolidated financial reporting calendar;
- quarterly development and communication of the schedule for closing and preparation of financial statements across KMG Group;
- quarterly analysis of questionnaires for non-routine situations submitted by KMG group companies;
- quarterly assessment of the chief accountants at KMG Group (in terms of timely and correct presentation of financial statements).

Business Continuity Management System

The Business Continuity Management System (BCMS) is a set of processes and procedures aimed at identifying potential threats/risks and assessing their impact on the activities of KMG and its subsidiaries and associates, which provides the basis for improving the Company's resilience to incidents by implementing effective responses capable of restoring its operations and protecting stakeholders' interests, the Company's business reputation, brand and value-adding operations.

The Company recognises the importance of having the BCMS in place and manages business continuity by identifying the necessary conditions and resources to develop and improve measures and tools to ensure business continuity in the context of threats and risks leading to business interruption.

The BCMS is organised in line with KMG's Business Continuity Management System Policy and the Guidelines for the Business Continuity Management Process. The BCMS Policy defines the scope, objectives, basic principles, and model of the business continuity management system, taking into account the recommendations of the international standard in business continuity management. The Rules for the Business Continuity Management Process define the procedures for determining BCMS' scope of application, business impact analysis, developing and approving the Business Continuity Plan (the "BCP"), BCP testing, monitoring and improvement of the BCMS, training and raising awareness of employees.

In 2023, the BCMS methodology was updated. Work was carried out at subsidiaries and affiliates to identify critical business processes and assess their impact on business continuity. In 2024, the Risk Management and Internal Control Service will continue to improve the BCMS. Efforts will be made to update the Business Continuity Plan, and similar work will be done at subsidiaries. The Risk Management and Internal Control Service will also continue to coordinate BCMS rollout across subsidiaries, provide methodological assistance, and conduct training for employees in charge and the management.

Corporate insurance

Insurance is central to ensuring robust risk control and financial management across KMG Group as it serves to protect the property interests of the Company and its shareholders against unexpected losses that may result from operations, including due to external factors.

The Group's insurance function is centralised in order to enforce the unified corporate standard for insurance, which enables the Company to apply a comprehensive approach to managing continuous coverage. Independent appraisal of reproduction cost / replacement cost new (RCN) and risk assessments are also coordinated through risk surveys conducted by independent risk engineers across KMG Group.

KMG's Corporate Insurance Programme includes the following key types of insurance coverage:
- insurance of core operating assets of the Company;
- third party insurance;
- energy risk insurance.

A reinsurance company is only considered for reinsurance when holding a financial credit rating of at least A- on the S&P scale or a comparable rating from other rating agencies. The Company employs best industry practices in negotiating the optimal insurance and risk coverage terms.

Key risks

KMG operates in a constantly changing environment. Some risks can evolve over time, while their potential impact and likelihood can change in response to internal and external factors. KMG manages, tracks and reports key risks and uncertainties that can affect its strategy implementation. As a company representing the interests of the government in the oil and gas industry, KMG is strategically committed to sustainable development. Consequently, our risk identification process encompasses ESG risks.

During the reporting period, a number of risks materialised, but their negative impact was managed and minimised through risk mitigation measures.

Key risks of the Company

Risk has reduced | Risk has increased | No change

Trend (over the year)	Risk description and likely impacts	Mitigation and management
Risk has increased	**Production decline risk** The main external risk factors are power outages, failures of external electricity supply (for example, supply failures on the part of KEGOC, Mangistau Atomic Energy Complex and Mangistau Regional Electricity Network), and severe weather conditions. Key reasons behind power outages and supply restrictions: ▪ emergency shutdown of power-generating units at the TPP of Mangistau Atomic Energy Complex; ▪ shortage of power capacities in the Mangistau and Atyrau regions. For more details, see the Upstream section	1. In order to ensure energy security and uninterrupted power supply to oilfield facilities, KMG's subsidiaries and associates are pursuing the following initiatives: ▪ construction of a hybrid power plant leveraging renewable energy sources (solar + wind) and gas-fired energy. The project timeframe is 2024–2025. ▪ implementation of the project titled "Strengthening the Power Zone in the Western Zone of the Unified Power System of Kazakhstan" to enhance the reliability of power supply to consumers in the western zone of JSC KEGOC. The project was completed in November 2023, doubling the reliability of the network's western zone and minimising the probability of consumers being disconnected. 2. Allocation of KZT 4.9 bln by the Government of Kazakhstan to finance the refurbishment of Mangistau Atomic Energy Complex. 3. Commissioning of a backup gas turbine unit (GTU) from Siemens at Mangistaumunaigaz in line with the plan envisaging simultaneous operation of GTU 1 and GTU 2 (2 x 45 MW Gas Turbine Power Plant) at the Kalamkas field as a way to ensure emergency power supply to the Kalamkas and Zhetibai facilities.
No change	**Risk of lower transportation and sales volumes in the segment of oil exports** Key risk factors: ▪ Strong dependence on Caspian Pipeline Consortium (CPC). ▪ Oil transportation and shipment restrictions (due to accidents, technical failures, sanctions extensions, geopolitical conflicts, sabotage, and acts of terrorism). **Impact** Oil transportation restrictions, curtailment or suspension of production at the TCO, Kashagan and KPO fields and the Company's operating assets, insufficiency of the tank farm capacities to meet the increasing supply.	Exploring oil transportation alternatives. ▪ To diversify export routes for domestic oil, the following initiatives have been implemented: a) crude oil is being supplied to Germany through the Druzhba pipeline; b) crude oil is being supplied from the Port of Aktau via Azerbaijan to the Baku–Tbilisi–Ceyhan pipeline; c) joint working groups with CNPC have been established to address the expansion of the Kazakhstan–China oil pipeline. ▪ Utilising KEBCO (Kazakhstan Export Blend Crude Oil) and addressing related matters with relevant authorised bodies. ▪ Considering the possibility of manufacturing and replacing CPC's critical equipment (single point moorings (SPMs)).

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Work-related injury risk Employees' non-compliance with the established health and safety rules, and breaches of operational discipline may pose a threat to their life and health. In 2023, a total of 29 KMG Group's employees were involved in workplace accidents, down 19% year-on-year. Due to the increased number of lost-time accidents involving subcontractor employees in 2023, the Company is taking steps to improve its subcontractor interaction processes with a view to minimising HSE risks **Impact** Violations of operational health and safety rules may lead to injuries, as well as production disruptions, financial losses, and reputational damage For more details, see the Health, Safety and Environment section	To prevent workplace accidents, KMG implements a number of organisational and technical measures that ensure: ▪ a safe working environment and prevention of work-related injuries and occupational diseases; ▪ timely training and knowledge testing; ▪ internal health and safety controls; ▪ deployment of new technologies and mechanised techniques; ▪ improvement of industrial safety for production facilities. The Company is implementing a near miss reporting programme through the Qorgau Card[1] project and behaviour-based working and driving safety cards. Implementation of the Behaviour-Based Safety Programme and Behaviour-Based Driving Safety Programme in subsidiaries and associates continues. Comprehensive HSE inspections were conducted at selected subsidiaries and associates
	Pandemic risk The emergence of new viruses/strains poses a threat to the health of employees. The COVID-19 situation in Kazakhstan is relatively stable for now, with the infection rates on the decline. In May 2023, the WHO determined that COVID-19 is now an established and ongoing health issue which no longer constitutes a public health emergency of international concern (PHEIC) **Impact** ▪ Spread of infection and an increase in the number of exposed individuals within KMG Group. ▪ Discontent, refusal to go to work, misinformation, panic and protest moods, xenophobia. ▪ Health damages, temporary disabilities, fatalities and compensation payments. ▪ Absence or lack of qualified operational, engineering and technical personnel, leading to a decrease in productivity. ▪ Mandatory isolation and hospitalisation of infected individuals and exposed persons; restrictive measures imposed by government authorities (such as lockdowns)	The Corporate Centre, subsidiaries and associates comply with the requirements and follow recommendations of applicable resolutions of chief state sanitary doctors depending on the current epidemiological situation and the zone of epidemiological risk in a particular region. A set of measures is being implemented in line with approved comprehensive business continuity plans of KMG and its subsidiaries and affiliates to be ready in case of deteriorating epidemiological situation associated with the spread of new strains

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Risk of emergencies or man-made disasters at production facilities The Company's operations are potentially hazardous. KMG is exposed to the risk of damage to property, third parties or the environment caused by accidents, emergencies, or man-made disasters at production facilities. In the reporting period, an accident was registered at the oil and gas production department of Embamunaigas: on 16 November 2023, a gas, oil, and water influx occurred while extracting core from the well during drilling operations. No injuries were reported **Impact** Accidents at production facilities may have the following consequences: ▪ Worker injuries and fatalities ▪ Partial or complete destruction of equipment, facilities, and structures ▪ Costs associated with environmental remediation, fire suppression, and production recovery ▪ Imposition of penalties for excessive environmental impact	To prevent incidents during drilling operations, the following preventive measures are implemented: ▪ conducting surveys to enhance the accuracy of geological data; ▪ monitoring parameters such as drilling fluid flow rate, gas concentration in the drilling fluid, and the process as a whole; ▪ mandatory oversight by well construction supervisors to control the drilling fluid formulation and preparation methods; ▪ monitoring direct and indirect indicators for early detection of gas, oil, and water influxes; ▪ conducting checks to ensure that the volume of added (displaced) drilling fluid matches the volume of lifted (lowered) drilling pipes during tripping operations To mitigate its production risks, the Company: ▪ ensures timely maintenance and repair of equipment as required by relevant regulations; ▪ performs timely diagnostics and identification of potential hazards, as well as industrial safety assessments of production facilities; ▪ controls safety review activities with respect to life-expired equipment; ▪ holds briefings on safe operation of equipment (technical devices); ▪ trains personnel in safe operation regulations and tests their knowledge with the subsequent assignment of qualification certificates (permits) Annual voluntary property insurance contracts are executed (against the risk of accidental destruction, loss or damage) for insured events
	Risk of terrorism Acts of terrorism and other violence against the Company's and contractors' personnel and assets. **Impact** The Company operates in a number of countries where acts of terror and other criminal wrongdoings against the Company's assets are possible. In 2023, there were no events when this risk materialised within KMG Group	The Company takes a set of preventive measures, including: ▪ checking the condition of security equipment, alarm systems, up-to-date status of evacuation plans, current status of exits and evacuation routes; ▪ training of security and maintenance personnel in counter-terrorist protection of facilities and personal safety in case of emergencies; ▪ physical security checks and counter-terrorist security inspections of facilities at subsidiaries and associates; ▪ interacting with law enforcement and special agencies on physical security and counter-terrorist security at facilities; ▪ screening of contractor employees authorised to work at the Company's facilities; training sessions for security, service, and technical personnel in the event of emergencies at facilities; ▪ control over the maintenance of video surveillance systems and routine maintenance of ISS, ACS, and boom barriers; ▪ issuance of IDs for terror vulnerable facilities in line with legal requirements for countering terrorism

[1] The use of the Qorgau Card is aimed at identifying and reporting an unsafe condition, unsafe behaviour, unsafe action, hazardous event or hazardous factor, as well as good practice and suggestions (initiatives).

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Environmental risk The Company is exposed to the risk of adverse environmental impact and the risk of tougher responsibility for non-compliance with environmental laws **Impact** Environmental risk materialisation may entail financial expenses in the form of fines, excess emissions charges, environmental remediation costs, as well as legal liability and escalating social and environmental tensions	The Company's priorities in environmental protection: ▪ atmospheric emissions management and reduction of routine flaring; ▪ water management; ▪ production waste management; ▪ land reclamation; ▪ energy efficiency improvement To mitigate the environmental risk, the Company: ▪ ensures preventive management of significant environmental aspects, based on project management and a risk-based approach, to improve environmental performance; ▪ engages stakeholders on environmental issues; ▪ implements the Memorandum of Cooperation in Environmental Protection signed with a competent authority to dispose of and recycle waste from its subsidiaries and associates; ▪ monitors the inventory of accumulated waste and the progress of land remediation for oil-contaminated soils; ▪ comprehensively develops the corporate environmental function and aligns KMG's activities with green economy principles; ▪ introduces the best available technologies and an automated environmental monitoring information system at subsidiaries and associates
	Risk of oil spills during offshore operations The risk of oil spills during offshore operations can be attributed to several factors. These include the violation of technological procedures, pipeline accidents, malfunctions in production and process equipment, gas, oil, and water influxes during the drilling of exploration and appraisal wells, as well as the closed ecosystem of the Caspian Sea, shallow waters, abnormally high reservoir pressure at the oil field, high hydrogen sulphide concentrations, and seasonal freezing of the surface **Impact** These factors can lead to significant environmental damage, disrupt production processes, and result in substantial financial costs associated with accident response and cleanup efforts	To minimise the risk of oil spills, the Company implements the following measures: ▪ Continuous monitoring and control to ensure compliance with technological processes. ▪ Ongoing monitoring of the functioning of production equipment, process equipment, and pipelines. Timely scheduling and completion of preventive maintenance and technical servicing. ▪ Being prepared to respond to oil spill emergencies, training and conducting level 1, 2, and 3 drills jointly with the Ministry for Emergency Situations of the Republic of Kazakhstan. ▪ Ensuring the effective functioning of the North Caspian Environmental Base for Oil Spill Response. ▪ Monitoring the condition of decommissioned wells. ▪ Participating in committees and working groups in accordance with the Production Sharing Agreement in respect of the North Caspian Sea (NCSPSA) to review preventive measures, provide recommendations, and make amendments
	Climate risks and low-carbon development In its operations, the Company faces risk factors related to energy transition and climate change, including: ▪ Risks related energy transition such as limitations on carbon unit sales, significant costs for implementing energy transition measures, inadequate profitability of low-carbon projects, absence of legislative and authorisation standards, and increases in electricity tariff rates. ▪ Physical impacts of climate change risks, including short-term risks like floods, landslides, droughts, fires, and hurricanes, as well as systematic risks like prolonged periods of abnormally high air temperatures, rising sea levels, onshore well flooding, and a decrease in the Caspian Sea level **Impact** These risks may have an adverse impact on operations of the Company as a major producer of fossil fuels and source of greenhouse gases in the form of higher costs, lower profits, and limited opportunities for further development. An increase in renewable energy generation can be expected in individual partner countries. It may lead to decline in demand for products supplied by the Company	As part of KMG Group's climate risk mitigation efforts, the following measures were implemented or are ongoing: ▪ in 2023, a Corporate Climate Governance Plan was developed with the support of the European Bank for Reconstruction and Development, in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD); ▪ an agreement of understanding was signed with Baker Hughes in the field of carbon capture and storage (CCUS); ▪ a memorandum of cooperation was signed with Samruk-Energy for the construction of solar power plants; ▪ an updated Internal Carbon Pricing Programme was approved; ▪ a corporate green project investment standard was drafted; ▪ participation in working groups to improve legislation related to low-carbon development, energy efficiency, renewable energy, and alternative energy, taking into account corporate interests; ▪ a feasibility study for a pilot project to build a full CCUS chain (Stage 2) underway; ▪ implementation of a forest-climate project, with Stantec engaged as contractor; ▪ methodology for recording GHG emissions (Scope 3) was drafted for integration into the Company's GHG Emission Monitoring and Reporting Methodology; ▪ the Company signed a memorandum of cooperation with Tetra Tech, implementer of the Power Central Asia (PCA) Activity, to inventory methane emissions sources across KMG assets and further cut relevant emissions; ▪ KMG joined the OGMP 2.0 (Oil and Gas Methane Partnership) initiative for methane emissions reporting among oil and gas companies
	Geological risk The implementation of new exploration projects is always associated with geological risks arising from the uncertainty of geology: lack of hydrocarbon discoveries; failure to confirm or low recoverable oil/gas reserve estimates **Impact** Absence of commercially viable oil and gas reserves and/or the discovery of reserves that are below the anticipated level	To address this risk, the Company: ▪ collects and analyses the geological and geophysical data from the operating area and similar nearby fields; ▪ plans geophysical surveys and exploration for hydrocarbons, applies effective study techniques and data processing and interpretation methods; ▪ conducts regional basin studies; ▪ conducts advanced seismic surveys as part of subsoil exploration efforts to reduce geological risks and obtain new data for the purposes of comprehensive geological, technical and economic analysis; ▪ attracts strategic partners for joint exploration and development of new fields; ▪ fosters professional development of personnel (training, experience sharing with international companies)

Trend (over the year)	Risk description and likely impacts	Mitigation and management
↑	**Social unrest in regions of operation** The Company is exposed to the risk of unauthorised strikes **Impact** Adverse impact on the Company's reputation, disruption to operations and higher OPEX and impact on CAPEX and project schedules. Rising commodity prices, accelerated domestic inflation or continued weakening of the national currency may affect negotiations over changes to wages and salaries. In 2023, there was a number of unauthorised strikes called by employees of the Company's contractors and some of its subsidiaries and associates. The Company held negotiations with the leaders of the trade union committees and met with rank-and-file employees. As a result, KMG took steps to narrow the salary gap between the Company's workers and contractor employees. The number of strikes called by employees of KMG's subsidiaries and associates and their contractors in the Mangistau Region decreased from 22 strikes in 2022 to 9 strikes in 2023, down 59% year-on-year	To mitigate social risks, the Company pursues a wide variety of initiatives: ▪ To ensure the timely settlement of social and labour conflicts in the Mangistau Region, KMG opened a representative office in Aktau. KMG participates in the meetings of the Interdepartmental Headquarters for Addressing Issues of Zhanaozen (Mangistau Region). ▪ A continuous monitoring system has been implemented to closely oversee the social climate at KMG enterprises and their contractors. In line with the developed Protest Action Response Algorithm, a unified position has been formed in collaboration with relevant government authorities. To prevent potential conflicts and improve the social environment, now continuous control is exercised over industrial relations at KMG subsidiaries and associates' contractors. ▪ The Company's subsidiaries and associates have developed 2023–2027 roadmaps for improving employees' working and leisure conditions, with plans to build new and overhaul existing social infrastructure facilities. ▪ In 2023, the Corporate Centre developed a unified form of the Samruk Research Services (SRS) improvement plan for all subsidiaries and associates, and introduced the practice of visiting KMG enterprises and providing assistance in drafting action plans to improve social stability. PetroKazakhstan Oil Products also partnered with the Social Partnership Centre at Samruk-Kazyna to conduct in-depth sociological surveys. In 2023, the SRS index reached 75%. ▪ KMG Group has a Unified Internal Communications System (Regulations) in place and holds mandatory meetings between the management and employees at all the Company's facilities to discuss social, day-to-day, and operational matters as well as to develop solutions together ▪ 2023 saw 101 reporting meetings covering some 14,000 employees of KMG subsidiaries and associates, with over 500 questions asked and answered. ▪ KMG actively contributes to the unemployment reduction efforts in the Mangistau Region. In 2023, under the direct joint coordination of the KMG's Representative Office and the Akimat of the Mangistau Region, a total of 2,216 individuals were employed by KMG's subsidiaries, associates, and contractors. Furthermore, as part of the agreement between KMG and Abu Dhabi Ports Group (ADP), a competition was launched among the local residents to fill vacant positions within ADP. ▪ To foster team spirit, consolidate the workforce, and cultivate a healthy psychological atmosphere, various events are regularly organised to develop corporate culture within KMG. These include the KMG Sports Competition involving all KMG's subsidiaries and associates and the Uzdyk Maman professional skills competition. ▪ To improve the quality of education offered to the young residents of Zhanaozen, the Company launched a programme for financing schoolchildren's training in the country's best specialised boarding schools and colleges. The programme is designed to provide training opportunities to an average of 1,300 students annually

Trend (over the year)	Risk description and likely impacts	Mitigation and management
⊖	**Liquidity and financial stability risks** Liquidity, financial stability, and credit rating downgrade risks are KMG's key risks. **Impact** Need to immediately repay current borrowings and Eurobonds. Inability to raise sufficient funds to finance the Company's current and investment activities. In 2023, the Company maintained an appropriate level of liquidity and demonstrated adequate financial stability	To overcome these risks, along with debt management activities and efforts to prevent liquidity shortages, the Company is focused on improving operational efficiency, clear prioritisation of capital expenditures, commitment to financial discipline, rationalisation of the Company's asset and project portfolios, and transition to portfolio-based project management. The Company takes the following measures to prevent risks: ▪ controlling leverage, preventing its growth to maintain financial stability, using free cash flow to repay debt; ▪ achieving an optimal balance between debt and internal sources of financing; ▪ cost cuts, budget control; ▪ repaying existing loans and providing financial aid to subsidiaries and affiliates; ▪ preventing deterioration of the Company's solvency position in order to maintain access to debt capital markets and avoid increases in borrowing costs; ▪ deleveraging through early debt repayment

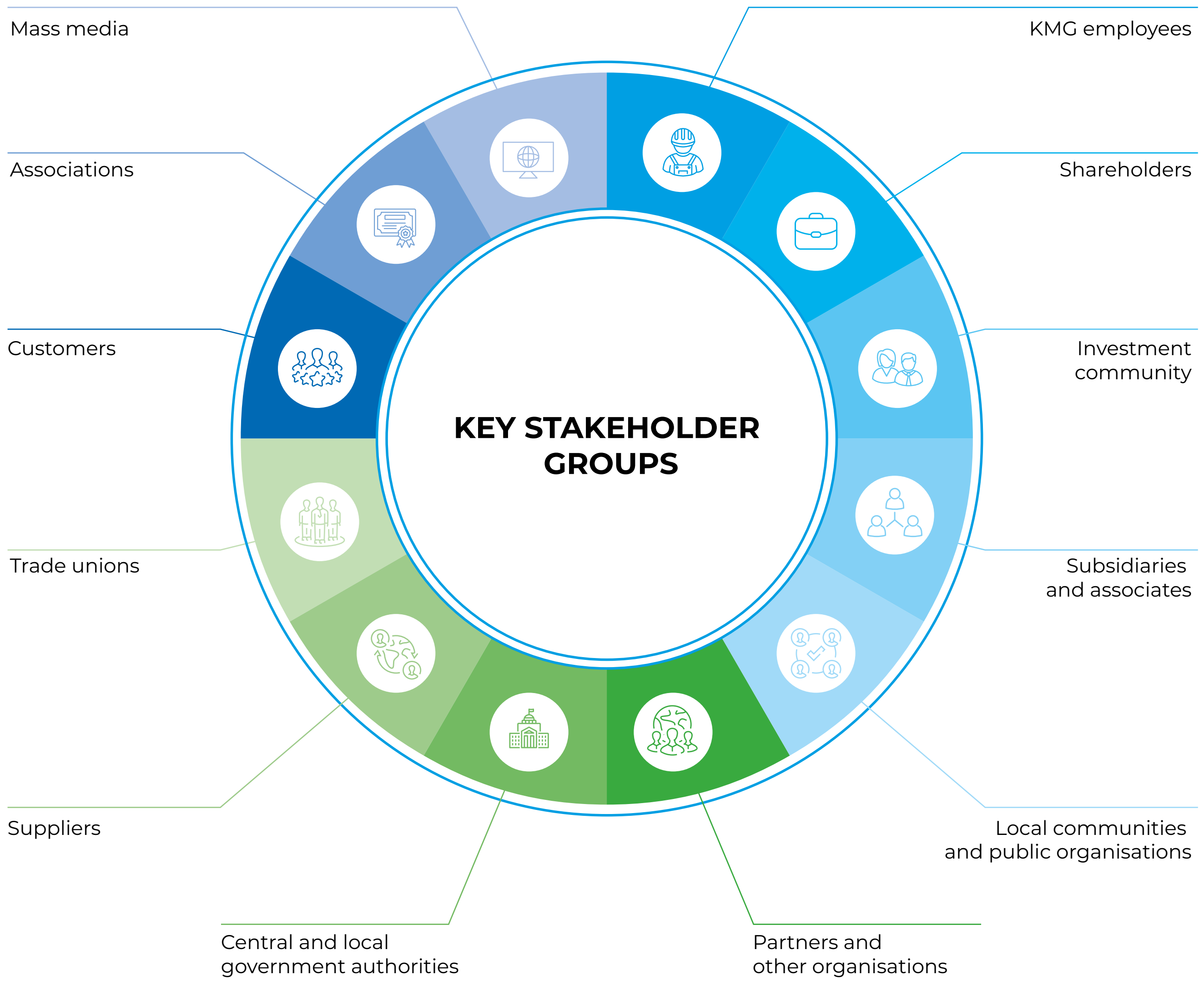
Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Compliance risks Intentional corruption for personal or material gain, including for the benefit of third parties. The Company has zero tolerance towards any fraudulent actions regardless of the amount of monetary damage. **Impact** Financial losses and reputation damage	The Company consistently implements and reinforces internal controls, embedding group-wide policies to prevent unlawful or wrongful acts of third parties or its employees, and maintaining the procedure for conducting internal investigations of unlawful or wrongful acts of its employees. The Company has adopted policies and standards in line with best global practices, while also committing itself to: ▪ improving and consolidating its internal and compliance controls (in the reporting period, additions were made to): – the Anti-Corruption Policy as regards the liability of the Chairman of the Management Board and their deputies for a failure to perform their job duties with respect to the prevention of corruption-related offences by their direct subordinates or for improper performance thereof; – the Confidential Informing Policy of KMG as regards the responsibility to submit investigation materials on received reports indicating criminal or administrative offences to authorised law enforcement bodies; – the Rules for Planning, Organising and Conducting Procurement of Goods, Works and Services at KMG as regards the feasibility of grounds for the application of single-source procurement; ▪ anti-corruption monitoring; ▪ analysing corruption risks; ▪ promoting an anti-corruption culture, taking preventive steps and informing employees on potential violations and enforcement; ▪ establishing an organisational and legal framework to foster accountability and transparency of decision-making procedures; ▪ conducting compliance audits (in the reporting period, long-term contracts, single-source procurement deals, and arrangements for the privatisation of economically material assets were reviewed for compliance with anti-corruption requirements); ▪ implementing and complying with business ethics standards; ▪ holding anti-corruption workshops and trainings; ▪ analysing drafts of internal documents to identify corruption factors; ▪ preventing conflicts of interest; ▪ conducting counterparty due diligence reviews; ▪ compiling an insider list and serving limitations, obligations and responsibility notifications on respective insiders; ▪ handling whistleblowing reports via the Hotline and submitting respective findings to the Board of Directors.

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Strong volatility of oil prices The Company is exposed to the risk of energy price volatility. **Impact** Oil price volatility may lead to significant changes in the Company's performance, revenues, and cash flow. The decrease in the average oil price in 2023 compared to 2022 had a negative impact on the Company's revenue and cash flow, leading to their reduction. For more details, see the Macroeconomics and Global Trends sections	In the event of high oil price volatility and a drop in demand due to adverse developments in the global markets, the Company will take steps to ensure financial stability, including but not limited to: ▪ introducing and taking anti-crisis measures in a timely manner; ▪ adjusting the Company's Development Plan, cutting costs; ▪ prioritising and optimising CAPEX and investment projects. KMG continuously monitors and analyses price and demand movements for crude oil and oil products
	Country risks and the risk of sanctions The Company operates overseas. Any significant adverse economic and political developments in a recipient country could affect the Company's operations. Sanctions against certain countries, including sectoral sanctions, may affect the Company's operations and its prospective joint projects. **Impact** Tightening of sanction laws may affect the Company's operating, financial and investment activities, including through secondary sanctions imposed on the Company	To manage and prevent relevant risks, KMG: ▪ conducts ongoing monitoring and analysis of sanction risks and shares regular updates on the impact of sanctions on KMG with the Fund and relevant Company departments; ▪ evaluates the feasibility of implementing promising projects and explores options for engaging alternative contractors; ▪ incorporates mechanisms to prevent or mitigate the negative impact of sanctions on KMG into agreements and contracts
	Investment (project) risks The Company is implementing a number of projects in hydrocarbon exploration, production, transportation and processing, which could be exposed to significant risks associated with external and internal factors. The materialisation of such risks can significantly affect the success of these projects. **Impact** When running investment projects, the Company faces the risks of rising costs, delays in the commissioning of production facilities, and failure to achieve design parameters	The Company regularly monitors progress against projects in the regions where it operates, making timely adjustments to project implementation plans as necessary. Where risk can arise affecting the timing, budget or quality of projects, mitigation measures may include negotiations with stakeholders, reduction of operating costs, optimisation of the investment programme, abandonment of unprofitable investment projects. We rely on a project management and investment decision-making system similar to standards adopted by global companies (Stage Gate Process)

Trend (over the year)	Risk description and likely impacts	Mitigation and management
⊖	**Risk of changes in applicable laws, and litigation and arbitration risks** The Company's performance can be impacted by changes in applicable laws, including subsoil use, tax, currency, customs regulations, etc., as well as the risk of negative court decisions on court or arbitration disputes involving the Company. **Impact** In 2023, 12 lawsuits worth over USD1 mln were initiated. Until the proceedings are completed, it is impossible to fully assess the impact of these events on the Company's operations	The Company continuously monitors changes in laws, while also evaluating and forecasting the extent to which they can potentially impact the operations of KMG entities. The Company regularly takes part in working groups to develop and discuss draft laws in various areas of legislation. The Company continuously monitors judicial and law enforcement practices, and actively applies best practices in resolving legal issues and disputes arising in the course of the Company's operations. In 2023, there were developments in the Stati case. On 22 September 2023, the Supreme Court dismissed the Stati Parties' appeal, confirming that the shares were immune from execution under customary international law. The Supreme Court ruled "that the Stati Parties' appeal was based on an incorrect interpretation of the decision of the Court of Appeal. Their appeal proceeded from the assumption that the Court of Appeal considered Samruk's statutory purpose decisive and ignored Samruk's actual activities. However, the Supreme Court noted that the Court of Appeal reached the correct conclusion the Stati Parties failed to prove that the shares have no public purpose"

STAKEHOLDER ENGAGEMENT

Key stakeholder groups



Stakeholder group	Principles of engagement	Methods of engagement	Company's activities
Shareholders	Openness and candid dialogue with shareholders	▪ Feedback channels (e-mail and phone number for shareholder engagement matters) ▪ Annual General Meeting of Shareholders	▪ Investor Day on the KASE ▪ Annual General Meeting of Shareholders
Investment community	Transparency and regulatory compliance	▪ Feedback channels (e-mail and phone number for investor engagement matters) ▪ Company's annual report ▪ Information disclosure on the Company's website and social media ▪ Semi-annual investor calls (issuer and investor days) ▪ Quarterly presentations on financial and operating results	▪ Publications on the corporate website kmg.kz, specifically in the Investors section ▪ Publications on the website of Kazakhstan Stock Exchange ▪ Roadshows for investors and other public events ▪ Meetings, conference calls ▪ Handling requests by e-mail (ir@kmg.kz), and consulting by phone ▪ Publication of press releases ▪ Publication of financial statements on the depositary's internet page
Associations, local communities, public organisations	Strong involvement in social activities of (local) communities	▪ Feedback channels (e-mail and phone number for various matters) ▪ Participation in the Public Council's meetings ▪ Participation in working groups ▪ Information disclosure: on the Company's website, in sustainability reports, and in mass media	▪ Access to information ▪ Publications on the corporate website ▪ Publications in mass media
Mass media	Providing mass media with open, transparent, and reliable information	▪ Press releases ▪ Participation in conferences, interactions with the Central Communications Service under the President of Kazakhstan ▪ Timely coverage of events and activities in the Company's social media	▪ Press releases, informational publications, articles on the Company's website and in mass media ▪ Distribution of press releases ▪ Response to mass media's requests ▪ Conference calls, briefings, press tours, forums, information sessions and other media events ▪ Handling requests
Central and local government authorities	Robust interaction in order to address national goals	▪ Working groups and meetings ▪ Direct correspondence ▪ Industry conferences	▪ Access to information ▪ Performance against instructions
Subsidiaries and associates	Direct and specific communication	▪ Meetings involving managers ▪ Business trips to assets ▪ Direct correspondence	▪ Access to information ▪ Giving instructions ▪ Information letters
Customers, suppliers, partners, other organisations	Agreements entered into in good faith and on arm's length conditions	▪ Entering into agreements	▪ Access to information ▪ Distribution of press releases
Trade unions, KMG employees	Equal opportunities, meritocracy principle	▪ Group and one-on-one meetings with managers ▪ Employee performance evaluation ▪ Insights into employee satisfaction and engagement	▪ Meetings, conference calls ▪ Distribution of press releases ▪ Surveys, general meetings ▪ Productivity management systems ▪ Publications on the corporate website ▪ Event publications through the Company's information resource ▪ Advisory and expert boards, working groups

For more details, see the Investor Communications section

SHAREHOLDER AND INVESTOR RELATIONS

KMG's shareholders

Shareholder	Ordinary shares	Ordinary shares, %	Preferred shares	Total shares	Total shares, %
Sovereign Wealth Fund Samruk-Kazyna	**411,371,263**	67.42	–	411,371,263	67.42
Kazakhstan's Ministry of Finance	**122,023,898**	20.00	–	122,023,898	20.00
The National Bank of Kazakhstan	**58,420,748**	9.58	–	58,420,748	9.58
Minority shareholders	**18,303,584**	3.00	–	18,303,584	3.00

Securities issues[1]

Type of shares	Authorised shares	Outstanding shares	Traded shares	Unissued shares
Ordinary	849,559,596	610,119,493	18,303,584	239,440,103

In the reporting period, KMG saw changes to its shareholder structure.

In late 2023, Samruk-Kazyna disposed of 122,023,898 KMG shares for a total of KZT 1.3 trln, selling them to the Ministry of Finance for a payment from the Kazakhstan National Fund under the trust management of the National Bank of Kazakhstan.

The Kazakhstan National Fund is on the balance sheet of the Government of Kazakhstan represented by the Ministry of Finance, which now owns the acquired shares.

The shares were disposed of in three tranches: in October, November and December 2023, making up a total of 20% of KMG's ordinary shares.

The transaction is, in effect, a redistribution of shares between government agencies, with no implications for KMG's operations or credit ratings.

According to the Ministry of Finance, the sale of KMG's shares to the Kazakhstan National Fund is one of the steps taken to achieve the national budget's revenue targets.

[1] As of 1 January 2024.

As of 10 April 2024, KMG had the following shareholder structure:
- Sovereign Wealth Fund Samruk-Kazyna – 67.42%
- Kazakhstan's Ministry of Finance – 20%
- The National Bank of Kazakhstan – 9.58%
- Minority shareholders – 3%

The shares in KMG currently owned by the Ministry of Finance are soon to be transferred to Samruk-Kazyna for trust management.

The annual General Meeting of Shareholders is expected to approve the following documents:
- KMG's 2023 annual financial statements (consolidated and standalone);
- KMG's 2023 net profit distribution procedure;
- amount of dividend per ordinary share in KMG;
- 2023 dividend record date;
- date for the commencement of dividend payments for ordinary shares for 2023.

Shareholder rights

The Company may issue shares and other securities in accordance with the Law of the Republic of Kazakhstan On Joint-Stock Companies and without prejudice to any rights associated with existing shares. Under its Charter, the Company may only issue ordinary shares.

The Law of the Republic of Kazakhstan On Joint-Stock Companies distinguishes between two types of shares: ordinary and preferred, each with specific rights as described in the same law. The Company can extend said rights on the basis of its Charter (although KMG's Charter currently does not provide for this) but may not limit them.

Any holder of an ordinary share is entitled to:
- participate in the management of a joint stock company in the manner described in the Law of the Republic of Kazakhstan On Joint-Stock Companies and/or the company's charter;
- receive dividends;
- obtain information about the company's operations, including direct analysis of the company's accounting statements in the manner determined by the company's general meeting of shareholders or its charter;
- obtain extracts from the central depositary or nominee holder confirming the shareholder's ownership of the securities;
- nominate members to the board of directors and have them reviewed by the general meeting of shareholders;
- in court, challenge resolutions adopted by the company's governing bodies;
- send to the company written requests for information about its operations, and receive a reasoned reply within 30 calendar days;
- receive part of the company's assets upon its liquidation;
- exercise the pre-emptive right to acquire shares or other securities convertible into shares, in the manner set out in the Law of the Republic of Kazakhstan On Joint Stock Companies;
- participate in the adoption of resolutions by the general meeting of shareholders on changing the number or type of shares in the manner set out in the Law of the Republic of Kazakhstan On Joint Stock Companies.

Publicly traded shares

KMG's IPO was held on 8 December 2022 as part of the Comprehensive Privatisation Plan for 2021–2025 approved by the Government of the Republic of Kazakhstan.

After the IPO, the free float of KMG is 3%.

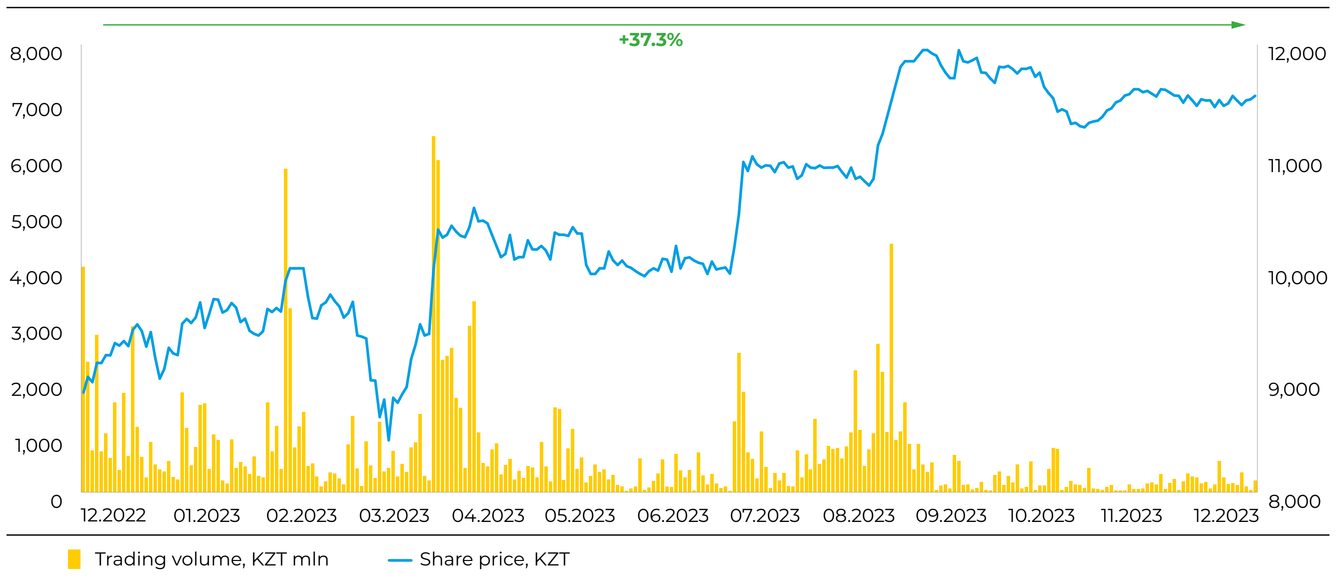
KMG's shares were offered on Kazakhstan's stock exchanges: AIX and KASE. The IPO was priced at KZT 8,406 per share, implying a market capitalisation of about KZT 5.1 trln or USD11 bln.

As of 31 December 2023, the price of KMG shares since the offering date went up by 37.3%. In 2023, shareholders were paid a record KZT 300 bln in dividends. The dividend per share was KZT 491.71. Taking into account the dividends paid, the share price increase as of 31 December 2023 compared to the offering date was 43.1%.

As of 31 December 2023, KMG has a market capitalisation of KZT 7.0 tln or USD 15.5 bln.

KASE	Offering date	31 December 2023
Share price	8,406	11,541
Market capitalisation, KZT	5.1 tln	7.0 tln
Market capitalisation, USD	11 bln	15.5 bln
Share price performance	–	+37.3%
Share price performance taking into account dividends paid	–	+43.1%

KMG share price performance (offering date to 31 December 2023)



Dividends

The new dividend policy of KMG is in effect since 2022 (resolution of the Management Board of Samruk-Kazyna dated 27 October 2022, Minutes No. 59/22).

It is aimed at balancing the interests of shareholders, creditors and the Company, as well as ensuring transparency in determining the amount of dividend payments to its shareholders.

- Resolutions on dividend payments are passed by KMG's General Meeting of Shareholders.
- Resolutions on dividend payments take into account the price of crude oil, the structure of KMG's debt, its capital expenditures, and other material circumstances.

Free cash flow means a consolidated cash flow from operations (including dividends received from joint ventures and associates but excluding net changes in working capital in respect of advances received for crude oil supplies) minus acquisition of fixed assets (including advances for fixed assets) minus acquisition of intangible assets minus acquisition of field development assets minus acquisition of evaluation and exploration assets minus acquisition of a stake in a subsidiary / joint venture plus proceeds from the sale of interests in a subsidiary / joint venture / associate (excluding proceeds from the denationalisation of the Company's assets as per the lists approved by Resolution No. 1141 dated 30 December 2015 and Resolution No. 908 dated 29 December 2020 of the Government of the Republic of Kazakhstan) based on performance in the reporting period.

Net debt means total debt minus cash and cash equivalents minus short-term and long-term bank deposits.

EBITDA means revenue plus dividends received from joint ventures and associates minus cost of purchased oil, gas, oil products, and other materials (excluding depreciation and amortisation) minus production costs minus G&A expenses (excluding depreciation and amortisation) minus transportation and selling expenses (excluding depreciation and amortisation) minus taxes other than income tax.

KMG's dividend policy sets an established procedure for determining the minimum amount of dividends in the range from 30% to 50% of the free cash flow.

KMG will make every effort to ensure that the following dividends are paid:
- at least 50% of the Free Cash Flow if the Net Debt / EBITDA ratio is less than, or equal to, 1.0x;
- at least 40% of the Free Cash Flow if the Net Debt / EBITDA ratio is more than 1.0x, but less than, or equal to, 1.5x;
- at least 30% of the Free Cash Flow if the Net Debt / EBITDA ratio is more than 1.5x, but less than, or equal to, 2.0x;
- as determined by resolution of the General Meeting of Shareholders if the Net Debt / EBITDA ratio is more than 2.0x.

Key terms for paying out dividends:
- positive equity;
- consolidated net income for the reporting period or retained earnings at the end of the reporting period;
- positive free cash flow.

Annual dividends of not less than KZT 200–250 bln for three years after the IPO provided that the average annual Brent crude oil price will not be less than USD 70 per barrel.

Dividend history

Indicator	2018	2019	2020	2021	2022
Dividend per share, KZT	60.64	133.97	81.95	327.80	491.71
Total dividends paid, KZT mln	36,998	81,738	49,999	199,997	300,002

On 26 June 2023, KMG completed the payment of dividends to shareholders based on the results of 2022. The total amount of dividends stood at KZT 300.0 bln. Dividend per ordinary share totalled KZT 491.71.

For more details, see the Financial Statements section

KMG's credit ratings

Credit ratings assigned by international rating agencies serve as reliable and independent tools for the Group's credit assessment. KMG aims at aligning its key financial metrics with target investment-grade long-term ratings and exceeding them. The Company provides rating agencies with access to all information necessary for a comprehensive and reliable evaluation of the Group's creditworthiness. Rating agencies and KMG hold regular review meetings, and KMG maintains the contacts.

In addition to the Company's operating and financial results and market environment, KMG's credit ratings are linked to Kazakhstan's sovereign credit profile as its change may impact credit ratings of Kazakhstani companies, including KMG.

In 2023, KMG's credit standing improved despite considerable external economic uncertainties. Fitch upgraded the Company's rating from BBB- to BBB, S&P affirmed the rating but revised the outlook to stable, and Moody's kept the rating unchanged while adjusting the outlook to positive. Currently, the Company has investment-grade credit ratings from Moody's and Fitch on par with the sovereign rating and is one notch below the sovereign rating according to S&P.

- On 9 March 2023, Standard & Poor's affirmed the Company's rating at BB+ and revised outlook to stable reflecting the agency's rating action on Kazakhstan (the rating being affirmed at BBB-, with outlook revised to stable).
- Fitch Ratings upgraded KMG's credit rating on 22 June 2023 from BBB- to BBB with a stable outlook, following an upgrade in its standalone credit profile. This rating aligns with the sovereign rating of the Republic of Kazakhstan.
- Moody's affirmed KMG's Baa2 rating on 13 December 2023 but revised the outlook to positive, indicating confidence in the Company's sustained standalone credit profile.
- On 26 December 2023, S&P affirmed KMG's BB+ rating, outlook stable, while upgrading its standalone credit profile from bb- to bb.

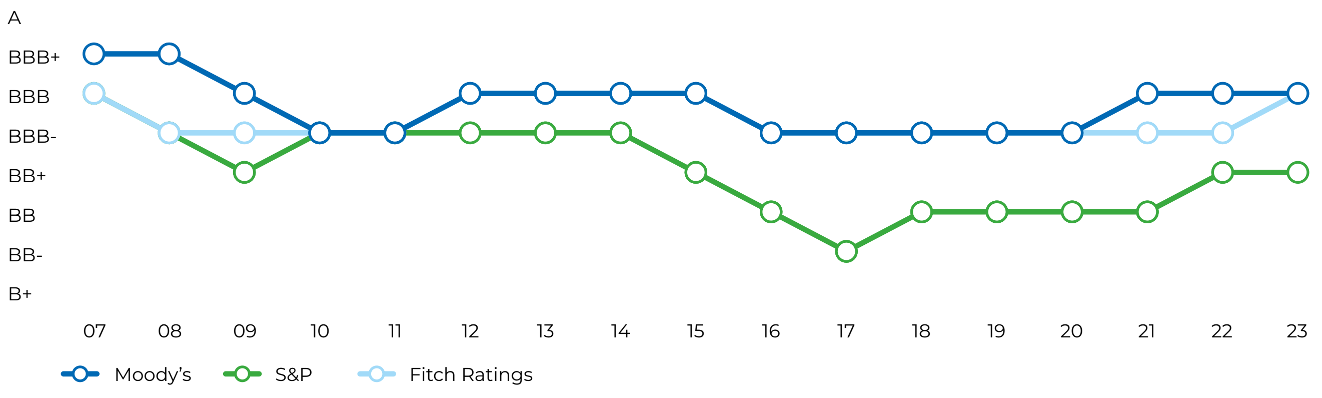
KMG's credit ratings

Rating agency	Date	Rating	Outlook
Moody's Investors Service	13 December 2023	Baa2	Positive
S&P	26 December 2023	BB+	Stable
Fitch Ratings	22 June 2023	BBB	Stable

Kazakhstan's credit ratings

Rating agency	Date	Rating	Outlook
Moody's Investors Service	27 October 2023	Baa2	Positive
S&P	3 March 2023	BBB–	Stable
Fitch Ratings	17 November 2023	BBB	Stable

Change in KMG's ratings



Bond issues

As of 31 December 2023, KMG's consolidated debt (expressed in USD) was USD8,265 mln, including USD 5,750 mln in KMG's Eurobonds and USD 1,654 mln (KZT 752 bln) in KMG's bonds issued to Samruk-Kazyna to buy out the share in Kashagan, as well as KMG's bonds for the upgrade and expansion of the Astrakhan–Mangyshlak water pipeline amounting to USD 154 mln (KZT 70 bn).

KMG Group's projects are largely financed through its own net cash flows. At the same time, KMG and its subsidiaries and associates may enter the bonds market, if the conditions are favourable, in order to finance individual strategic projects or to maintain financial stability as per the Company's financial strategy.

KMG borrows both on the national and global capital markets in line with its flexible and balanced debt management policy. The Company's bonds are among the most liquid instruments amidst those offered by Kazakhstan's issuers. KMG's Eurobonds have been historically attractive to a wide range of investors. KMG bonds' investor base includes thousands of institutional and retail investors, mostly based in the USA, Europe and Asia. The Company's Eurobonds are traded in the London Stock Exchange, the Kazakhstan Stock Exchange, and the Astana International Exchange.

For more details, see the Financial Review section

As of 31 December 2023, KMG had five outstanding Eurobond issues at the Corporate Centre level for a total amount of USD 5.75 bln on par value.

KMG's outstanding Eurobonds[1]

Issue date / maturity date	Issue size, USD mln	Outstanding bonds, USD mln	Coupon rate, % p.a.	ISIN: RegS/144A
19 April 2017 / 19 April 2027	1,000	1,000	4.75	XS1595713782/US48667QAN51
19 April 2017 / 19 April 2047	1,250	1,250	5.75	XS1595714087/US48667QAP00
24 April 2018 / 24 April 2030	1,250	1,250	5.375	XS1807300105/US48667QAQ82
24 April 2018 / 24 April 2048	1,500	1,500	6.375	XS1807299331/US48667QAS49
14 October 2020 / 14 April 2033	750	750	3.50	XS2242422397/US48126PAA03

As of 31 December 2023, KMG had three outstanding local bond issues at the Corporate Centre level for a total amount of KZT 821,631.4 mln on par value.

KMG bonds

Issue date / maturity date	Issue size, KZT mln	Outstanding bonds, KZT mln	Coupon rate, % p.a.	ISIN:
16 September 2022 / 16 October 2035	751,631.4	751,631.4	3.0	KZ2C00008969
24 April 2023 / 1 April 2033	50,000	50,000	0.5	KZ2C00009736
24 November 2023 / 1 October 2033	20,000	20,000	0.5	KZ2C00010429

Investor communications

KMG continues to successfully implement its investor relations programme to ensure stability of financing and reduce its cost of capital. Communications with investors involve the Chairman of the Board of Directors, Chairman of the Management Board, members of the Management Board and heads of KMG's strategic, financial, and operating units, Health, Safety and Environment Department and the Investor Relations function.

KMG holds semi-annual conference calls for investors to discuss financial and operating results with the Deputy Chairman and members of the Management Board, as well as heads of departments. In addition to the quarterly calls, the Company held special one-on-one calls with investors and rating agencies, and also took part in online conferences on the global sustainable development trends and situation in the emerging markets.

The Company adheres to the principles of timeliness, completeness and availability of disclosures for the investment community. Each quarter, KMG publishes quarterly results presentations, financial results, trading updates, IFRS financial statements and analyst databooks. In 2023, the Company continued its practice to promptly inform investors and analysts on KMG's financial and operating performance upon their request.

Guided by sustainability principles, in 2022 the Company considerably enhanced the transparency of its ESG disclosures. In particular, KMG published its comprehensive 2022 Sustainability Report in 2023. In October 2022, Sustainalytics updated KMG's ESG risk rating to 32.3. The Company was also ranked in the top 40 among the 306 global oil and gas companies researched by Sustainalytics.

The materials and publications as well as contacts of the Investor Relations are available in the Investors section on the Company's website.

KMG understands the importance of further enhancing its two-way dialogue with the investment community and regularly conducts investor perception surveys on the Company, with the results reviewed by the Board of Directors.

2023 Investor Calendar

1Q 2023	▪ Investor conference call on full-year 2022 financial and operating results ▪ 2022 quarterly results presentation ▪ 2022 financial results and trading update ▪ IFRS consolidated financial statements for 2022 ▪ 2022 trading update ▪ 2022 financial results
2Q 2023	▪ 1Q 2023 quarterly results presentation ▪ 1Q 2023 financial results and trading update ▪ Interim condensed consolidated IFRS financial statements for 3M 2023 ended 31 March 2023 ▪ Publication of 2022 Annual Report ▪ 1Q 2023 trading update ▪ 1Q 2023 financial results ▪ 19 May 2023: call with the EMEA and a group of investors
3Q 2023	▪ Investor Day at KASE based on 1H 2023 financial and operating results ▪ 1H 2023 quarterly results presentation ▪ 1H 2023 financial results and trading update ▪ Interim condensed consolidated IFRS financial statements for 6M 2023 ended 30 June 2023 ▪ Publication of 2022 Sustainability Report ▪ Publication of 2022 Climate Change Questionnaire (CDP) ▪ Publication of 2022 Water Security Questionnaire ▪ 1H 2023 trading update ▪ 1H 2023 financial results
4Q 2023	▪ 3Q 2023 quarterly results presentation ▪ 3Q 2023 financial results and trading update ▪ Interim condensed consolidated IFRS financial statements for 9M 2023 ended 30 September 2023 ▪ 9M 2023 financial results ▪ 9M 2023 trading update

[1] Senior unsecured, as of 31 December 2023 at the Corporate Centre level.

IN THE REPORTING YEAR, THE COMPANY DELIVERED ROBUST PRODUCTION AND FINANCIAL RESULTS, CONTINUING TO FOCUS ON BALANCED GROWTH AND DUE FULFILMENT OF RELEVANT OBLIGATIONS

03 FINANCIAL STATEMENTS

Joint Stock Company
“National Company “KazMunayGas”

Consolidated financial statements

For the year ended December 31, 2023
with independent auditor’s report

CONTENTS

Building a better working world

«Эрнст энд Янг» ЖШС
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Independent auditor's report

To the Shareholders, Board of Directors and Management of Joint Stock Company "National Company "KazMunayGas"

Opinion

We have audited the consolidated financial statements of Joint Stock Company "National Company "KazMunayGas" and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2023, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including material accounting policy information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2023 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' (IESBA) International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) together with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Kazakhstan, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

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Key audit matter	*How our audit addressed the key audit matter*
Impairment of non-current assets	
We consider this matter to be one of the matters of most significance in our audit due to materiality of the balances of non-current assets, including upstream, downstream and midstream assets, to the consolidated financial statements, the high level of subjectivity in respect of assumptions underlying impairment analysis and significant judgements and estimates made by management. Assumptions included discount rates, oil and petroleum products prices forecasts and inflation and exchange rate forecasts. Significant estimates included production forecast, future capital expenditure and oil and gas reserves available for development and production. Information on non-current assets and the impairment tests performed is disclosed in *notes 4* and *16* to the consolidated financial statements.	We considered management's assessment of the existence of impairment indicators and where impairment indicators were identified, we involved our business valuation specialists in the testing of management's impairment analysis and calculation of recoverable amounts. We analyzed the assumptions underlying management forecasts. We compared oil and petroleum products prices used in the calculation of recoverable amount to available market forecasts. We compared the discount rates and long-term growth rates to general market indicators and other available evidence and checked the adjustments made by management when calculating the applicable discount rate. We tested the mathematical accuracy of the impairment models and assessed the analysis of the sensitivity of the results of impairment tests to changes in assumptions. We performed procedures to assess competence, capabilities and objectivity of the external experts engaged by the Group to estimate the volumes of oil and gas reserves and prepare impairment models, where applicable. We analysed disclosures on impairment test in the consolidated financial statements.
Provisions and contingent liabilities	
Provisions are recognized and contingent liabilities are disclosed by the Group in respect of government inspections, provisions for asset retirement obligations (ARO) and general legal proceedings, as well as other matters. In 2023 the Group recognized additional ARO for refineries and recorded changes in certain estimates related to ARO. The assessment as to whether, or not, a liability should be recognized and whether	We inquired the Group's management and legal department for instances of non-compliance with laws and regulations and the status of any pending and ongoing litigations, claims and proceedings. We obtained legal letters from internal legal advisers. We inspected relevant correspondence, the minutes of the meetings of the Group's management and Board of Directors. Our procedures in respect of ARO included assessment of legal and constructive

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amounts can be reliably estimated involves estimation and judgement. Predicting the outcome of the matter and estimating the potential impact if the outcome is unfavourable represents a complex process and the potential exposure on the consolidated financial statements may be significant.

Calculation of ARO requires significant judgment due to the inherent complexity in estimating future costs and due to significance of this liability. Most of these obligations are expected to be settled in a long-term perspective. The Group involved specialists to assess the ARO. Management's assumptions used in the calculation include expected approach to decommissioning and discount rates, along with the effects of changes in inflation rates.

Assessment of legal and constructive obligations of the Group related to the liquidation of assets according to the contractual agreements and relevant local legislation requires management's judgement and evaluation and implies variability.

We considered provisions and contingent liabilities to be one of the matters of most significance in our audit because of their significance to the consolidated financial statements, the level of judgment required and the 2023 events describe above.

Information on provisions, contingent liabilities and commitments is disclosed in *notes 30* and *36* to the consolidated financial statements.

obligations related to the liquidation of assets on the basis of contractual agreements and relevant local legislation.

We considered the competence and objectivity of the specialists involved by the Group, who produced the cost estimates as a basis for ARO. We compared the discount and inflation rates used to available external data. We checked mathematical accuracy of the calculations.

We have also assessed changes in estimated future costs related to ARO and assessed how the Group took into consideration the recent changes in the related legislation.

We analysed the Group's management's estimates underlying the amounts recognized as provisions in the consolidated financial statements and assessed judgements in respect of the probability of potential outcomes of contingent liabilities in the consolidated financial statements.

We analysed the related disclosures in the consolidated financial statements.

Other information included in the Group's 2023 annual report

Other information consists of the information included in the Group's 2023 Annual Report, other than the consolidated financial statements and our auditor's report thereon. Management is responsible for the other information. The Group's 2023 Annual Report is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information, when it becomes available, and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

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Responsibilities of management and the Audit Committee for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

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- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The partner in charge of the audit resulting in this independent auditor's report is Kairat Medelbayev.

Ernst & Young LLP

Kairat Medetbayev
Auditor

Rustamzhan Sattarov
General Director
Ernst and Young LLP

Auditor Qualification Certificate
No. МФ-0000137 dated 8 February 2013

State audit license for audit activities on the territory of the Republic of Kazakhstan: series МФЮ-2 No. 0000003 issued by the Ministry of finance of the Republic of Kazakhstan on 15 July 2005

050660, Republic of Kazakhstan, Almaty
Al-Farabi ave., 77/7, Esentai Tower

12 March 2024

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended December 31, 2023

In millions of tenge	Note	2023	2022 (restated)*
Revenue and other income			
Revenue from contracts with customers	9	**8,319,543**	8,693,081
Share in profit of joint ventures and associates, net	10	**534,177**	991,310
Gain from disposal of subsidiary	5	**186,225**	–
Finance income	17	**147,245**	120,603
Other operating income		**55,378**	22,319
Total revenue and other income		**9,242,568**	9,827,313
Costs and expenses			
Cost of purchased oil, gas, petroleum products and other materials	11	**(4,621,881)**	(4,960,176)
Production expenses	12	**(1,219,722)**	(1,144,241)
Taxes other than income tax	13	**(594,080)**	(677,921)
Depreciation, depletion and amortization	37	**(601,204)**	(506,900)
Transportation and selling expenses	14	**(245,525)**	(205,352)
General and administrative expenses	15	**(177,792)**	(160,479)
Impairment of property, plant and equipment, intangible assets and exploration expenses	16	**(230,580)**	(19,917)
Finance costs	17	**(322,073)**	(308,055)
Foreign exchange gain, net		**25,222**	40,089
Other expenses		**(60,124)**	(85,424)
Total costs and expenses		**(8,047,759)**	(8,028,376)
Profit before income tax		**1,194,809**	1,798,937
Income tax expenses	33	**(270,348)**	(492,377)
Net profit for the year		**924,461**	1,306,560

The accounting policies and explanatory notes on pages 9 through 84 form an integral part of these consolidated financial statements.

JSC NC "KazMunayGas" Consolidated financial statements

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (continued)

In millions of tenge	Note	2023	2022 (restated)*
Other comprehensive income/(loss)			
Other comprehensive income/(loss) to be reclassified to profit or loss in subsequent periods			
Hedging effect	31	**849**	(11,872)
Exchange differences on translation of foreign operations		**(176,614)**	695,642
Net gain/(loss) on hedge of a net investment	28	**46,152**	(187,440)
Tax effect		**11,101**	(36,525)
Net other comprehensive (loss)/income to be reclassified to profit or loss in the subsequent periods, net of tax		**(118,512)**	459,805
Other comprehensive income/(loss) not to be reclassified to profit or loss in subsequent periods			
Actuarial gain on defined benefit plans of the Group		**341**	9,075
Actuarial gain/(loss) on defined benefit plans of the joint ventures		**651**	(19)
Tax effect		**(327)**	(116)
Net other comprehensive income not to be reclassified to profit or loss in the subsequent periods, net of tax		**665**	8,940
Net other comprehensive (loss)/income for the year, net of tax		**(117,847)**	468,745
Total comprehensive income for the year, net of tax		**806,614**	1,775,305
Net profit/(loss) for the year attributable to:			
Equity holders of the Parent Company		**960,483**	1,278,359
Non-controlling interests		**(36,022)**	28,201
		924,461	1,306,560
Total comprehensive income/(loss) for the year attributable to:			
Equity holders of the Parent Company		**842,977**	1,745,651
Non-controlling interests		**(36,363)**	29,654
		806,614	1,775,305
Earnings per share** – tenge thousands			
Basic and diluted	27	**1.574**	2.095

* *Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2022 and reflect adjustments made, refer to Note 7.*

** *The number of ordinary shares as of December 31, 2023 and 2022 equaled to 610,119,493.*

Deputy Chairman of the Management Board ____________ *D.A. Aryssova*

Chief accountant ____________ *A.S. Yesbergenova*

The accounting policies and explanatory notes on pages 9 through 84 form an integral part of these consolidated financial statements.

JSC NC "KazMunayGas" Consolidated financial statements

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at December 31, 2023

In millions of tenge	Note	2023	2022 (restated)*
Assets			
Non-current assets			
Exploration and evaluation assets	19	**174,187**	251,280
Property, plant and equipment	18	**7,181,206**	6,994,001
Investment property		**19,383**	17,304
Intangible assets	20	**874,930**	918,261
Right-of-use assets		**101,765**	76,567
Investments in joint ventures and associates	22	**4,821,427**	4,947,403
VAT receivable		**30,360**	16,760
Advances for non-current assets		**50,954**	52,982
Other non-current non-financial assets		**4,192**	3,713
Loans and receivables due from related parties	25	**94,334**	129,857
Other non-current financial assets		**23,217**	10,672
Long-term bank deposits	21	**63,891**	59,229
Deferred income tax assets	33	**65,829**	41,598
		13,505,675	13,519,627
Current assets			
Inventories	23	**376,444**	310,764
Trade accounts receivable	24	**561,258**	519,684
VAT receivable		**60,523**	42,762
Income tax prepaid	33	**33,051**	36,167
Other current non-financial assets	24	**157,257**	109,173
Loans and receivables due from related parties	25	**125,569**	119,874
Other current financial assets	24	**74,870**	57,057
Short-term bank deposits	21	**997,012**	1,178,138
Cash and cash equivalents	26	**1,050,873**	763,185
		3,436,857	3,136,804
Assets classified as held for sale		**180**	459
		3,437,037	3,137,263
Total assets		**16,942,712**	16,656,890

The accounting policies and explanatory notes on pages 9 through 84 form an integral part of these consolidated financial statements.

JSC NC "KazMunayGas" Consolidated financial statements

CONSOLIDATED STATEMENT OF FINANCIAL POSITION (continued)

In millions of tenge	Note	2023	2022 (restated)*
Equity and liabilities			
Equity			
Share capital	27	**916,541**	916,541
Additional paid-in capital		**1,142**	1,142
Other equity		**(910)**	(1,759)
Currency translation reserve		**4,090,281**	4,209,612
Retained earnings		**5,486,747**	4,803,431
Attributable to equity holders of the Parent Company		**10,493,801**	9,928,967
Non-controlling interests	27	**(99,404)**	(61,541)
Total equity		**10,394,397**	9,867,426
Non-current liabilities			
Borrowings	28	**3,365,736**	3,784,897
Lease liabilities	29	**87,880**	65,872
Other non-current financial liabilities	31	**18,743**	15,080
Provisions	30	**306,219**	210,765
Employee benefit liabilities		**70,975**	66,097
Other non-current non-financial liabilities	31	**37,777**	41,548
Deferred income tax liabilities	33	**1,126,767**	999,010
		5,014,097	5,183,269
Current liabilities			
Trade accounts payable	31	**663,930**	565,092
Borrowings	28	**391,358**	369,489
Lease liabilities	29	**17,400**	15,682
Other current financial liabilities	31	**145,953**	283,820
Provisions	30	**33,576**	58,779
Employee benefit liabilities		**5,703**	4,969
Income tax payable	33	**28,285**	66,648
Other taxes payable	32	**116,500**	148,497
Other current non-financial liabilities	31	**131,513**	93,219
		1,534,218	1,606,195
Total liabilities		**6,548,315**	6,789,464
Total equity and liabilities		**16,942,712**	16,656,890
Book value per ordinary share** – tenge thousands	27	**15.603**	[illegible]

* *Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2022 and reflect adjustments made, refer to Note 7.*

** *The number of ordinary shares as of December 31, 2023 and 2022 equaled to 610,119,493. Presentation of Book value per ordinary share is a non-IFRS measure required by KASE.*

Deputy Chairman of the Management Board ____________ *D.A. Aryssova*

Chief accountant ____________ *A.S. Yesbergenova*

The accounting policies and explanatory notes on pages 9 through 84 form an integral part of these consolidated financial statements.

JSC NC "KazMunayGas" Consolidated financial statements

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended December 31, 2023

In millions of tenge	Note	2023	2022 (restated)*
Cash flows from operating activities			
Profit before income tax		**1,194,809**	1,798,937
Adjustments:			
Depreciation, depletion and amortization	37	**601,204**	506,900
Impairment of property, plant and equipment, intangible assets and exploration expenses	16	**230,580**	19,917
Gain on disposal of subsidiary	5	**(186,225)**	–
Realized losses from derivatives on petroleum products	12	**(69)**	121,539
Finance income	17	**(147,245)**	(120,603)
Finance costs	17	**322,073**	308,055
Gain on disposal of joint venture		**90**	–
Share in profit of joint ventures and associates, net	10	**(534,177)**	(991,310)
Movements in provisions		**(6,158)**	78,603
Net foreign exchange gain		**(29,107)**	(34,290)
Write-off of inventories to net realizable value		**4,646**	4,236
Loss on disposal of property, plant and equipment, intangible assets, investment property and assets held for sale, net		**501**	2,623
Reversal of impairment of VAT receivable	15	**(282)**	(1,942)
Change in financial guarantees		**344**	122
VAT non-recoverable	15	**5,811**	2,582
Allowance for impairment of advances for non-current assets		**20,320**	–
Allowance of expected credit loss for trade receivables and other assets	15	**9,125**	2,758
Operating profit before working capital changes		**1,486,240**	1,698,127
Change in VAT receivable		**(37,306)**	(14,118)
Change in inventory		**(76,763)**	(115,725)
Change in trade accounts receivable and other current assets		**4,640**	32,933
Change in trade and other payables and contract liabilities		**78,727**	(110,086)
Change in other taxes payable		**(127,565)**	(58,183)
Cash generated from operations		**1,327,973**	1,432,948
Dividends received from joint ventures and associates	22	**619,826**	462,309
Income taxes paid		**(147,166)**	(144,015)
Interest received		**123,389**	49,487
Interest paid	28, 29	**(256,408)**	(233,418)
Net cash flow from operating activities		**1,667,614**	1,567,311

The accounting policies and explanatory notes on pages 9 through 84 form an integral part of these consolidated financial statements.

JSC NC "KazMunayGas" Consolidated financial statements

CONSOLIDATED STATEMENT OF CASH FLOWS (continued)

In millions of tenge	Note	2023	2022 (restated)*
Cash flows from investing activities			
Placement of bank deposits		**(1,460,352)**	(1,698,647)
Withdrawal of bank deposits		**1,614,940**	1,138,294
Acquisition of subsidiary, net of cash acquired	6,7	**(156,388)**	(1,198,317)
Deferred consideration paid for the acquisition of subsidiary	7	**(163,770)**	–
Purchase of property, plant and equipment, intangible assets and exploration and evaluation assets		**(683,439)**	(451,476)
Proceeds from sale of property, plant and equipment, exploration and evaluation assets and assets held for sale		**3,317**	2,219
Proceeds from disposal of subsidiary net of cash disposed	5	**94,624**	–
Cash of disposed subsidiaries		**–**	(4,137)
Additional contributions to joint ventures without changes in ownership	22	**(20,117)**	(15,398)
Loans given to related parties	34	**(44,672)**	(42,018)
Repayment of loans due from related parties	34	**35,963**	38,190
Acquisition of debt securities		**(7,063)**	–
Proceeds from sale of debt securities		**289**	118
Redeem of notes of the National Bank of RK	34	**451,598**	17,000
Acquisition of notes of the National Bank of RK	34	**(425,263)**	(87,000)
Other		**697**	(1,138)
Net cash flows used in investing activities		**(759,636)**	(2,302,310)
Cash flows from financing activities			
Proceeds from borrowings	28	**385,304**	985,714
Repayment of borrowings	28	**(666,232)**	(224,327)
Dividends paid to shareholders	27	**(300,002)**	(199,997)
Dividends paid to non-controlling interests	27	**(1,572)**	(1,975)
Distributions to Samruk-Kazyna	27	**(120)**	(266,069)
Contribution from the related party	27	**14,155**	7,064
Payment of principal portion of lease liabilities	29	**(26,933)**	(19,709)
Return of insurance premium	28	**–**	7,370
Other distribution to shareholders	27	**(8,962)**	–
Net cash flows (used in)/from financing activities		**(604,362)**	288,071
Effects of exchange rate changes on cash and cash equivalents		**(15,942)**	65,755
Change in allowance for expected credit losses		**14**	114
Net change in cash and cash equivalents		**287,688**	(381,059)
Cash and cash equivalents, at the beginning of the year		**763,185**	1,144,244
Cash and cash equivalents, at the end of the year		**1,050,873**	763,185

* *Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2021 and reflect adjustments made, refer to Note 7.*

Non-cash transactions

For the year ended December 31, 2023, accounts payable for purchases of property, plant and equipment increased by 69,734 million tenge (2022: increased by 81,471 million tenge).

As at December 31, 2022 the financial aid provided to Samruk-Kazyna has been fully repaid by setting of against the payable for the acquisition of 49.50% ownership interest in Kazakhstan Petrochemical Industries Inc. LLP for 91,175 million tenge, payable for the acquisition of 49.90% ownership interest in Silleno LLP for 816 million tenge and the part of the payable for exercising the Option for 424,587 million tenge (acquisition of Kashagan) *(Notes 7, 25* and *34).*

Deputy Chairman of the Management Board ______________ *D.A. Abyssova*

Chief accountant ______________ *A.S. Yesbergenova*

The accounting policies and explanatory notes on pages 9 through 84 form an integral part of these consolidated financial statements.

JSC NC "KazMunayGas" Consolidated financial statements

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2023

	Attributable to equity holders of the Parent Company							
In millions of tenge	Share capital	Additional paid-in capital	Other equity	Currency translation reserve	Retained earnings	Total	Non-controlling interests	Total
As at December 31, 2021 (restated)*	916,541	1,142	10,113	3,738,581	5,438,328	10,104,705	(89,282)	10,015,423
Net profit for the year (restated)*	–	–	–	–	1,278,359	1,278,359	28,201	1,306,560
Other comprehensive (loss)/income (restated)*	–	–	(11,872)	471,031	8,133	467,292	1,453	468,745
Total comprehensive (loss)/income (restated)*	–	–	(11,872)	471,031	1,286,492	1,745,651	29,654	1,775,305
Dividends *(Note 27)*	–	–	–	–	(199,997)	(199,997)	(2,296)	(202,293)
Distributions to Samruk-Kazyna *(Note 27)*	–	–	–	–	(273,870)	(273,870)	–	(273,870)
Acquisition of joint ventures *(Notes 7, 8 and 27)*	–	–	–	–	(63,634)	(63,634)	–	(63,634)
Acquisition of KMG Kashagan B.V. under common control *(Note 7)*	–	–	–	–	(1,777,076)	(1,777,076)	–	(1,777,076)
Transactions with Samruk-Kazyna *(Note 27)*	–	–	–	–	385,997	385,997	–	385,997
Contribution from the related party *(Note 27)**	–	–	–	–	9,960	9,960	–	9,960
Equity contribution to subsidiary	–	–	–	–	–	–	383	383
Other distributions	–	–	–	–	(2,769)	(2,769)	–	(2,769)
As at December 31, 2022 (restated)*	916,541	1,142	(1,759)	4,209,612	4,803,431	9,928,967	(61,541)	9,867,426

* *Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2022 and reflect adjustments made, refer to Note 7.*

The accounting policies and explanatory notes on pages 9 through 84 form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (continued)

	Attributable to equity holders of the Parent Company							
In millions of tenge	Share capital	Additional paid-in capital	Other equity	Currency translation reserve	Retained earnings	Total	Non-controlling interests	Total
As at December 31, 2022 (restated)*	**916,541**	**1,142**	**(1,759)**	**4,209,612**	**4,803,431**	**9,928,967**	**(61,541)**	**9,867,426**
Net profit/(loss) for the year	–	–	–	–	960,483	960,483	(36,022)	924,461
Other comprehensive income/(loss)	–	–	849	(119,331)	976	(117,506)	(341)	(117,847)
Total comprehensive income/(loss)	–	–	849	(119,331)	961,459	842,977	(36,363)	806,614
Dividends *(Note 27)*	–	–	–	–	(300,002)	(300,002)	(1,500)	(301,502)
Distributions to Samruk-Kazyna *(Note 27)*	–	–	–	–	(120)	(120)	–	(120)
Other operations *(Note 27)*	–	–	–	–	(17,925)	(17,925)	–	(17,925)
Acquisition of Polimer Production LLP under common control *(Note 7)*	–	–	–	–	(1,520)	(1,520)	–	(1,520)
Transactions with Samruk-Kazyna *(Note 27)*	–	–	–	–	26,597	26,597	–	26,597
Contribution from the related party *(Note 27)*	–	–	–	–	14,827	14,827	–	14,827
As at December 31, 2023	**916,541**	**1,142**	**(910)**	**4,090,281**	**5,486,747**	**10,493,801**	**(99,404)**	**10,394,397**

* *Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2022 and reflect adjustments made, refer to Note 7.*

Deputy Chairman of the Management Board ____________ *D.A. Aryssova*

Chief accountant ____________ *A.S. Yesbergenova*

The accounting policies and explanatory notes on pages 9 through 84 form an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2023

1. GENERAL

Joint stock company "National Company "KazMunayGas" (further the Company, JSC NC "KazMunayGas" or Parent Company) is oil and gas enterprise of the Republic of Kazakhstan (further RK), which was established on February 27, 2002 as a closed joint stock company pursuant to the Decree No. 811 of the President of the RK dated February 20, 2002 and the resolution of the Government of the RK (further the Government) No. 248 dated February 25, 2002. The Company was formed as a result of the merger of closed joint stock companies "National Oil and Gas Company Kazakhoil" and "National Company Transport Nefti i Gaza". As the result of the merger, all assets and liabilities, including ownership interest in all entities owned by these companies, have been transferred to the Company. The Company was reregistered as a joint stock company in accordance with the legislation of the RK in March 2004.

Starting from June 8, 2006, the sole shareholder of the Company was joint stock company "Kazakhstan Holding Company for State Assets Management "Samruk", which in October 2008 was merged with the state owned Sustainable Development Fund "Kazyna" and formed joint stock company "National Welfare Fund Samruk-Kazyna", now renamed to joint stock company "Sovereign Wealth Fund Samruk-Kazyna" (further Samruk-Kazyna). The Government is the sole shareholder of Samruk-Kazyna.

On August 7, 2015, the National Bank of RK (further NB RK) purchased 9.58% plus one share of the Company from Samruk-Kazyna. From December 8, 2022, 3.00% of shares of the Company are freely available on the Astana International Exchange (further AIX) and the Kazakhstan Stock Exchange (further KASE) stock exchanges.

On December 22, 2023, 20.00% of the Company's shares owned by Samruk-Kazyna were transferred to the Ministry of Finance of the Republic of Kazakhstan.

As at December 31, 2023, the Company has interest in 61 operating companies (as of December 31, 2022: 59) (jointly "the Group").

The Company has its registered office in the RK, Astana, Dinmukhamed Kunayev, 8.

The principal activity of the Group includes, but is not limited, to the following:

- Participation in the development and implementation of the uniform public policy in the oil and gas sector;
- Representation of the state interests in subsoil use contracts through interest participation in those contracts; and
- Corporate governance and monitoring of exploration, development, production, oil servicing, processing, petrochemistry, transportation and sale of hydrocarbons and the designing, construction and maintenance of oil-and-gas pipeline and field infrastructure.

The consolidated financial statements comprise the financial statements of the Company and its controlled subsidiaries *(Note 3)*.

These consolidated financial statements of the Group were approved for issue by the Deputy Chairman of the Management Board and the Chief accountant on March 12, 2024.

2. BASIS OF PREPARATION

These consolidated financial statements have been prepared on a historical cost basis, except as described in the accounting policies and the notes to these consolidated financial statements. All values in these consolidated financial statements are rounded to the nearest millions, except when otherwise indicated.

Statement of compliance

These consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by International Accounting Standards Board (IASB).

The preparation of the consolidated financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the Group consolidated financial statements are disclosed in *Note 4*.

The Group has prepared these consolidated financial statements on the basis that it will continue to operate as a going concern. The Management of the Group consider that there are no material uncertainties that may cast significant doubt over this assumption. They have formed a judgement that there is a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future, and not less than 12 months from the end of the reporting period.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

2. BASIS OF PREPARATION (continued)

Foreign currency translation

Functional and presentation currency

Items included in the financial statements of each of the Group's entities included in these consolidated financial statements are measured using the currency of the primary economic environment in which the entities operate (the functional currency). The consolidated financial statements are presented in Kazakhstan tenge (tenge or KZT), which is the Company's functional and presentation currency.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the consolidated statement of comprehensive income.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined.

Differences arising on settlement or translation of monetary items are recognized in profit or loss with the exception of monetary items that are designated as part of the hedge of the Group's net investment in foreign operation. These are recognized in other comprehensive income until the net investment is disposed of, at which time, the cumulative amount is reclassified to profit or loss. Tax charges and credits attributable to exchange differences on those monetary items are also recorded in other comprehensive income.

Group Companies

The results and financial position of all of the Group's subsidiaries, joint ventures and associates (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each statement of financial position presented are translated at the closing rate at that reporting date;
- Income and expenses for each statement of comprehensive income presented are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the date of the transaction); and
- All resulting exchange differences are recognized as a separate component of other comprehensive income.

Exchange rates

Weighted average currency exchange rates established by KASE are used as official currency exchange rates in the Republic of Kazakhstan. The currency exchange rate of KASE as at December 31, 2023 was 454.56 tenge to 1 United States dollar (US dollar). This rate was used to translate monetary assets and liabilities denominated in US dollar as at December 31, 2023 (2022: 462.65 tenge to 1 US dollar). The currency exchange rate of KASE as at March 12, 2024 was 449.30 tenge to 1 US dollar. For the year ended December 31, 2023, the Group had net foreign exchange gain of KZT 25,222 million due to fluctuations in foreign exchange rates to tenge.

3. MATERIAL ACCOUNTING POLICY INFORMATION

Changes in accounting policies and disclosures

New and amended standards and interpretations

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Group's annual consolidated financial statements for the year ended December 31, 2022, except for the adoption of new standards and interpretations effective as of January 1, 2023.

JSC "National Company "KazMunayGas" Consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Changes in accounting policies and disclosures (continued)

New and amended standards and interpretations (continued)

The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

Several amendments and interpretations apply for the first time in 2023, but do not have an impact on the consolidated financial statements of the Group.

The Group presented only the list of standards effective and applicable for the Group.

IFRS 17 Insurance Contracts

In May 2017, the IASB issued IFRS 17 *Insurance Contracts*, a comprehensive new accounting standard for insurance contracts covering recognition and measurement, presentation and disclosure. IFRS 17 replaces IFRS 4 *Insurance Contracts* that was issued in 2005. IFRS 17 applies to all types of insurance contracts (i.e., life, non-life, direct insurance and reinsurance), regardless of the type of entities that issue them, as well as to certain guarantees and financial instruments with discretionary participation features; a few scope exceptions will apply. The overall objective of IFRS 17 is to provide an accounting model for insurance contracts that is more useful and consistent for insurers. In contrast to the requirements in IFRS 4, which are largely based on grandfathering previous local accounting policies, IFRS 17 provides a comprehensive model for insurance contracts, covering all relevant accounting aspects. IFRS 17 is based on a general model, supplemented by:

- A specific adaptation for contracts with direct participation features (the variable fee approach);
- A simplified approach (the premium allocation approach) mainly for short-duration contracts.

The amendments had no significant impact on the Group's consolidated financial statements.

Definition of Accounting Estimates - Amendments to IAS 8

The amendments to IAS 8 clarify the distinction between changes in accounting estimates, and changes in accounting policies and the correction of errors. They also clarify how entities use measurement techniques and inputs to develop accounting estimates.

The amendments had no impact on the Group's consolidated financial statements.

Disclosure of Accounting Policies - Amendments to IAS 1 and IFRS Practice Statement 2

The amendments to IAS 1 and IFRS Practice Statement 2 *Making Materiality Judgements* provide guidance and examples to help entities apply materiality judgements to accounting policy disclosures. The amendments aim to help entities provide accounting policy disclosures that are more useful by replacing the requirement for entities to disclose their 'significant' accounting policies with a requirement to disclose their 'material' accounting policies and adding guidance on how entities apply the concept of materiality in making decisions about accounting policy disclosures.

The amendments have had an impact on the Group's disclosures of accounting policies, but not on the measurement, recognition or presentation of any items in the Group's financial statements.

Deferred Tax related to Assets and Liabilities arising from a Single Transaction – Amendments to IAS 12

The amendments to IAS 12 Income Tax narrow the scope of the initial recognition exception, so that it no longer applies to transactions that give rise to equal taxable and deductible temporary differences such as leases and decommissioning liabilities.

The amendments had no impact on the Group's consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Changes in accounting policies and disclosures (continued)

New and amended standards and interpretations (continued)

International Tax Reform – Pillar II Model Rules - Amendments to IAS 12 Income Taxes

The amendments to IAS 12 have been introduced in response to the OECD's BEPS Pillar II rules and include:

- A mandatory temporary exception to the recognition and disclosure of deferred taxes arising from the jurisdictional implementation of the Pillar II model rules; and
- Disclosure requirements for affected entities to help users of the financial statements better understand an entity's exposure to Pillar II income taxes arising from that legislation, particularly before its effective date.

KMG Group is part of Samruk-Kazyna Group that is a multinational enterprise with revenue in excess of EUR 750 million per consolidated financial statements of the international group for the financial year, immediately preceding the reporting financial year, using the arithmetic average market exchange rate determined in accordance with the tax legislation of the Republic of Kazakhstan for the respective financial year.

Samruk-Kazyna is a parent entity of the international group. Entities of the multinational enterprise are presented in the following jurisdictions where Pillar II Model Rules have been enacted (or substantially enacted), and will enter into force in tax years 2024 and beyond: the Republic of Bulgaria, Federal Republic of Germany, Kingdom of the Netherlands, Romania, the Swiss Confederation and the United Kingdom of Great Britain and Northern Ireland.

The Group has applied the exception to recognizing and disclosing information about deferred tax assets and liabilities related to Pillar II income taxes.

The Group is in the process of potential exposure assessment related to the Pillar II Model Rules implementation at the legislative level. The assessment is based on the most recent tax filings, country-by-country reporting for 2022 and current financial information for 2023.

Based on the assessment the Group identified potential exposure related to the Pillar II income taxes on profit earned by some companies in the Swiss Confederation jurisdiction and Kingdom of the Netherlands, where the effective income tax rate was below 15%. The Group does not expect a material exposure to Pillar II income taxes in these jurisdictions. However, exposure may also exist in other jurisdictions where the assessment is in progress.

The Group is still in the process of assessing the potential exposure to Pillar II income taxes as at December 31, 2023. The potential exposure, if any, to Pillar II income taxes is currently not known or reasonably estimable. The Group continues to progress on the assessment and expects to complete the assessment in 2024.

Standards issued but not yet effective

There are new pronouncements issued as at December 31, 2023:

- Amendments to *IAS 7 Statement of Cash Flows and IFRS 7 Financial Instruments: Disclosures: Supplier Finance Arrangements* (issued on May 25, 2023);
- Amendments to *IAS 1 Presentation of Financial Statements: classification of Liabilities as Current or Non-current* (issued on January 23, 2020)*, deferral of effective date of classification of Liabilities as Current or Non-current* (issued on July 15, 2020)*, non-current Liabilities with Covenants* (issued on October 31, 2022);
- Amendments to *IFRS 16 Leases: Lease Liability in a Sale and Leaseback* (issued on September 22, 2022);
- Amendments to *IAS 21 The Effects of Changes in Foreign Exchange Rates: Lack of Exchangeability* (issued on August 15, 2023).

The amendments are not expected to have a material impact on the Group's financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Basis of consolidation

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries as of December 31, 2023. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if and only if the Group has: power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee); exposure, or rights, to variable returns from its involvement with the investee, and; the ability to use its power over the investee to affect its returns.

Generally, there is a presumption that a majority of voting rights result in control. To support this presumption and when the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including: the contractual arrangement with the other vote holders of the investee; rights arising from other contractual arrangements; the Group's voting rights and potential voting rights.

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control over the subsidiary. Assets, liabilities, revenue and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

The financial statements of the subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies. Profit or loss and each component of other comprehensive income are attributable to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interest having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies. All intra-group balances, transactions, unrealized gains and losses resulting from intra-group transactions and dividends are eliminated in full on consolidation. A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity while any resultant gain or loss is recognized in profit or loss. Any investment retained is recognized at fair value.

Subsidiaries

As at December 31, 2023 and 2022, the following direct significant subsidiaries were included in these consolidated financial statements:

Significant entities	Main activity	Country of incorporation	Percentage ownership 2023	2022
KazMunayGas Exploration Production JSC (further KMG EP)	Exploration and production	Kazakhstan	**99.72%**	99.72%
KazMunayTeniz LLP	Exploration and production	Kazakhstan	**100%**	100%
KMG Karachaganak LLP	Exploration and production	Kazakhstan	**100%**	100%
Kazakhturkmunay LLP	Exploration and production	Kazakhstan	**100%**	100%
KMG Kashagan B.V. *(Note 7)*	Exploration and production	Netherlands	**100%**	100%
Dunga Operating GmbH *(Note 6)*	Production	Kazakhstan	**100%**	–
KazTransOil JSC	Oil transportation	Kazakhstan	**90%**	90%
KazMorTransFlot LLP	Oil transportation and construction	Kazakhstan	**100%**	100%
Cooperative KazMunayGas PKI U.A.	Refinery and marketing of oil products	Netherlands	**100%**	100%
Atyrau Refinery LLP	Refinery	Kazakhstan	**99.53%**	99.53%
Pavlodar oil chemistry refinery LLP (further Pavlodar refinery)	Refinery	Kazakhstan	**100%**	100%
KMG International N.V. (further KMGI)	Refinery and marketing of oil products	Romania	**100%**	100%
KMG Drilling&Services LLP	Drilling services	Kazakhstan	**100%**	100%

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition costs incurred are expensed and included in general and administrative expenses.

When the Group acquires a business, it assesses the financial assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Contingent consideration classified as an asset or liability that is a financial instrument and within the scope of IFRS 9 *Financial Instruments*, is measured at fair value with changes in fair value recognized in the statement of profit or loss in accordance with IFRS 9. If the contingent consideration is not within the scope of IFRS 9, it is measured at fair value through profit and loss. Contingent consideration that is classified as equity is not remeasured and its subsequent settlement is accounted for within equity.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill forms part of a cash-generating unit and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed in this circumstance is measured based on the relative values of the operation disposed of and the portion of the cash-generating unit retained.

Acquisition of subsidiaries from parties under common control

Acquisitions of subsidiaries from parties under common control are accounted for using the pooling of interest method.

The assets and liabilities of the subsidiary transferred under common control are recorded in the consolidated financial statements at the carrying amounts of the transferring entity (the Predecessor) at the date of the transfer. Related goodwill, if any, inherent in the Predecessor's original acquisition is also recorded in the consolidated financial statements. Any difference between the total book value of net assets, including the Predecessor's goodwill, and the consideration paid is accounted for in the consolidated financial statements as an adjustment to equity.

The consolidated financial statements, including corresponding figures, are presented as if the subsidiary had been acquired by the Group on the date it was originally acquired by the Predecessor.

Acquisition of joint ventures and associates from parties under common control

Acquisition of joint ventures and associates from parties under common control are accounted for using the pooling of interest method.

The Group's share in the assets and liabilities of the joint ventures and associates transferred under common control is recorded in the consolidated financial statements at the carrying amounts of the transferring entity (the Predecessor) at the date of the transfer. Any difference between the Group's share in the total book value of net assets, and the consideration paid is accounted for in the consolidated financial statements as an adjustment to equity.

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Investment in associates and joint ventures

The considerations made in determining significant influence or joint control are similar to those necessary to determine control over subsidiaries. The Group's investments in its joint venture and associates are accounted for using the equity method.

The consolidated statement of comprehensive income reflects the Group's share of the results of operations of the joint venture or associate. Any change in other comprehensive income of those investees is presented as part of the Group's other comprehensive income. In addition, when there has been a change recognized directly in the equity of the joint venture or associate, the Group recognizes its share of any changes, when applicable, in the consolidated statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the joint venture or associate are eliminated to the extent of the interest in the joint venture or associate.

The aggregate of the Group's share in profit or loss of a joint venture and an associate is shown on the face of the consolidated statement of comprehensive income and represents profit or loss after tax and non-controlling interest in the subsidiaries of the joint venture or associate. The financial statements of the joint venture or associate are prepared for the same reporting period as the Group. When necessary, adjustments are made to bring their accounting policies in line with those of the Group.

After application of the equity method, the Group determines whether it is necessary to recognize an impairment loss on its investment in its joint venture or associate. At each reporting date, the Group determines whether there is objective evidence that the investment in the joint venture or associate is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value, and then recognizes the loss as "Impairment of investment in joint venture and associate" in the consolidated statement of comprehensive income.

Upon loss of joint control over the joint venture or significant influence over the associate, the Group measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the joint venture or associate upon loss of joint control or significant influence and the fair value of the retained investment and proceeds from disposal is recognized in profit or loss.

Oil and natural gas exploration, evaluation and development expenditure

Costs incurred before obtaining subsoil use rights (licenses)

Costs incurred before obtaining full subsoil use rights (licenses) are expensed in the period in which they are incurred, except when costs are incurred after signing preliminary agreements with the Government of RK, in such cases costs incurred after this date are capitalized in exploration and evaluation assets.

Subsoil use rights and property acquisition costs

Exploration and production subsoil use rights and related property acquisition costs are capitalized within exploration and evaluation assets and subclassified as intangible. Each property under exploration and appraisal is reviewed on an annual basis to confirm that drilling activity is planned and it is not impaired. If no future activity is planned, the carrying amount of the exploration subsoil use right and related property acquisition costs is written off. Upon determination of economically recoverable reserves ('proved reserves' or 'commercial reserves') and internal approval of development, the carrying amount of the subsoil use right and related property acquisition costs held on a field-by-field basis is aggregated with exploration and evaluation assets and transferred to oil and gas assets or intangible assets.

Exploration and evaluation costs

Once the legal right to explore has been acquired, geological and geophysical exploration costs and costs directly associated with exploration and appraisal wells, including unsuccessful development or delineation wells are capitalized as exploration and evaluation intangible or tangible assets, according to the nature of the costs, until the drilling of the well is complete and the results have been evaluated. These costs include employee remuneration, materials and fuel used, rig costs and payments made to contractors. If no expected reserves are found, the exploration and evaluation asset is tested for impairment. If extractable hydrocarbons are found and, subject to further appraisal activity, which may include the drilling of further wells, are likely to be developed commercially; the costs continue to be carried as an asset while sufficient/continued progress is made in assessing the commerciality of the hydrocarbon reserves.

All such carried costs are subject to technical, commercial and management review as well as review for impairment at least once a year to confirm the continued intent to develop or otherwise extract value from the discovery.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Oil and natural gas exploration, evaluation and development expenditure (continued)

Exploration and evaluation costs (continued)

When proved reserves of hydrocarbons are determined and development is sanctioned, the relevant expenditure is transferred to oil and gas assets after impairment is assessed and impairment loss recognized, if any.

When this is no longer the case, and the Group decides to relinquish the contract territory to the Government and terminate the subsoil use contracts, the assets are written off.

Development costs

Expenditures on the construction, installation or completion of infrastructure facilities such as platforms, pipelines and the drilling of development wells, are capitalized within oil and gas assets.

Oil and gas assets and other property, plant and equipment

Oil and gas assets and other property, plant and equipment are stated at cost less accumulated depreciation, depletion and impairment.

The initial cost of an asset comprises its purchase price or construction cost, borrowing cost for long-term construction or development project, if recognition criteria is met, any costs directly attributable to bringing the asset into operation and the initial estimate of decommissioning obligation, if there is any. The purchase price or construction cost is the aggregate amount paid and the fair value of any other consideration given to acquire the asset.

Oil and gas assets are depreciated using a unit-of-production method, whereas tangible assets are depreciated over proved developed reserves and intangible assets − over proved reserves. Certain oil and gas assets with useful lives less than the remaining life of the fields or term of the subsoil use contracts are depreciated on a straight-line basis over useful lives.

Property, plant and equipment other than oil and gas assets and land principally comprise buildings, machinery and equipment, vehicles and others that are depreciated on a straight-line basis over the expected remaining useful average lives as follows:

Refinery assets	4-100 years
Pipelines	2-30 years
Buildings and improvements	2-100 years
Machinery and equipment	2-30 years
Vehicles	3-35 years
Other	2-20 years
Land	Not depreciated

The expected useful lives of property, plant and equipment are reviewed on an annual basis and, if necessary, changes in useful lives are accounted for prospectively.

The carrying value of property, plant and equipment is reviewed for impairment whenever events or changes in circumstances indicate the carrying value may not be recoverable.

An item of property, plant and equipment, inclusive of production wells which stop producing commercial quantities of hydrocarbons and are scheduled for abandonment, is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the item) is included in the profit or loss in the period the item is derecognized.

Intangible assets

Intangible assets are stated at cost, less accumulated amortization and accumulated impairment losses. Intangible assets include expenditure on acquiring subsoil use rights for oil and natural gas exploration, evaluation and development, computer software and goodwill. Intangible assets acquired separately from a business are carried initially at cost. The initial cost is the aggregate amount paid and the fair value of any other consideration given to acquire the asset.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Intangible assets (continued)

Intangible assets, except for goodwill and subsoil use rights, are amortized on a straight-line basis over the expected remaining useful life. The expected useful lives of the assets are reviewed on an annual basis and, if necessary, changes in useful lives are accounted for prospectively. Computer software costs have an estimated useful life of 3 to 7 years.

The carrying value of intangible assets is reviewed for impairment whenever events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is tested for impairment annually (as at December 31) and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each cash-generating unit (or group of cash-generating units) to which the goodwill relates. Where the recoverable amount of the cash generating unit is less than their carrying amount an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods.

Impairment of exploration and evaluation assets

Exploration and evaluation assets are tested for impairment when reclassified to oil and gas development tangible and intangible assets or whenever facts and circumstances indicate impairment.

One or more of the following facts and circumstances indicate that the Group should test exploration and evaluation assets for impairment (the list is not exhaustive):

- The period for which the Group entity has the right to explore and appraise in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed;
- Substantive expenditure on the further exploration for and evaluation of hydrocarbon resources in the specific area is neither budgeted nor planned;
- Exploration for and evaluation of hydrocarbon resources in the specific area have not led to the discovery of commercially viable quantities of hydrocarbon resources and the Group entity has decided to discontinue such activities in the specific area;
- Sufficient data exist to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or by sale.

Asset retirement obligation (decommissioning)

Provision for decommissioning is recognized in full, on a discounted cash flow basis, when the Group has an obligation to dismantle and remove a facility or an item of plant, property and equipment and to restore the site on which it is located, and when a reasonable estimate of that provision can be made. The amount recognized is the present value of the estimated future expenditure determined in accordance with local conditions and requirements. A corresponding item of property, plant and equipment of an amount equivalent to the provision is also created. This asset is subsequently depreciated as part of the capital costs of the production and transportation facilities based on the appropriate depreciation method.

Changes in the measurement of an existing decommissioning provision that result from changes in the estimated timing or amount of the outflow of resources embodying economic benefits required to settle the obligation, or change in the discount rate, is accounted for so that:

(a) Changes in the provision are added to, or deducted from, the cost of the related asset in the current period;

(b) The amount deducted from the cost of the asset shall not exceed its carrying amount. If a decrease in the provision exceeds the carrying amount of the asset, the excess is recognized immediately in the consolidated statement of comprehensive income; and

(c) If the adjustment results in an addition to the cost of an asset, the Group considers whether this is an indication that the new carrying amount of the asset may not be fully recoverable. If it is such an indication, the Group tests the asset for impairment by estimating its recoverable amount, and accounts for any impairment loss, in accordance with IAS 36.

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortized cost, fair value through other comprehensive income, and fair value through profit or loss. The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under IFRS 15.

In order for a debt financial asset to be classified and measured at amortized cost or fair value through other comprehensive income, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level. The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in two categories:

- Financial assets at amortized cost (debt instruments);
- Financial assets at fair value through profit or loss.

The Group does not have financial assets at fair value through other comprehensive income.

Derecognition

A financial asset is primarily derecognized (removed from the consolidated statement of financial position) when:

- The rights to receive cash flows from the asset have expired; or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

Impairment of financial assets

The Group recognizes an allowance for expected credit losses (ECL) for all debt instruments not held at fair value through profit or loss. ECL are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECL are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECL are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade and other receivables, the Group applies a simplified approach in calculating ECL. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECL at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Derecognition (continued)

Impairment of financial assets (continued)

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Leases

The Group assesses at contract inception whether a contract is, or contains a lease. That is if the contract conveys the right to control the use of an identified asset for a period in exchange for consideration.

The Group as a lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognises lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

Right-of-use assets

The Group recognises right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets.

If the ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset. The right-of-use assets are also subject to impairment.

Lease liabilities

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating a lease if the lease term reflects the Group exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognized as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities are increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities are remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset. The Group's lease liabilities are included in Finance lease liabilities.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Inventories

Inventories are stated at the lower of cost and net realizable value on a first-in first-out (FIFO) basis. Cost includes all costs incurred in the normal course of business in bringing each product to its present location and condition. The cost of crude oil and refined products is the cost of production, including the appropriate proportion of depreciation, depletion and amortization and overheads based on normal capacity. Net realizable value of crude oil and refined products is based on estimated selling price in the ordinary course of business less any costs expected to be incurred to complete the sale.

Cash and cash equivalents

Cash and cash equivalents include cash in bank and cash on hand, demand deposits with banks with original maturities of three months or less.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans borrowings and payables, or as derivatives financial instruments.

All financial liabilities are recognized initially at fair value and in the case of loans and borrowings, plus directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings and derivative financial instruments.

Trade and other payables

Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

Loans and borrowings

After initial recognition, interest bearing loans and borrowings are subsequently measured at amortized cost using the effective interest rate method. Gains and losses are recognized in the consolidated statement of comprehensive income when the liabilities are derecognized as well as through the effective interest rate amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fee or costs that are an integral part of the effective interest rate. The effective interest rate amortization is included in finance costs.

The Group does not have financial liabilities at fair value through profit or loss.

Financial guarantee contracts

Financial guarantee contracts issued by the Group are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the expected credit losses allowance calculated under IFRS 9 and the amount recognized less cumulative amortization, if any.

Net investment hedges

When a derivative instrument or a non-derivative financial liability is designated as the hedging instrument in a hedge of a net investment in a foreign operation, the effective portion of changes in the fair value of a derivative or a foreign exchange gains and losses for a non-derivative is recognized in OCI and presented in the translation reserve within equity. Any ineffective portion of the changes in the fair value of the derivative or foreign exchange gains and losses on the non-derivatives is recognized immediately in profit or loss. The amount recognized in OCI is fully or partially reclassified to profit or loss as a reclassification adjustment on disposal or partial disposal of the foreign operation, respectively.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Group expects a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain.

If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

Provision for obligations to the Government

The Government assigns various sponsorship and financing obligations to the Group. Management of the Group believes that such Government's assignments represent constructive obligations of the Group and require recognition on the basis of respective resolution of the Government. Furthermore, as the Government is acting as the ultimate controlling party of the Group, the expenditures on these assignments are recognized as other distributions to the Shareholders directly in the equity, in the consolidated financial statements.

Employee benefits

Pension scheme

Payments to defined contribution retirement benefit plans are charged as an expense as they fall due. Payments made to state − managed retirement benefit schemes are dealt with as defined contribution plans where the Group's obligations under the scheme are equivalent to those arising in a defined contribution retirement benefit plan.

Long-term employee benefits

The Group provides long-term employee benefits to employees before, on and after retirement, in accordance with the collective agreements between the Group entities and their employees. The collective agreement provides for certain one-off retirement payments, financial aid for employees' disability, anniversaries, funeral and other benefits. The entitlement to benefits is usually conditional on the employee remaining in service up to retirement age.

The expected costs of the benefits associated with one-off retirement payments are accrued over the period of employment using the same accounting methodology as used for defined benefit post-employment plans with defined payments upon the end of employment. Actuarial gains and losses arising in the year are taken to other comprehensive income. For this purpose, actuarial gains and losses comprise both the effects of changes in actuarial assumptions and experience adjustments arising because of differences between the previous actuarial assumptions and what has actually occurred. Other movements are recognized in the current period, including current service cost, any past service cost and the effect of any curtailments or settlements.

The most significant assumptions used in accounting for defined benefit obligations are discount rate and mortality assumptions. The discount rate is used to determine the net present value of future liabilities and each year the unwinding of the discount on those liabilities is charged to the consolidated statement of comprehensive income as finance costs. The mortality assumption is used to project the future stream of benefit payments, which is then discounted to arrive at a net present value of liabilities.

Employee benefits other than one-off retirement payments are considered as other long-term employee benefits. The expected cost of these benefits is accrued over the period of employment using the same accounting methodology as used for the defined benefit plan. Actuarial gains and losses on other long-term employee benefits are recognized in the profit or loss. These obligations are valued by independent qualified actuaries on an annual basis.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Revenue recognition

Revenues are recognized when (or as) the Group satisfies a performance obligation by transferring a promised good or service (i.e. an asset) to a customer. An asset is transferred when (or as) the customer obtains control of that asset, which usually occurs when the title is passed, provided that the contract price is fixed or determinable and collectability of the receivable is reasonably assured. Specifically, domestic sales of crude oil and gas, as well as petroleum products and materials are usually recognized when title passes. For export sales, title generally passes at the border of the RK. Revenue is measured at the fair value of the consideration received or receivable taking into account the amount of any trade discounts, volume rebates and reimbursable taxes.

Sales of support services are recognized as services are performed provided that the service price can be determined and no significant uncertainties regarding the receipt of revenues exist.

The Group mainly recognizes revenue for the following types:

Revenue from sale of crude oil and oil products

Revenue from the sale of oil and oil products is recognized when control of the goods is transferred to the customer and is measured at an amount that reflects the consideration to which the Group expects to be entitled in exchange for such goods or services.

Revenue from transportation services

Revenue from transportation services is recognized when services are provided based on the actual volumes of oil transported in the reporting period.

Revenue from oil and oil products refinery services

Revenue from oil and oil products refinery services is recognized if it is probable that the economic benefits will flow to the Group and if the revenue can be measured reliably, regardless of the timing of payment.

Interest income and expense

For all financial instruments measured at amortized cost, and interest income and interest expense are recorded using the effective interest rate. Effective interest rate is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the net carrying amount of the financial asset or liability. Interest income is included in finance income and interest expense is included in finance costs in the consolidated statement of comprehensive income.

Contract liabilities

A contract liability is the obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Group transfers goods or services to the customer, a contract liability is recognized when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when the Group performs under the contract.

Income taxes

Income tax for the year comprises current income tax, excess profit tax and deferred tax. Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted by the reporting date. Current income tax (CIT) relating to items recognized directly in equity is recognized in equity and not in the consolidated statement of comprehensive income.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. MATERIAL ACCOUNTING POLICY INFORMATION (continued)

Income taxes (continued)

Excess profit tax (EPT) is treated as an income tax and forms part of income tax expense. In accordance with the applicable tax legislation, the Group accrues and pays EPT in respect of each subsoil use contract, at varying rates based on the ratio of aggregate annual income to deductions for the year for a particular subsoil use contract. The ratio of aggregate annual income to deductions in each tax year triggering the application of EPT is 1.25:1. EPT rates are applied to the part of the taxable income (taxable income after corporate income tax and allowable adjustments) related to each subsoil use contract in excess of 25% of the deductions attributable to each contract.

Deferred tax is calculated with respect to both CIT and EPT. Deferred EPT is calculated on temporary differences for assets allocated to subsoil use contracts at the expected rate of EPT to be paid under the contract.

Deferred income tax is provided using the liability method on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Equity

Non-controlling interest

Non-controlling interests are initially recognized in proportion to identifiable net assets at the acquisition date.

Non-controlling interests are presented in the consolidated statement of financial position within equity, separately from the equity of the Company's owners. Total comprehensive income is attributed to the Company's owners and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Dividends

Dividends are recognized as a liability and deducted from equity at the reporting date only if they are declared before or on the reporting date. Dividends are disclosed when they are declared before the reporting date or after the reporting date but before the consolidated financial statements are authorized for issue.

4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGEMENTS

The preparation of the Group's consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities and the disclosure of contingent liabilities and assets, at the reporting date. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

Impairment testing assumptions

The Group assessed the existence of impairment indicators of non-current assets and where impairment indicators were identified, the Group performed the impairment tests.

The Group's long-term assumptions for Brent oil prices, KZT/USD exchange rate and inflation projections have been revised and are based on externally sourced forecasts and rates of the independent research organizations considering long-tern market expectations. Production volumes estimates are based on proved developed and undeveloped reserves for subsidiaries, and on proved and probable reserves for significant investments in joint ventures and associates. Production period is either based on subsoil use contracts' expiration date or on extended license period, to which the Group has strong intention to extend its licenses. Estimated production volumes are based on the Group's production plans that are mostly used for the purposes of application filing for extension of subsoil use contracts.

Discount rates were estimated on the weighted average cost of capital of the individual cash generating unit and ranged between 11.60-16.60% depending on the functional currency, production period, size, equity risk premium, beta and gearing ratio of the relevant CGU.

The long-term price assumptions applied were derived from Bloomberg consensus; so did the near-term commodity price assumptions, a summary of which, in real 2023 terms, is provided below:

	2024	2025	2026	2027	2028
Brent oil (ICE Brent $/bbl)	84.60	83.00	78.00	73.00	74.47

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGEMENTS (continued)

Impairment testing assumptions (continued)

For 2023 in *"Exploration and production of oil and gas"* segment net impairment charges were 130,502 million tenge, which mainly relate to the exploration and evaluation assets of Aktoty and Kairan project in the amount of 74,255 million tenge and Jenis project in the amount of 40,244 million tenge (December 31, 2022: 8,895 million tenge of Southern Urikhtau project and 3,172 million tenge of Isatay project).

For 2023 in "*Refining and trading of crude oil and refined products*" net impairment charges were 100,809 million tenge, which mainly relate to the CGU KMGI in the amount of 97,636 million tenge (December 31, 2022: no impairment loss was recognized).

Headroom of the majority of oil and refining assets are sensitive to changes in price or other assumptions. The changes within next financial periods may result in recoverable amount of these assets above or below the current carrying amounts and therefore there is a risk of impairment reversals or charges in those periods.

Oil and gas reserves

Oil and gas reserves are a material factor in the Group's computation of depreciation, depletion and amortization expenses. The Group estimates its oil and gas reserves in accordance with the methodology of the Society of Petroleum Engineers (SPE). In estimating its reserves under SPE methodology, the Group uses long-term planning prices. Using planning prices for estimating proved reserves removes the impact of the volatility inherent in using year-end spot prices. Management believes that long-term planning price assumptions, which are also used by management for their business planning and investment decisions are more consistent with the long-term nature of the upstream business and provide the most appropriate basis for estimating oil and gas reserves.

All reserve estimates involve some degree of uncertainty. The uncertainty depends mainly on the amount of reliable geological and engineering data available at the time of the estimate and the interpretation of this data.

The relative degree of uncertainty can be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Proved reserves are more certain to be recovered than unproved reserves and may be further sub-classified as developed and undeveloped to denote progressively increasing uncertainty in their recoverability.

Estimates are reviewed and revised annually. Revisions occur due to the evaluation or re-evaluation of already available geological, reservoir or production data, availability of new data, or changes to underlying price assumptions. Reserve estimates may also be revised due to improved recovery projects, changes in production capacity or changes in development strategy. Proved developed reserves are used to calculate the unit of production rates for depreciation, depletion and amortization in relation to oil and gas production assets. The Group has included in proved reserves only those quantities that are expected to be produced during the initial subsoil use contract period. This is due to the uncertainties surrounding the outcome of such renewal procedures, since the renewal is ultimately at the discretion of the Government. An increase in the Group's subsoil use contract periods and corresponding increase in reported reserves would generally lead to lower depreciation, depletion and amortization expense and could materially affect earnings. A reduction in proved developed reserves will increase depreciation, depletion and amortization expense (assuming constant production), reduce income and could also result in an immediate write-down of the property's book value. Given the relatively small number of producing fields, it is possible that any changes in reserve estimates year on year could significantly affect prospective charges for depreciation, depletion and amortization.

Please refer *Note 16* for details on annual impairment test results.

Recoverability of oil and gas assets, downstream, refining and other assets

The Group assesses assets or CGU for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Where an indicator of impairment exists, a formal estimate of the recoverable amount is made, which is considered to be the higher of the fair value less costs to sell and value in use. These assessments require the use of estimates and assumptions such as long-term oil prices, discount rates, future capital requirements, operating performance (including production and sales volumes) that are subject to risk and uncertainty. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset/CGU is considered to be impaired and is written down to its recoverable amount. In assessing recoverable values, the estimated future cash flows are adjusted for the risks specific to the asset group and are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Fair value less costs to sell is identified as the price that would be received to sell the asset in an orderly transaction between market participants and does not reflect the effects of factors that may be specific to the entity and not applicable to entities in general.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGEMENTS (continued)

Recoverability of oil and gas assets, downstream, refining and other assets (continued)

KMGI CGU, including goodwill

As at December 31, 2023 and 2022, the Group performed its annual impairment tests for goodwill and downstream, refining and other assets due to existence of impairment indicators at the CGUs of KMGI. For the detailed discussion of KMGI CGU impairment test refer to *Note 16*.

Pavlodar refinery, including goodwill

As of December 31, 2023, and 2022 the Group has goodwill of 88,553 million tenge related to acquisition of Pavlodar refinery *(Note 20).* In December 2023 and 2022 the Group performed annual impairment test for the Pavlodar refinery goodwill. In assessing the recoverable amount, the fair value less the cost of sale was calculated, determined using a marketing scheme. The Group considered the forecast for oil tolling volumes, oil tolling tariffs, capital expenditures, among other factors, when reviewing for indicators of impairment. The recoverable amount is calculated using a discounted cash flow model. In 2023, the discount rate of 16.02% (2022: 12.86%) was calculated based on the pre-tax weighted average cost of capital. The inherent risk was included by applying an individual beta factor. The beta factor was estimated based on the publicly available market data. Forecasted cash flows till to 2032 were based on five-years business plan of Pavlodar refinery 2024-2028 (2022: 2023-2027 years), which assumes current management estimates on potential changes in operating and capital costs. As at December 31, 2023 and 2022 the recoverable amount of goodwill, which was determined based on value-in-use, exceeded its book value, as such no impairment of Pavlodar refinery goodwill was recognized.

Sensitivity to changes in assumptions

Results of the assessment of recoverable amount of Pavlodar refinery goodwill are sensitive to changes in key assumptions, in particular, assumptions related to changes in discount rate and target EBITDA in terminal period. Increase in discount rates by 1.0% to 17.02% (2022: 13.86%) and decrease of target EBITDA in terminal period by 1% would not result decrease of the recoverable amount of CGU Pavlodar refinery to its carrying value.

Other CGUs

Revision to the Group's commodity price and other assumptions have not resulted in impairment charges in any other CGUs of the *Refining and trading of crude oil and refined products segment*.

Assets retirement obligations

Oil and gas production facilities

Under the terms of certain subsoil use contracts, legislation and regulations the Group has legal obligations to dismantle and remove tangible assets and restore the land at each production site. Specifically, the Group's obligation relates to the ongoing closure of all non-producing wells and final closure activities such as removal of pipes, buildings and recultivation of the contract territories, and also obligations to dismantle and remove tangible assets and restore territory at each production site. Since the subsoil use contract terms cannot be extended at the discretion of the Group, the settlement date of the final closure obligations has been assumed to be the end of each subsoil use contract period. The extent of the Group's obligations to finance the abandonment of wells and for final closure costs depends on the terms of the respective subsoil use contracts and current legislation.

Where neither subsoil use contracts nor legislation include an unambiguous obligation to undertake or finance such final abandonment and closure costs at the end of the subsoil use contract term, no liability has been recognized. There is some uncertainty and significant judgment involved in making such a determination. Management's assessment of the presence or absence of such obligations could change with shifts in policies and practices of the Government or in the local industry practice.

The Group calculates asset retirement obligations separately for each contract. The amount of the obligation is the present value of the estimated expenditures expected to be required to settle the obligation adjusted for expected inflation and discounted using average long-term risk-free interest rates for emerging market sovereign debt adjusted for risks specific to the Kazakhstan market.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGEMENTS (continued)

Assets retirement obligations (continued)

Oil and gas production facilities (continued)

At each reporting date the Group reviews site restoration provisions, and adjusts them to reflect the current best estimate in accordance with IFRIC 1 *Changes in Existing Decommissioning, Restoration and Similar Liabilities*.

Estimating the future closure costs involves significant estimates and judgments by management. Most of these obligations are many years in the future and, in addition to ambiguities in the legal requirements, the Group's estimate can be affected by changes in asset removal technologies, costs and industry practice. The Group estimates future well abandonment cost using current year prices and the average long-term inflation rate.

The long-term inflation and discount rates used to determine the obligation in the consolidated statement of financial position across the Group entities at December 31, 2023 were in the range from 2.03% to 14.54% and from 6.20% to 11.37%, respectively (December 31, 2022: from 2.09% to 15.05% and from 6.42% to 12.38%, respectively). As at December 31, 2023 the carrying amounts of the Group's asset retirement obligations relating to decommissioning of oil and gas facilities were 123,785 million tenge (December 31, 2022: 88,207 million tenge) *(Note 30)*.

Major oil and gas pipelines

According to the Law of the RK *On Major Pipelines* which was made effective on July 4, 2012 KazTransOil JSC (further KTO) has legal obligation to decommission its major oil pipelines at the end of their operating life and to restore the land to its original condition. Asset retirement obligation is calculated based on estimate of the work to decommission and rehabilitate. As at December 31, 2023, the carrying values of the Group's asset retirement obligations relating to decommissioning of pipelines and land were 45,649 million tenge (December 31, 2022: 40,665 million tenge) *(Note 30)*.

Environmental remediation obligations provision

The enforcement of environmental regulation in Kazakhstan is evolving and subject to ongoing changes. In accordance with the amendments to the Environmental Code of the RK effective from July1, 2021, the management believes that there are possible liabilities that may have an impact on the Group's financial position and results of operations.

At the date of issuance of the consolidated financial statements the Group has analysed the changes and, accordingly, estimated the amount of additional potential liabilities related to the asset retirement and land recultivation. As at December 31, 2023, the carrying amount of the Group's assets retirement obligations were in total amount of 39,271 million, which is equal to the present value of future cash outflows *(Note 36)*.

The Group continues to monitor this matter and will adjust for new facts and circumstances, and any clarification provided by the State body in regards to the application of the Environmental Code of the RK.

The Group also makes judgments and estimates in establishing provisions for environmental remediation obligations. Environmental expenditures are capitalized or expensed depending upon their future economic benefit. Expenditures that relate to an existing condition caused by past operations and do not have a future economic benefit are expensed.

Liabilities are determined based on current information about costs and expected plans for remediation and are recorded on discounted basis. The Group's environmental remediation provision represents management best estimate based on an independent assessment of the anticipated expenditure necessary for the Group to remain in compliance with the current regulatory regime in Kazakhstan and Europe. The Group has classified this obligation as non-current except for the portion of costs, included in the annual budget for 2024. For environmental remediation provisions, actual costs can differ from estimates because of changes in laws and regulations, public expectations, discovery and analysis of site conditions and changes in clean-up technology. Movements in the provision for environmental remediation obligations are disclosed in *Note 30*.

Employee benefits

The cost of defined long-term employee benefits payable before, on and after retirement and the present value of the obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases.

Due to the complexity of the valuation, the underlying assumptions and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGEMENTS (continued)

Taxation

In assessing tax risks, management considers to be probable obligations the known areas of tax positions which the Group would not appeal or does not believe it could successfully appeal, if assessed by tax authorities. Such determinations inherently involve significant judgment and are subject to change as a result of changes in tax laws and regulations, amendments to the taxation terms of the Group's subsoil use contracts, the determination of expected outcomes from pending tax proceedings and current outcome of ongoing compliance audits by tax authorities. The provision for tax risks other than on income tax are disclosed under provisions for taxes in *Note 30*. Contingent liabilities for tax risks other than on income tax are disclosed in *Note 36*. Provisions and contingent liabilities related to income tax are included or disclosed as income tax liabilities or contingencies (see *Note 33* and *36*).

Useful lives of property, plant and equipment

The Group assesses the remaining useful lives of items of property, plant and equipment at least at each financial year-end and, if expectations differ from previous estimates, the changes are accounted for prospectively as a change in an accounting estimate in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*.

Fair value of financial instruments

Where the fair value of financial assets and financial liabilities recorded in the consolidated statement of financial position cannot be derived from active markets, they are determined using valuation techniques including the discounted cash flows model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments presented in the consolidated financial statements. Further details are disclosed in *Note 35*.

5. LOSS OF CONTROL

KALAMKAS-KHAZAR OPERATING LLP (further KKO)

On February 9, 2023, the Company and Lukoil PJSC signed a purchase and sale agreement for a 50% share of KKO, subsidiary of the Company, holder of a contract for the production of hydrocarbons at the Kalamkas-Sea, Khazar and Auezov subsoil blocks located in the Kazakhstani sector of the Caspian Sea. On September 11, 2023, KKO was re-registered after the parties fulfilled the suspensive conditions of a purchase and sale agreement. As a result of the transaction, the Group lost control over KKO.

The sale price of a 50% share was 200 million US dollars (equivalent to 93,258 million tenge at the date of disposal of subsidiary). According to the terms of the sale and purchase agreement, the sale price may be adjusted by 100 million US dollars if certain conditions are met (further the Additional consideration). The Group recognized this Additional consideration as a financial asset measured at fair value through profit or loss in the amount of 29 million US dollars (equivalent to 14,154 million tenge) within other non-current financial assets in the consolidated statement of the financial position.

On September 21, 2023, Lukoil PJSC made payment of cash consideration in the amount of 200 million US dollars (equivalent to 94,644 million tenge at the date of payment).

The investment retained in the former subsidiary is an investment to a joint venture accounted for using the equity method and its fair value is 93,258 million tenge.

The results of KKO for the period from January 1, 2023 through the date of loss of control are presented below:

In millions of tenge	**January 1, 2023 – September 11, 2023**
Finance income	**7**
General and administrative expenses	**(108)**
Finance costs	**(33)**
Net foreign exchange loss	**(98)**
Income tax expenses	**(1)**
Loss for the period	**(233)**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

5. LOSS OF CONTROL (continued)

KALAMKAS-KHAZAR OPERATING LLP (further KKO) (continued)

The net cash flows incurred by KKO for the period from January 1, 2023 through the date of loss of control are as follows:

In millions of tenge	**January 1, 2023 – September 11, 2023**
Operating	**(102)**
Investing	**(16,937)**
Financing	**17,059**
Net increase in cash and cash equivalents	**20**

At the date of loss of control net assets of KKO were as follows:

In millions of tenge	**Net assets at the date of loss of control**
Assets	
Property, plant and equipment *(Note 18)*	5,185
Exploration and evaluation assets *(Note 19)*	14,678
Cash and cash equivalents	20
Other assets	626
Total assets	**20,509**
Liabilities	
Borrowings	2,511
Trade accounts payable	3,548
Other liabilities	5
Total liabilities	**6,064**
Net assets directly associated with the disposal group	**14,445**
Cash consideration received at the date of disposal of subsidiary	93,258
Fair value of the Additional consideration at the date of disposal of subsidiary	14,154
Fair value of 50% retained interest in a joint venture *(Note 22)**	93,258
Gain from disposal of subsidiary	**186,225**

* *The Group recognized 50% investment in a joint venture for the corresponding share at a fair value of identifiable net assets of KKO.*

PSA LLP (further PSA)

On December 20, 2022, the Company transferred to Corporate fund Samruk-Kazyna Trust 100% interest in PSA for 1 tenge. As a result, the Group lost control over PSA.

The results of PSA for the period ended December 20, 2022 are presented below:

In millions of tenge	**January 1, 2022 – December 20, 2022**
General and administrative expenses	(8,950)
Finance costs	(58)
Net foreign exchange loss	(39)
Loss for the period	**(9,047)**

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

5. LOSS OF CONTROL (continued)

PSA LLP (further PSA) (continued)

The net cash flows incurred by PSA period ended December 20, 2022 are as follows:

In millions of tenge	**January 1, 2022 – December 20, 2022**
Operating	(7,702)
Investing	(28)
Financing	11,871
Net increase in cash and cash equivalents	**4,108**

At the date of loss of control net assets of PSA were as follows:

In millions of tenge	**Net assets at the date of loss of control**
Assets	
Property, plant and equipment	36
Intangible assets	64
Right-of-use assets	255
VAT receivable	12
Other current assets	109
Cash and cash equivalents	4,137
Total assets	**4,613**
Liabilities	
Lease liabilities	286
Trade accounts payable	1,736
Other current liabilities	709
Total liabilities	**2,731**
Net assets directly associated with disposal group	**1,882**

Since the transfer of PSA was carried out pursuant to the instructions of Samruk-Kazyna, the difference between the sale price and the carrying amount of net assets of PSA at the date of loss of control was recorded as transactions with Samruk-Kazyna and presented in the line «*Other distributions*» in consolidated statement of changes in equity.

6. BUSINESS COMBINATION

Acquisition of Dunga Operating GmbH

On October 9, 2023 KMG signed a purchase agreement with TOTALENERGIES EP DENMARK A/S for the acquisition of a 100% of the shares of Total E&P Dunga GmbH (renamed to Dunga Operating GmbH in December 2023), engaged in the exploration and production of crude oil and natural gas. The base consideration comprises of 358.5 million US dollars (equivalent to 165,913 million tenge). The agreement contains certain closing conditions precedent, which were met on October 30, 2023 and on November 20, 2023, the transaction was completed after the re-registration of Dunga Operating GmbH shares to KMG. KMG has obtained control over Dunga Operating GmbH, a subsidiary, increasing the KMG share in the hydrocarbon resource base and production of the crude oil and natural gas on the RK market.

The Group assessed the fair value of the net identifiable assets and liabilities of Dunga Operating GmbH at provisional amounts being the fair value of the consideration given of 358.5 million US dollars (equivalent to 165,913 million tenge). The initial accounting for the business combination has not been completed. In accordance with *IFRS 3 Business Combinations* the valuation of property, plant and equipment will be completed and accounted for within 12 months from the date of acquisition.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

6. BUSINESS COMBINATION (continued)

Acquisition of Dunga Operating GmbH (continued)

The provisional fair values of the identifiable assets and liabilities of *Dunga Operating GmbH* as at the date of acquisition are as presented below:

In millions of tenge	At the date of acquisition
Assets	
Non-current assets	
Property, plant and equipment *(Note 18)*	192,313
Intangible assets *(Note 20)*	7,005
Long-term bank deposits	5,413
Current assets	
Inventories	6,607
Trade accounts receivable	9,426
Income tax prepaid	2,316
Other current non-financial assets	7,792
Other current financial assets	58
Cash and cash equivalents	7,961
Total assets	**238,891**
Non-current liabilities	
Provisions *(Note 30)*	4,346
Deferred income tax liabilities *(Note 33)*	55,196
Current liabilities	
Trade accounts payable	11,881
Other current financial liabilities	1,555
Total liabilities	**72,978**
Total identifiable net assets at provisional fair values	**165,913**
Purchase consideration transferred, including withholding tax	**165,913**

The business of Dunga Operating GmbH is represented in the Group's *Exploration and production of oil and gas* segment in these consolidated financial statements.

The acquisition date fair value of the trade accounts receivable amounts to 9,426 million tenge, that is the gross amount of trade accounts receivable. It is expected that the full contractual amounts can be collected.

7. ACQUISITIONS UNDER COMMON CONTROL

Acquisition of subsidiary under common control

Polimer Production LLP (further Polimer)

In December 2023, the Company acquired 99.9% and 0.1% interest in Polimer from Samruk-Kazyna Ondeu LLP (further SKO), subsidiary of Samruk-Kazyna, and JSC UK MEZ HimPark Taraz, the third party, for consideration of 1,520 million tenge not yet paid as at December 31, 2023.

The Group has control over Polimer and recognized Polimer as a subsidiary. The acquisition accounted for as an acquisition of the subsidiary from the parties under common control and accounted for under the pooling of interest method based on the carrying value of assets and liabilities of Polimer based on Predecessor's accounting books. Comparative consolidated financial position as at December 31, 2022, consolidated statement of comprehensive income for the year ended December 31, 2022 and consolidated statement of cash flows for the year ended December 31, 2022, as well as the related notes to the consolidated financial statements for the year ended December 31, 2022, were restated, as if the acquisition has occurred from the beginning of the earliest period presented.

The difference between the consideration and net assets of Polimer was recognized in equity.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

7. ACQUISITIONS UNDER COMMON CONTROL (continued)

Acquisition of subsidiary under common control (continued)

Polimer Production LLP (further Polimer) (continued)

Impact on comparative data due to acquisition of *Polimer* is presented below:

In millions of tenge	As at December 31, 2022
Impact on financial position:	
Increase in assets	
Increase in non-current assets	
Increase in property, plant and equipment	4,164
Increase in intangible assets	8
	4,172
Increase in current assets	
Increase in inventories	1,339
Increase in trade accounts receivable	147
Increase in VAT receivable	65
Increase in other current non-financial assets	36
Increase in cash and cash equivalents	368
	1,955
Increase in total assets	**6,127**
Increase in non-current liabilities	
Increase in borrowings	9,006
Increase in provisions	44
	9,050
Increase in current liabilities	
Increase in trade accounts payable	186
Increase in borrowings	2,046
Increase in provisions	672
Increase in other taxes payable	20
Increase in other current financial liabilities	103
Increase in other current non-financial liabilities	74
	3,101
Increase in total liabilities	**12,151**
Decrease in equity	
Decrease in retained earnings	6,024
Decrease in equity, attributable to equity holders of the Parent Company	**6,024**
Decrease in total equity	**6,024**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

7. ACQUISITIONS UNDER COMMON CONTROL (continued)

Acquisition of subsidiary under common control (continued)

Polimer Production LLP (further Polimer) (continued)

In millions of tenge	For the year ended December 31, 2022
Impact on the results:	
Revenue and other income	
Revenue from contracts with customers	6,697
Finance income	16
Other operating income	36
Total revenue and other income	**6,749**
Costs and expenses	
Cost of purchased oil, gas, petroleum products and other materials	(5,792)
Production expenses	(1,853)
Taxes other than income tax	(116)
Depreciation, depletion and amortization	(315)
Transportation and selling expenses	(12)
General and administrative expenses	(311)
Impairment of property, plant and equipment	(7,096)
Finance costs	(1,209)
Foreign exchange loss, net	(836)
Other expenses	(838)
Total costs and expenses	**(18,378)**
Loss before income tax	**(11,629)**
Income tax expenses	870
Loss for the year	**(10,759)**
Total comprehensive income for the year, net of tax	**(10,759)**
Net profit for the year attributable to:	
Equity holders of the Parent Company	**(10,759)**
	(10,759)
Total comprehensive income attributable to:	
Equity holders of the Parent Company	**(10,759)**
	(10,759)

The net cash flows effect for the year ended December 31, 2022 were as follows:

In millions of tenge	2022 год
Operating	4
Investing	(1)
Financing	318
Net increase in cash and cash equivalents	**317**

The business of Polimer represented in the Group's *Other* segment in these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

7. ACQUISITIONS UNDER COMMON CONTROL (continued)

Acquisition of subsidiary under common control (continued)

KMG Kashagan B.V. (further Kashagan)

On October 16, 2015, Coöperatieve KazMunaiGaz U.A. (further Cooperative), a subsidiary of the Company, sold 50% of its shares in Kashagan to Samruk-Kazyna with a right to buy back all or part of the shares (further Option) effective from January 1, 2018 to December 31, 2020 which was later extended to December 31, 2022.

In 2017, the Amsterdam Court imposed certain restrictions on 50% of shares in Kashagan owned by Samruk-Kazyna (further Restrictions). During the Restrictions period, these shares of Kashagan cannot be sold, transferred or pledge. As of December 31, 2021 the Restrictions remained in force.

On June 14, 2022 the Amsterdam Court lifted the Restrictions.

On September 14, 2022 the Cooperative and Samruk-Kazyna signed an Amendment to Share Option Agreement and Exercise of Option (further Amendment Agreement), which set the exercise price of the Option in the amount of 3,781.7 million US dollars (equivalent to 1,777,076 million tenge presented in statement of changes in equity).

Amendment Agreement and Agreement on Transfer of Debt and Set-Off dated September 14, 2022 between the Company, Samruk-Kazyna and Cooperative determine the following way for consideration payment:

- The amount of 2,476.3 million US dollars to be converted at the agreed exchange rate of 475.00 tenge to 1 US dollar for subsequently setting off a part of the amount against the provided financial aid from the Company to Samruk- Kazyna for 424,587 million tenge, and paying the rest of the amount by the Company from the proceeds of the sale of bonds for 751,631 million tenge *(Notes 28 and 34)*;
- The amount of 566.7 million US dollars to be paid with 10 business days after the completion of the deal (paid as at December 31, 2022; equivalent to 271,032 million tenge per exchange rate at the date of payment);
- The amount of 375.1 million US dollars to be paid by December 31, 2022 (paid as at December 31, 2022; equivalent to 175,654 million tenge per exchange rate at the date of payment) and the amount of 363.6 million US dollars to be paid by June 30, 2023 (paid as at December 31, 2023: 163,770 million tenge per exchange rate at the date of payment) *(Notes 31 and 34)*.

On September 15, 2022 the Group fulfilled conditions of the Amendment Agreement, completing the transaction, exercised the Option and 50% of Kashagan shares were re-registered in favor of Cooperative.

As a result of exercising the Option, the Group has control over Kashagan and recognized Kashagan as a subsidiary. The acquisition accounted for as an acquisition of the subsidiary from the parties under common control and accounted for under the pooling of interest method based on the carrying value of assets and liabilities of Kashagan based on Predecessor's accounting books.

The difference between the consideration and net assets of Kashagan was recognized in equity.

The business of Kashagan represented in the Group's *Exploration and production of oil and gas* segment in these consolidated financial statements.

Detailed information on acquisition of Kashagan is presented in the Group's annual consolidated financial statements for the year ended December 31, 2022.

KLPE LLP (further - KLPE)

On December 1, 2022, the Company acquired 100% interest in charter capital of KLPE for 2 tenge from SKO and Polimer. Primary activity of KLPE is the construction of the first integrated gas and chemical complex in Kazakhstan.

As a result of acquisition, the Group has control over KLPE and recognized KLPE as a subsidiary. The acquisition accounted for as an acquisition of the subsidiary from the parties under common control and accounted for under the pooling of interest method based on the carrying value of assets and liabilities of KLPE based on Predecessor's accounting books.

The difference between the transferred consideration and Kashagan's net assets was recognized in equity.

The business of KLPE represented in the Group's *Other* segment in these consolidated financial statements.

Detailed information on acquisition of KLPE is presented in the Group's annual consolidated financial statements for the year ended December 31, 2022.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

7. ACQUISITIONS UNDER COMMON CONTROL (continued)

Acquisition of joint venture under common control

Kazakhstan Petrochemical Industries Inc. LLP (further KPI)

On June 13, 2022, Samruk-Kazyna transferred 49.50% of the shares KPI to the Company. The cost of the acquisition was 91,175 million tenge and was paid by setting off a part of the amount against the provided financial aid from the Company to Samruk- Kazyna (*Note 25*). KPI is engaged in the implementation of the investment project "Construction of the first integrated petrochemical complex in Atyrau region".

49.50% interest in KPI was accounted for as an acquisition of the joint venture from the parties under common control and accounted for under the pooling of interest method based on its carrying value. Samruk-Kazyna Ondeu LLP (further SKO), subsidiary of Samruk-Kazyna, and the Company have joint control over the KPI where decisions about the relevant activities of KPI require unanimous consent.

The difference between the consideration paid and carrying value of identifiable assets and liabilities of KPI at the date of acquisition was recognized as distribution to Samruk-Kazyna and presented in the line *«Acquisition of joint ventures»* in consolidated statement of changes in equity.

Detailed information on acquisition of KPI is presented in the Group's annual consolidated financial statements for the year ended December 31, 2022.

8. ACQUISITION OF JOINT VENTURE

PETROSUN LLP (further Petrosun)

On July 1, 2022, in accordance with the minutes of the meeting of the Commission under the chairmanship of the Prime-Minister of RK for the demonopolization of the economy, namely the market of fuels and lubricants, the Company acquired 49% interest in Petrosun, that specializes in the sale of liquefied petroleum gas and petroleum products. The acquisition price was 1 tenge. The difference between the consideration paid and the fair value of identifiable assets and liabilities of Petrosun at the date of acquisition was recognized as a contribution from Samruk-Kazyna based on instruction in minutes above and presented in the line *«Acquisition of joint ventures»* in consolidated statement of changes in equity in the amount of 10,989 million tenge *(Note 27)*.

49% interest in Petrosun is recognized as a joint venture and accounts for using the equity method in accordance with IAS 28 *Investments in Associates and Joint Ventures*. CNPC INTERNATIONAL IN KAZAKHSTAN LLP (the second owner of Petrosun) and the Company have joint control over Petrosun where decisions about the relevant activities of Petrosun require the unanimous consent.

9. REVENUE FROM CONTRACTS WITH CUSTOMERS

In millions of tenge	2023	2022 (restated)
Type of goods and services		
Sales of crude oil and gas	**4,628,125**	4,593,971
Sales of refined products	**2,848,921**	3,369,860
Refining of oil and oil products	**248,058**	204,390
Oil transportation services	**226,142**	187,533
Other revenue	**368,297**	337,327
	8,319,543	8,693,081
Geographical markets		
Kazakhstan	**1,454,546**	1,217,280
Other countries	**6,864,997**	7,475,801
	8,319,543	8,693,081
Timing of revenue recognition		
At a point in time	**8,121,191**	8,510,294
Over time	**198,352**	182,787
	8,319,543	8,693,081

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

10. SHARE IN PROFIT OF JOINT VENTURES AND ASSOCIATES, NET

In millions of tenge	2023	2022
Joint ventures		
Tengizchevroil LLP	**340,884**	742,660
Petrosun	**46,567**	23,184
Mangistau Investments B.V. Group (MMG)	**38,255**	48,486
KazRosGas LLP	**32,324**	554
KazGerMunay LLP	**20,983**	20,530
Kazakhstan-China Pipeline LLP	**18,720**	16,783
Valsera Holdings B.V. Group (PKOP)	**17,296**	21,009
Teniz Service LLP	**116**	(6,497)
Kazakhoil-Aktobe LLP	**(1,869)**	12,648
KPI	**(12,339)**	(18,227)
Ural Group Limited	**(47,006)**	(11,470)
Other	**3,896**	4,234
	457,827	853,894
Associates		
Caspian Pipeline Consortium	**64,358**	117,763
PetroKazakhstan Inc.	**4,889**	6,502
Other	**7,103**	13,151
	76,350	137,416
	534,177	991,310

11. COST OF PURCHASED OIL, GAS, PETROLEUM PRODUCTS AND OTHER MATERIALS

In millions of tenge	2023	2022 (restated)
Purchased oil for resale	**3,402,819**	3,620,699
Cost of oil for refining	**687,792**	765,164
Materials and supplies	**416,851**	421,601
Purchased petroleum products for resale	**90,108**	87,644
Purchased gas for resale	**24,311**	65,068
	4,621,881	4,960,176

12. PRODUCTION EXPENSES

In millions of tenge	2023	2022 (restated)
Payroll	**510,927**	434,520
Repair and maintenance	**212,500**	190,592
Realized losses from derivatives on petroleum products *(Note 31)*	**(69)**	121,539
Energy	**117,957**	119,381
Short-term lease expenses	**102,385**	78,568
Transportation costs	**123,310**	31,017
Environmental protection	**17,930**	21,461
Write-off of inventories to net realizable value	**1,590**	19,473
Others	**133,192**	127,690
	1,219,722	1,144,241

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

13. TAXES OTHER THAN INCOME TAX

In millions of tenge	2023	2022 (restated)
Mineral extraction tax	**142,900**	163,334
Rent tax on crude oil export	**138,986**	215,765
Export customs duty	**113,248**	131,732
Excise	**112,320**	90,012
Social tax	**44,863**	38,195
Property tax	**31,505**	29,221
Other taxes	**10,258**	9,662
	594,080	677,921

14. TRANSPORTATION AND SELLING EXPENSES

In millions of tenge	2023	2022 (restated)
Transportation	**184,940**	153,403
Payroll	**19,990**	16,591
Other	**40,595**	35,358
	245,525	205,352

15. GENERAL AND ADMINISTRATIVE EXPENSES

In millions of tenge	2023	2022 (restated)
Payroll	**80,672**	77,854
Consulting services	**17,828**	20,678
Maintenance	**6,845**	6,148
Social payments	**6,037**	5,829
Accrual of expected credit losses for trade receivables and other current financial assets *(Note 24)*	**8,691**	2,876
VAT non-recoverable	**5,811**	2,582
Communication	**2,080**	1,864
Allowance for fines, penalties and tax provisions	**169**	605
Accrual of impairment of other current non-financial assets *(Note 24)*	**3,204**	28
Reversal of impairment of VAT receivable	**(282)**	(1,942)
Other	**46,737**	43,957
	177,792	160,479

For the year ended December 31, 2023, the total payroll amounted to 611,589 million tenge (2022: 528,965 million tenge) and was included in production expenses, transportation and selling expenses and general and administrative expenses in the consolidated statement of comprehensive income.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

16. IMPAIRMENT OF PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND EXPLORATION EXPENSES

In millions of tenge	2023	2022 (restated)
Impairment charge and reversal		
Property, plant and equipment *(Note 18)*	**101,782**	7,658
Intangible assets *(Note 20)*	**483**	139
Investment property	**–**	7
	102,265	7,804
Exploration expenses (impairment and write-off) ***(Note 19)***		
Kairan and Aktoty	**74,255**	–
Jenis	**40,244**	–
Liman project	**8,847**	–
Urikhtay project	**4,876**	8,895
Isatay project	**93**	3,172
Others	**–**	46
	128,315	12,113
	230,580	19,917

Impairment was recognized for the following CGUs:

In millions of tenge	2023	2022 (restated)
CGUs of KMGI	**97,636**	–
Others	**4,629**	7,804
	102,265	7,804

Impairment of property, plant and equipment

KMG International N.V. (further KMGI) CGU

For the year ended December 31, 2023, the Group performed its impairment tests for goodwill and downstream, refining and other assets due to existence of impairment indicators at the CGUs of KMGI: CGU Refining, CGU Petrochemicals and CGU Downstream. As the result of the impairment test, recoverable amount of KMGI CGUs were lower than its carrying values. The total impairment loss for the analyzed KMGI's CGUs was 94,962 million tenge, of which CGU Refining was estimated at 80,761 million tenge, for CGU Petrochemicals at 340 million tenge and for CGU Downstream at 13,861 million tenge.

The main impairment indicators have been i) the increased oil & gas market refining margins volatility and decreased market demand in the context of strict decarbonization regulations and geopolitical instability, ii) lack of a long-term decarbonization plan of KMGI, iii) the change in the tax environment in Romania, in particular the introduction at the end of 2023 of a turnover tax in the oil and gas sector in the amount of 0.5%, starting from 2024 to 2025, and further 1% or more depending on the turnover of enterprises.

The Group considered forecasted refining margins and production volumes, among other factors, when analyzing the impairment indicators. The recoverable amount of KMGI CGU Refining was determined based on fair value less costs of disposal (FVLCD), which was calculated using the discounted cash flow method. The key assumptions used in the FVLCD calculations for the CGU were operating profit, including the assumption that KMGI will be able to recover, through an increase in the final selling price, the costs of turnover tax from 2026, discount rates and growth rate used to extrapolate cash flows beyond the budgeted period.

In addition, KMGI applied the assumption that introduced in 2024 an additional tax burden on KMGI turnover will be recovered by a phased increase in the price for the final users.

Refining and Petrochemicals CGU of KMGI

The discount rate applied to cash flow projections for Refining and Petrochemicals CGU was 11.60% (2022: 12.10%) and cash flows beyond the 5-year period were extrapolated using negative 1.50% (2022: positive 2.10%) growth rate, for 2023 is the average annual growth rate during 2028-2051 for market refinery margins estimated by Platts-PIRA available as at valuation date. The capitalization rate used for residual values was 13.10% (2022:10.00%).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

16. IMPAIRMENT OF PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND EXPLORATION EXPENSES (continued)

Impairment of property, plant and equipment (continued)

KMG International N.V. (further KMGI) CGU (continued)

Downstream CGU of KMGI

The discount rate applied to cash flow projections for Downstream CGU was 11.60% (2022: 12.10%) and cash flows beyond the 5-year period were extrapolated using negative 0.40% (2022: positive 2.10%) perpetuity growth rate, taking into account expected market demand during 2029-2051 from the latest market studies available as at valuation date (Wood Mackenzie) and the long term inflation rate for USD as per PWC report Global Economy Watch Projections, issued in July 2023. The capitalization rate used for residual values was 11.20% (2022: 10.00%).

Sensitivity to changes in assumptions for CGU Refinery

The additional impairment charges of 25,595 million tenge will occur if the discount rate increases by more than 1% to 12.6%, should the volumes decrease by more than 2.0% an additional impairment charge will be 41,869 million tenge and contribution margin decrease by more than 2.0% an additional impairment charge will be 28,831 million tenge or perpetuity growth rate decrease by more than 1.50% an additional impairment charge will be 28,168 million tenge.

The additional impairment charges of 51,858 million tenge will occur if the additional tax burden is not recovered in the form of a turnover tax by increasing the price for the final users.

Sensitivity to changes in assumptions for CGU Downstream

The additional impairment charges of 18,705 million tenge will occur if the discount rate increases by more than 1.0%, should the volumes decrease by more than 2.0% an additional impairment charge will be 14,721 million tenge and gross margin decrease by more than 2.0% an additional impairment charge will be 20,318 million tenge or perpetuity growth rate decrease by more than 1.50% an additional impairment charge will be 20,076 million tenge.

Sensitivity to changes in assumptions for CGU Petrochemicals

The additional impairment charges of 788 million tenge will occur if the discount rate increases by more than 1.0%, should the volumes decrease by more than 1.50% an additional impairment charge will be 1,422 million tenge and contribution margin decrease by more than 1.50% an additional impairment charge will be 1,320 million tenge or perpetuity growth rate decrease by more than 1.50% an additional impairment charge will be 638 million tenge.

In June 2023, an incident occurred at the Petromidia Refinery, a subsidiary of KMGI, which led to the temporary decommissioning of the Mild Hydrocracker installation. Petromidia Refinery conducted assessments to estimate the incident consequences and recognized impairment of property, plant and equipment for 2,674 million tenge.

Exploration expenses

For the year ended December 31, 2023, the Group recognized impairment loss of 40,244 million tenge on exploration and evaluation assets relating to Jenis project due to negative drilling results (the absence of hydrocarbons in the well).

For the year ended December 31, 2023, the Group recognized impairment loss of 74,255 million tenge on exploration and evaluation assets relating to Kairan and Aktoty project, due to the notification of termination of the subsoil use right for the mentioned mining areas received from the Ministry of Energy of RK.

For the year ended December 31, 2023, the Group has recognized impairment of exploration and evaluation assets in the amount of 4,876 million tenge of the Urikhtay, due to the expiration of the Contract for the use of Devonian sediments.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

17. FINANCE INCOME / FINANCE COST

Finance income

In millions of tenge	2023	2022 (restated)
Interest income on bank deposits, financial assets, loans and bonds	**139,105**	115,492
Amortization of issued financial guarantees	**344**	–
Total interest income	**139,449**	115,492
Derecognition of loan *(Note 28)*	**4,377**	–
Revaluation of financial assets at fair value through profit or loss	**827**	895
Other	**2,592**	4,216
	147,245	120,603

Finance costs

In millions of tenge	2023	2022 (restated)
Interest expense on loans and bonds	**271,785**	259,344
Interest expense on lease liabilities *(Note 29)*	**7,420**	4,188
Unwinding of discount on payables to Samruk-Kazyna for exercising the Option *(Note 31)*	**3,256**	3,929
Commission for the early redemption of the loan *(Note 28)*	**–**	4,498
Total interest expense	**282,461**	271,959
Unwinding of discount on asset retirement obligations, for environmental obligation and other provisions *(Note 30)*	**13,398**	17,947
Unwinding of discount on employee benefits obligations	**7,157**	4,723
Other	**19,057**	13,426
	322,073	308,055

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

18. PROPERTY, PLANT AND EQUIPMENT

In millions of tenge	Oil and gas assets	Pipelines	Refinery assets	Buildings and improve-ments	Machinery and equip-ment	Vehicles	Other	Capital work in progress	Total
Net book value as at December 31, 2021 (restated)	4,428,347	262,717	1,121,420	216,879	245,626	75,225	109,198	278,019	6,737,431
Foreign currency translation	275,403	1,760	21,162	6,698	3,925	2,490	5,491	9,300	326,229
Change in estimate	(105,568)	(7,609)	–	(3,405)	–	–	–	–	(116,582)
Additions	84,069	638	938	18,964	9,956	5,743	876	384,227	505,411
Disposals	(46,201)	(1,761)	(3,295)	(948)	(5,138)	(4,810)	(4,180)	(863)	(67,196)
Loss of control over subsidiaries	–	–	–				(36)	–	(36)
Depreciation charge	(262,374)	(13,821)	(110,749)	(17,110)	(27,077)	(9,395)	(10,503)	–	(451,029)
Accumulated depreciation and impairment on disposals	44,364	1,651	2,901	820	4,717	4,073	3,678	625	62,829
Reversal of impairment/(impairment) *(Note 16)*	909	643	(3,009)	(4,609)	(4,941)	(140)	4,487	(998)	(7,658)
Transfers from assets classified as held for sale	–	–	–	324	5	11	68	–	408
Transfers from exploration and evaluation assets *(Note 19)*	3,253	–	–	–	–	–	–	–	3,253
Transfers from investment property	–	–	–	2,073	–	–	–	–	2,073
Other changes	(635)	(65)	11	–	(784)	–	279	62	(1,132)
Transfers	176,668	22,413	46,006	15,779	41,763	1,343	5,732	(309,704)	–
Net book value as at December 31, 2022 (restated)	4,598,235	266,566	1,075,385	235,465	268,052	74,540	115,090	360,668	6,994,001
At cost	6,915,401	412,952	2,765,873	566,147	654,179	222,283	258,420	411,846	12,207,101
Accumulated depreciation and impairment	(2,317,166)	(146,386)	(1,690,488)	(330,682)	(386,127)	(147,743)	(143,330)	(51,178)	(5,213,100)
Net book value as at December 31, 2022 (restated)	**4,598,235**	**266,566**	**1,075,385**	**235,465**	**268,052**	**74,540**	**115,090**	**360,668**	**6,994,001**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

18. PROPERTY, PLANT AND EQUIPMENT (continued)

In millions of tenge	Oil and gas assets	Pipelines	Refinery assets	Buildings and improve-ments	Machinery and equip-ment	Vehicles	Other	Capital work in progress	Total
Net book value as at December 31, 2022 (restated)	**4,598,235**	**266,566**	**1,075,385**	**235,465**	**268,052**	**74,540**	**115,090**	**360,668**	**6,994,001**
Business combination *(Note 6)*	**170,276**			**4,520**	**664**	**67**	**447**	**16,339**	**192,313**
Foreign currency translation	**(71,585)**	**(749)**	**(5,719)**	**(2,769)**	**(525)**	**(494)**	**(1,418)**	**(3,864)**	**(87,123)**
Change in estimate	**8,755**	**793**	**–**	**365**	**–**	**–**	**–**	**(1,572)**	**8,341**
Additions	**52,199**	**2,042**	**63,802**	**3,527**	**6,308**	**11,212**	**3,714**	**575,509**	**718,313**
Disposals	**(18,295)**	**(559)**	**(7,751)**	**(1,566)**	**(3,641)**	**(2,533)**	**(5,055)**	**(3,473)**	**(42,873)**
Loss of control over subsidiaries *(Note 5)*	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**(5,185)**	**(5,185)**
Depreciation charge	**(355,969)**	**(10,666)**	**(102,767)**	**(15,290)**	**(26,001)**	**(11,145)**	**(9,543)**	**–**	**(531,381)**
Accumulated depreciation and impairment on disposals	**17,150**	**438**	**7,735**	**912**	**3,520**	**2,508**	**4,763**	**1,641**	**38,667**
(Impairment)/reversal of impairment *(Note 16)*		**(28)**	**(83,187)**	**(13,749)**	**(1,595)**	**(888)**	**149**	**(2,484)**	**(101,782)**
Transfers from/(to) assets classified as held for sale	**–**	**–**	**–**	**208**	**–**	**(4)**	**2**	**–**	**206**
Transfers from exploration and evaluation assets *(Note 19)*	**21**	**–**	**–**	**–**	**–**	**–**	**–**	**19**	**40**
Transfers to investment property	**–**	**–**	**(702)**	**(1,742)**	**–**	**–**	**–**	**–**	**(2,444)**
Other changes	**16**	**(25)**	**–**	**133**	**44**	**(2)**	**19**	**(72)**	**113**
Transfers	**256,521**	**3,950**	**61,857**	**31,593**	**128,416**	**4,852**	**6,586**	**(493,775)**	**–**
Net book value as at December 31, 2023	**4,657,324**	**261,762**	**1,008,653**	**241,607**	**375,242**	**78,113**	**114,754**	**443,751**	**7,181,206**
At cost	**7,523,664**	**417,598**	**2,856,817**	**610,240**	**782,754**	**234,741**	**261,453**	**513,875**	**13,201,142**
Accumulated depreciation and impairment	**(2,866,340)**	**(155,836)**	**(1,848,164)**	**(368,633)**	**(407,512)**	**(156,628)**	**(146,699)**	**(70,124)**	**(6,019,936)**
Net book value as at December 31, 2023	**4,657,324**	**261,762**	**1,008,653**	**241,607**	**375,242**	**78,113**	**114,754**	**443,751**	**7,181,206**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

18. PROPERTY, PLANT AND EQUIPMENT (continued)

Additions

In 2023, additions were mainly attributable to development drilling at Ozenmunaigas JSC, Embamunaigas JSC, subsidiaries of KMG EP and KMG Karachaganak LLP for the total amount of 289,128 million tenge, replacement of the section of the pipelines "Uzen-Atyrau-Samara" and "Astrakhan-Mangyshlak" for a total of 174,799 million tenge in KazTransOil JSC.

Other

For the year ended December 31, 2023, the Group capitalized to the carrying amount of property, plant and equipment borrowing costs related to construction of 9,794 million tenge at the average capitalization rate of 10,78% (for the year ended December 31, 2022: 1,304 million tenge at the average capitalization rate of 4.40%).

As at December 31, 2023, the cost of fully depreciated but still in use property, plant and equipment was 370,497 million tenge (as at December 31, 2022: 384,815 million tenge).

As at December 31, 2023, property, plant and equipment with the net book value of 168,214 million tenge were mainly pledged as collateral to secure borrowings of the Group (as at December 31, 2022: 778,757 million tenge).

Capital commitments are disclosed in *Note 36*.

19. EXPLORATION AND EVALUATION ASSETS

In millions of tenge	Tangible	Intangible	Total
Net book value as at December 31, 2021	221,368	13,636	235,004
Additions	17,417	510	17,927
Foreign currency translation	13,682	–	13,682
Change in estimate	33	–	33
Impairment *(Note 16)*	(10,418)	(1,695)	(12,113)
Transfer to property, plant and equipment *(Note 18)*	(3,253)	–	(3,253)
Other changes	173	(173)	–
Net book value as at December 31, 2022	239,002	12,278	251,280
Additions	**39,905**	**29,590**	**69,495**
Foreign currency translation	**(3,378)**	**–**	**(3,378)**
Transfer to property, plant and equipment *(Note 18)*	**(40)**	**–**	**(40)**
Impairment *(Note 16)*	**(118,462)**	**(9,853)**	**(128,315)**
Loss of control over subsidiaries *(Note 5)*	**–**	**(14,678)**	**(14,678)**
Write-off	**(2)**	**(175)**	**(177)**
Net book value as at December 31, 2023	**157,025**	**17,162**	**174,187**

As at December 31, 2023 and 2022, the exploration and evaluation assets are represented by the following projects:

In millions of tenge	**December 31, 2023**	December 31, 2022
North Caspian project	**140,098**	206,007
KMG Barlau	**14,346**	–
Embamunaigas JSC	**1,509**	14,084
Zhenis	**–**	18,310
Urikhtau	**–**	4,889
Other	**18,234**	7,990
	174,187	251,280

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

20. INTANGIBLE ASSETS

In millions of tenge	Licenses	Subsoil use rights (under production)	Goodwill	Marketing related intangible assets	Software	Other	Total
Net book value as at December 31, 2021 (restated)	510,140	201,725	99,849	25,467	17,411	34,909	889,501
Foreign currency translation	36,280	14,389	807	1,819	351	1,916	55,562
Additions	765	637	–	–	2,414	7,811	11,627
Disposals	(2,546)	–	–	–	(3,605)	(516)	(6,667)
Amortization charge	(23,284)	(7,990)	–	–	(6,372)	(1,245)	(38,891)
Accumulated amortization and impairment on disposals	2,271	–	–	–	3,326	362	5,959
Loss of control over subsidiaries	–	–	–	–	–	(64)	(64)
Impairment *(Note 16)*		–	–	–	–	(139)	(139)
Other changes	274	669	–	–	425	5	1,373
Transfers	801	2,790	–	–	4,304	(7,895)	–
Net book value as at December 31, 2022 (restated)	524,701	212,220	100,656	27,286	18,254	35,144	918,261
Foreign currency translation	**(9,038)**	**(3,637)**	**(212)**	**(477)**	**(165)**	**(274)**	**(13,803)**
Additions	**148**	**68**	**–**	**–**	**1,056**	**14,457**	**15,729**
Disposals	**(699)**	**–**	**–**	**–**	**(1,198)**	**(297)**	**(2,194)**
Amortization charge	**(33,763)**	**(11,004)**	**–**	**–**	**(6,239)**	**(1,007)**	**(52,013)**
Accumulated amortization and impairment on disposals	**695**	**–**	**–**	**–**	**1,198**	**267**	**2,160**
Business combination *(Note 6)*	**–**	**–**	**–**	**–**	**5,289**	**1,716**	**7,005**
Impairment *(Note 16)*	**–**	**–**	**–**	**–**	**–**	**(483)**	**(483)**
Other changes	**–**	**62**	**–**	**–**	**230**	**(24)**	**268**
Transfers	**1,265**	**–**	**–**	**–**	**969**	**(2,234)**	**–**
Net book value as at December 31, 2023	**483,309**	**197,709**	**100,444**	**26,809**	**19,394**	**47,265**	**874,930**
At cost	**687,462**	**264,388**	**209,189**	**68,816**	**85,944**	**112,936**	**1,428,735**
Accumulated amortization and impairment	**(204,153)**	**(66,679)**	**(108,745)**	**(42,007)**	**(66,550)**	**(65,671)**	**(553,805)**
Net book value as at December 31, 2023	**483,309**	**197,709**	**100,444**	**26,809**	**19,394**	**47,265**	**874,930**
At cost	698,950	268,892	209,401	70,041	78,585	100,138	1,426,007
Accumulated amortization and impairment	(174,249)	(56,672)	(108,745)	(42,755)	(60,331)	(64,994)	(507,746)
Net book value as at December 31, 2022 (restated)	524,701	212,220	100,656	27,286	18,254	35,144	918,261

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

20. INTANGIBLE ASSETS (continued)

As at December 31, 2023 and 2022, marketing related intangible assets were represented by trademarks of KMGI.

Carrying amount of goodwill is allocated to each of the group of cash-generating units as follows:

Cash-generating unit	**December 31, 2023**	December 31, 2022
Pavlodar refinery CGU	**88,553**	88,553
CGUs of KMGI	**11,891**	12,103
Total goodwill	**100,444**	100,656

In 2023 and 2022, based on the impairment test results, no impairment of Pavlodar refinery or KMGI goodwill was recognized. For the detailed discussion of Pavlodar refinery goodwill impairment test refer to *Note 4*.

21. BANK DEPOSITS

In millions of tenge	**December 31, 2023**	December 31, 2022
Denominated in US dollar	**1,055,456**	1,230,928
Denominated in tenge	**5,628**	6,616
Less: allowance for expected credit losses	**(181)**	(177)
	1,060,903	1,237,367

As at December 31, 2023, the weighted average interest rate for long-term bank deposits was 2.73% in US dollars and 6.23% in tenge (December 31, 2022: 0.94% in US dollars and 0.74% in tenge).

As at December 31, 2023, the weighted average interest rate for short-term bank deposits was 5.65% in US dollars and 1.38% in tenge (December 31, 2022: 2.64% in US dollars and 1.24% in tenge).

In millions of tenge	**December 31, 2023**	December 31, 2022
Maturities under 1 year	**997,012**	1,178,138
Maturities between 1 and 2 years	**279**	94
Maturities over 2 years	**63,612**	59,135
	1,060,903	1,237,367

As at December 31, 2023 bank deposits include those pledged as collateral with carrying value of 63,891 million tenge (December 31, 2022: 59,229 million tenge), which are represented mainly by 60,573 million tenge at restricted bank accounts designated as a liquidation fund per requirements of subsoil use contracts (December 31, 2022: 55,517 million tenge).

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

22. INVESTMENTS IN JOINT VENTURES AND ASSOCIATES

			December 31, 2023		December 31, 2022	
In millions of tenge	**Main activity**	**Place of business**	**Carrying value**	**Percentage ownership**	Carrying value	Percentage ownership
Joint ventures						
Tengizchevroil LLP (TCO)	Oil and gas exploration and production	Kazakhstan	**3,598,510**	**20.00%**	3,825,053	20.00%
Mangistau Investments B.V. Group (MMG)	Oil and gas development and production	Kazakhstan	**203,614**	**50.00%**	164,716	50.00%
KKO	Oil and gas development and production	Kazakhstan	**93,258**	**50.00%**	–	–
KazRosGas LLP (KRG)	Processing and sale of natural gas and refined gas products	Kazakhstan	**69,479**	**50.00%**	58,812	50.00%
Kazakhstan-China Pipeline LLP (KCP)	Oil transportation	Kazakhstan	**53,358**	**50.00%**	37,138	50.00%
Valsera Holdings B.V. Group (PKOP)	Oil refining	Kazakhstan	**41,515**	**50.00%**	26,351	50.00%
KazGerMunay LLP (KGM)	Oil and gas exploration and production	Kazakhstan	**36,506**	**50.00%**	32,070	50.00%
Petrosun LLP (Petrosun) *(Note 8)*	Sale of liquefied gas and oil products	Kazakhstan	**31,740**	**49.00%**	24,373	49.00%
Kazakhoil-Aktobe LLP (KOA)	Production of crude oil	Kazakhstan	**18,042**	**50.00%**	26,911	50.00%
Teniz Service LLP (Teniz Service)	Design, construction and operation of infrastructure facilities, offshore oil operations support	Kazakhstan	**8,210**	**48.996%**	10,396	48.996%
Ural Group Limited (UGL)	Oil and gas exploration and production	Kazakhstan	**7,641**	**50.00%**	31,490	50.00%
Other			**58,345**		42,014	
Associates						
Caspian Pipeline Consortium (CPC)	Transportation of liquid hydrocarbons	Kazakhstan / Russia	**451,913**	**20.75%**	521,882	20.75%
PetroKazakhstan Inc. (PKI)	Exploration, production and processing of oil and gas	Kazakhstan	**94,887**	**33.00%**	94,635	33.00%
Other			**54,409**		51,562	
			4,821,427		4,947,403	

All of the above joint ventures and associates are strategic for the Group's business.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

22. INVESTMENTS IN JOINT VENTURES AND ASSOCIATES (continued)

As at December 31, 2023, the Group's share in unrecognized losses of joint ventures and associates was equal to 7,145 million tenge (December 31, 2022: 19,950 million tenge).

The following table summarizes the movements in the investments in 2023 and 2022:

In millions of tenge	2023	2022
On January 1	**4,947,403**	4,145,646
Share in profits of joint ventures and associates, net *(Notes 10)*	**534,177**	991,310
Acquisitions under common control *(Notes 7 and 34)*	**–**	17,368
Acquisition *(Note 8)*	**–**	10,989
Recognition of investment in KKO *(Note 5)*	**93,258**	–
Dividends received	**(619,826)**	(462,309)
Change in dividends receivable	**(107,633)**	(41,682)
Other changes in the equity of the joint venture	**41,764**	(637)
Other changes	**1,016**	–
Additional contributions without change in ownership	**20,117**	15,398
Disposals, net *(Note 34)*	**(8,621)**	–
Transfers to assets classified as held for sale	**–**	(76)
Eliminations and adjustments*	**(2,140)**	(1,944)
Foreign currency translation	**(78,088)**	273,340
On December 31	**4,821,427**	4,947,403

* *Equity method eliminations and adjustments represent capitalized borrowing costs on the loans provided by the Company and subsidiaries to joint ventures.*

The following tables illustrate summarized financial information of material joint ventures, based on financial statements of these entities for 2023:

In millions of tenge	TCO	MMG	KKO	KRG	KCP	PKOP
Non-current assets	24,831,196	462,565	9,192	33,032	127,038	431,261
Current assets, including	1,863,832	199,708	1,232	148,932	49,554	114,561
Cash and cash equivalents	*696,871*	*89,410*	*112*	*65,122*	*23,837*	*66,459*
Non-current liabilities, including	(7,434,076)	(132,981)	(10,376)	(238)	(23,107)	(304,590)
Non-current financial liabilities	*(4,091,040)*	–	–	–	–	*(258,338)*
Current liabilities, including	(1,268,404)	(119,109)	(324)	(42,769)	(46,768)	(106,740)
Current financial liabilities	–	–	–	–	*(32,843)*	*(80,398)*
Equity	**17,992,548**	**410,183**	**(276)**	**138,957**	**106,717**	**134,492**
Share of ownership	20%	50%	50%	50%	50%	50%
Equity method adjustments	–	(1,477)	–	–	–	–
Recognition of investment	–	–	93,258	–	–	–
Accumulated unrealized losses	–	–	138	–	–	(25,731)
Carrying amount of the investments as at December 31, 2023	**3,598,510**	**203,614**	**93,258**	**69,479**	**53,358**	**41,515**
Revenue	8,796,634	878,362	–	260,125	86,843	250,435
Depreciation, depletion and amortization	*(2,426,361)*	*(107,455)*	–	*(295)*	*(10,170)*	*(41,216)*
Finance income	86,023	784	2	2,243	585	6,013
Finance costs	(283,225)	(14,411)	(118)	–	(3,628)	(36,390)
Income tax expenses	(730,465)	(47,354)	–	(13,996)	(9,341)	(12,954)
Profit/(loss) for the year from continuing operations	**1,704,419**	**76,510**	**(44)**	**64,648**	**37,440**	**34,592**
Other comprehensive (loss)/income	(325,499)	1,285	–	(305)	1	16
Total comprehensive income/(loss)	**1,378,920**	**77,795**	**(44)**	**64,343**	**37,441**	**34,608**
Dividends received	426,893	–	–	553	2,500	–

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

22. INVESTMENTS IN JOINT VENTURES AND ASSOCIATES (continued)

The following tables illustrate summarized financial information of material joint ventures, based on financial statements of these entities for 2023:

In millions of tenge	KGM	Petrosun	KOA	Teniz Service	UGL
Non-current assets	64,031	17	41,969	8,898	193,637
Current assets, including	52,764	137,202	23,956	16,907	11,475
Cash and cash equivalents	*44,840*	*6,440*	*10,794*	*14,619*	*6,905*
Non-current liabilities, including	(14,966)	–	(18,608)	(545)	(145,798)
Non-current financial liabilities	–	–	–	–	*(119,188)*
Current liabilities, including	(28,817)	(72,443)	(11,233)	(8,504)	(4,033)
Current financial liabilities	–	–	–	–	–
Equity	**73,012**	**64,776**	**36,084**	**16,756**	**55,281**
Share of ownership	50%	49%	50%	48.996%	50%
Impairment of the investment	–	–	–	–	(20,000)
Carrying amount of the investments as at December 31, 2023	**36,506**	**31,740**	**18,042**	**8,210**	**7,641**
Revenue	145,728	1,336,888	80,064	13,994	(352)
Depreciation, depletion and amortization	*(20,007)*	*(14)*	*(10,365)*	*(632)*	*(109)*
Finance income	1,292	3,258	851	313	–
Finance costs	(1,667)	(1,006)	(375)	(56)	(606)
Income tax expenses	(27,450)	(23,812)	(11,617)	(3,390)	8,206
Profit/(loss) for the year from continuing operations	**41,965**	**95,034**	**(3,737)**	**237**	**(94,011)**
Other comprehensive loss	(1,729)	–	–	–	(3,243)
Total comprehensive income/(loss)	**40,236**	**95,034**	**(3,737)**	**237**	**(97,254)**
Dividends received	15,793	39,200	7,000	2,303	–

The following tables illustrate summarized financial information of material joint ventures, based on financial statements of these entities for 2022:

In millions of tenge	TCO	MMG	KRG	KCP	PKOP
Non-current assets	25,713,747	464,868	40,100	137,004	454,653
Current assets, including	3,046,293	111,126	99,637	42,103	120,412
Cash and cash equivalents	*1,905,924*	*28,622*	*59,000*	*17,871*	*79,079*
Non-current liabilities, including	(7,808,607)	(144,698)	(269)	(58,417)	(377,788)
Non-current financial liabilities	*(4,163,850)*	–	–	*(32,197)*	*(340,106)*
Current liabilities, including	(1,826,167)	(99,344)	(21,844)	(46,415)	(97,393)
Current financial liabilities	–	–	–	*(33,900)*	*(82,347)*
Equity	19,125,266	331,952	117,624	74,275	99,884
Share of ownership	20%	50%	50%	50%	50%
Equity method adjustments	–	(1,260)	–	–	–
Accumulated unrealized losses	–	–	–	–	(23,591)
Carrying amount of the investments as at December 31, 2022	3,825,053	164,716	58,812	37,138	26,351
Revenue	10,949,194	910,069	192,427	86,319	219,429
Depreciation, depletion and amortization	*(1,129,895)*	*(26,647)*	*(323)*	*(10,269)*	*(38,552)*
Finance income	36,076	594	2,765	357	244
Finance costs	(99,857)	(9,404)	–	(4,593)	(31,616)
Income tax expenses	(1,591,414)	(38,267)	(4,040)	(8,703)	(10,260)
Profit for the year from continuing operations	3,713,299	96,971	1,107	33,566	42,018
Other comprehensive income	1,114,004	1,784	7,884	–	(228)
Total comprehensive income	4,827,303	98,755	8,991	33,566	41,790
Dividends received	207,892	92,071	–	5,000	2,189

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

22. INVESTMENTS IN JOINT VENTURES AND ASSOCIATES (continued)

The following tables illustrate summarized financial information of material joint ventures, based on financial statements of these entities for 2022:

In millions of tenge	KGM	Petrosun	KOA	Teniz Service	UGL
Non-current assets	71,787	28	51,963	14,283	275,714
Current assets, including	53,303	123,612	17,357	16,745	1,851
Cash and cash equivalents	*46,729*	*14,662*	*1,186*	*2,570*	*1,704*
Non-current liabilities, including	(21,559)	–	(4,101)	(573)	(171,042)
Non-current financial liabilities	–	–	–	–	*(133,544)*
Current liabilities, including	(39,392)	(73,899)	(11,397)	(9,236)	(3,543)
Current financial liabilities	–	–	–	–	–
Equity	64,139	49,741	53,822	21,219	102,980
Share of ownership	50%	49%	50%	48.996%	50%
Impairment of the investment	–	–	–	–	(20,000)
Carrying amount of the investments as at December 31, 2022	32,070	24,373	26,911	10,396	31,490
Revenue	150,039	676,932	90,330	3,182	223
Depreciation, depletion and amortization	*(22,550)*	*(22)*	*(111)*	*(645)*	*(26)*
Finance income	791	870	933	27	–
Finance costs	(994)	(812)	(261)	(49)	(8,387)
Income tax expenses	(39,783)	(12,722)	(10,266)	(58)	(3,005)
Profit/(loss) for the year from continuing operations	41,061	47,315	25,296	(13,261)	(22,939)
Other comprehensive income	4,115	–	–	–	2,746
Total comprehensive income/(loss)	45,176	47,315	25,296	(13,261)	(20,193)
Dividends received	22,826	9,800	14,000	–	–

The following tables illustrate summarized financial information of material associates, based on their financial statements for 2023:

In millions of tenge	December 31, 2023 CPC	PKI
Non-current assets	**1,969,703**	**206,008**
Current assets	**295,663**	**138,626**
Non-current liabilities	**(18,722)**	**(20,063)**
Current liabilities	**(279,064)**	**(16,497)**
Equity	**1,967,580**	**308,074**
Share of ownership	**20.75%**	**33%**
Goodwill	**43,640**	**–**
Impairment of the investment	**–**	**(6,778)**
Carrying amount of the investment	**451,913**	**94,887**
Revenue	**1,039,509**	**128,343**
Depreciation, depletion and amortization	**(245,423)**	**(25,990)**
Finance income	**14,080**	**926**
Finance costs	**(1,519)**	**(1,172)**
Income tax expenses	**(118,490)**	**(7,009)**
Profit for the year	**310,160**	**14,814**
Other comprehensive loss	**(42,915)**	**(4,927)**
Total comprehensive income	**267,245**	**9,887**
Dividends received	**113,892**	**2,864**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

22. INVESTMENTS IN JOINT VENTURES AND ASSOCIATES (continued)

The following tables illustrate summarized financial information of material associates, based on their financial statements for 2022:

In millions of tenge	December 31, 2022 CPC	PKI
Non-current assets	2,240,723	224,559
Current assets	292,198	116,827
Non-current liabilities	(35,730)	(18,489)
Current liabilities	(196,152)	(15,586)
Equity	2,301,039	307,311
Share of ownership	20.75%	33%
Goodwill	44,416	–
Impairment of the investment	–	(6,778)
Carrying amount of the investment	521,882	94,635
Revenue	976,076	140,901
Depreciation, depletion and amortization	(216,491)	(24,217)
Finance income	8,119	439
Finance costs	–	(1,503)
Income tax expenses	(122,394)	(17,548)
Profit for the year	567,533	19,702
Other comprehensive income	185,893	9,782
Total comprehensive income	753,426	29,484
Dividends received	98,854	2,890

The following tables illustrate aggregate financial information of individually immaterial joint ventures (the Group's proportional share):

In millions of tenge	December 31, 2023	December 31, 2022
Group share in:		
Non-current assets	**68,336**	39,088
Current assets	**22,813**	18,950
Non-current liabilities	**(16,170)**	(13,922)
Current liabilities	**(21,493)**	(8,800)
Goodwill	**172**	172
Accumulated unrecognized share of losses	**1,127**	1,706
Other changes	**3,560**	4,820
Carrying amount of the investments as at December 31	**58,345**	42,014
Profit for the year from continuing operations	**3,692**	4,013
Other comprehensive loss	**(845)**	(1,148)
Total comprehensive income	**2,847**	2,865
Unrecognized share of loss	**(204)**	(221)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

22. INVESTMENTS IN JOINT VENTURES AND ASSOCIATES (continued)

The following tables illustrate aggregate financial information of individually immaterial associates (the Group's proportional share):

In millions of tenge	**December 31, 2023**	December 31, 2022
Group share in:		
Non-current assets	**60,636**	53,699
Current assets	**92,172**	87,702
Non-current liabilities	**(17,916)**	(15,673)
Current liabilities	**(81,358)**	(75,041)
Accumulated unrecognized share of losses	**875**	875
Carrying amount of the investments as at December 31	**54,409**	51,562
Profit for the year from continuing operations	**7,103**	31,339
Other comprehensive income	**375**	3,675
Total comprehensive income	**7,478**	35,014

23. INVENTORIES

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
Materials and supplies (at cost)	**232,469**	180,762
Crude oil (at cost)	**61,621**	60,670
Refined products (at lower of cost and net realizable value)	**82,354**	69,332
	376,444	310,764

As at December 31, 2023 carrying value of inventories under pledge as collateral amounted to 186,378 million tenge (December 31, 2022: 126,345 million tenge).

24. TRADE ACCOUNTS RECEIVABLE AND OTHER CURRENT FINANCIAL AND NON-FINANCIAL ASSETS

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
Trade accounts receivable		
Trade accounts receivable	**593,448**	549,430
Less: allowance for expected credit losses	**(32,190)**	(29,746)
	561,258	519,684
Other current financial assets		
Other receivables	**97,771**	98,485
Dividends receivable	**20,952**	320
Less: allowance for expected credit losses	**(43,853)**	(41,748)
	74,870	57,057
Other current non-financial assets		
Advances paid and prepaid expenses	**91,769**	60,260
Taxes receivable, other than VAT	**63,188**	43,030
Other	**5,659**	6,040
Less: impairment allowance	**(3,359)**	(157)
	157,257	109,173
Total other current assets	**232,127**	166,230

As at December 31, 2023 and 2022, the above assets were non-interest bearing.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

24. TRADE ACCOUNTS RECEIVABLE AND OTHER CURRENT FINANCIAL AND NON-FINANCIAL ASSETS (continued)

As at December 31, 2023, trade accounts receivable with a carrying value of 197,546 million tenge are pledged as collateral (December 31, 2022: 167,255 million tenge).

As of December 31, 2023 and 2022, trade accounts receivable is denominated in the following currencies:

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
US dollars	**364,490**	325,296
Tenge	**121,165**	114,406
Romanian Leu	**68,896**	73,508
Euro	**3,324**	3,871
Other currency	**3,383**	2,603
	561,258	519,684

Movements in the allowance for expected credit losses and impairment were as follows:

	Individually impaired	
In millions of tenge	**Trade accounts receivable and other current financial assets**	**Other current non-financial assets**
As at December 31, 2021 (restated)	66,275	103
Charge for the year, net *(Notes 15)*	2,876	28
Written-off	(748)	(3)
Foreign currency translation	3,091	29
As at December 31, 2022 (restated)	71,494	157
Charge for the year, net *(Note 15)*	**8,691**	**3,204**
Written-off	**(4,336)**	**–**
Foreign currency translation	**194**	**(2)**
As at December 31, 2023	**76,043**	**3,359**

Set out below is the information about credit risk exposure on the Group's trade receivables using a provision matrix:

		Days past due				
In millions of tenge	**Current**	**<30 days**	**30-60 days**	**61-90 days**	**>91 days**	**Total**
December 31, 2023						
Expected credit loss rate	**0.23%**	**12.18%**	**14.33%**	**5.84%**	**58.78%**	
Trade accounts receivable	**519,801**	**16,351**	**1,594**	**7,527**	**48,175**	**593,448**
Expected credit losses	**(1,214)**	**(1,991)**	**(229)**	**(439)**	**(28,317)**	**(32,190)**
December 31, 2022 (restated)						
Expected credit loss rate	0.23%	3.80%	9.83%	41.72%	95.69%	
Trade accounts receivable	484,508	32,690	3,489	857	27,886	549,430
Expected credit losses	(1,120)	(1,242)	(343)	(358)	(26,683)	(29,746)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

25. LOANS AND RECEIVABLES DUE FROM RELATED PARTIES

In millions of tenge	**December 31, 2023**	December 31, 2022
At amortized cost		
NB RK notes *(Note 34)*	**43,709**	70,192
Loans due from related parties *(Note 34)*	**50,103**	31,062
Bonds receivable from Samruk-Kazyna *(Note 34)*	**21,021**	19,665
Treasury bills of foreign states	**7,032**	–
Less: allowance for expected credit losses	**(1,863)**	(1,878)
	120,002	119,041
At fair value through profit or loss		
Loans due from related parties *(Note 34)*	**86,173**	117,511
Guaranteed returns from shareholders of joint venture	**13,728**	13,179
	99,901	130,690
Total loans and receivables due from related parties	**219,903**	249,731

Loans and receivables due from related parties are denominated in the following currencies:

In millions of tenge	**December 31, 2023**	December 31, 2022
US dollars	**104,964**	146,435
Tenge	**114,939**	103,296
	219,903	249,731

In millions of tenge	**December 31, 2023**	December 31, 2022
Current portion	**125,569**	119,874
Non-current portion	**94,334**	129,857
	219,903	249,731

Movements in the allowance for expected credit losses of loans and receivables due from related parties were as follows:

In millions of tenge	
As at December 31, 2021	3,249
Charged, net	(1,376)
Foreign currency translation	5
As at December 31, 2022	1,878
Charged, net	**(17)**
Foreign currency translation	**2**
As at December 31, 2023	**1,863**

As at December 31, 2023 and 2022 for credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). Since initial recognition of the loans and receivables due from related parties there have been no significant increases in credit risk.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

26. CASH AND CASH EQUIVALENTS

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
Term deposits with banks − US dollar	**580,214**	228,818
Term deposits with banks − tenge	**124,702**	231,793
Term deposits with banks − other currencies	**76,316**	17,550
Current accounts with banks − US dollar	**120,787**	200,478
Current accounts with banks − tenge	**13,321**	20,878
Current accounts with banks − other currencies	**10,409**	15,816
The contracts of reverse repo with original maturities of three months or less	**116,091**	27,499
Cash in transit	**5,463**	17,449
Cash-on-hand and cheques	**3,613**	2,961
Less: allowance for expected credit losses	**(43)**	(57)
	1,050,873	763,185

Term deposits with banks are made for various periods of between one day and three months, depending on the immediate cash requirements of the Group.

As at December 31, 2023, the weighted average interest rate for time deposits with banks was 5.40% in US dollars, 15.45% in tenge and 5.99% in other currencies (December 31, 2022: 1.12% in US dollars, 13.01% in tenge and 4.84% in other currencies).

As at December 31, 2023 and 2022, cash and cash equivalents were not pledged as collateral for obligations of the Group.

27. EQUITY

Share capital

Total number of outstanding, issued and paid shares comprises:

	December 31, 2023 and 2022
Number of shares issued and paid, including	**610,119,493**
Par value of 27,726.63 tenge	137,900
Par value of 10,000 tenge	20,719,604
Par value of 5,000 tenge	59,707,029
Par value of 2,500 tenge	71,104,187
Par value of 2,451 tenge	1
Par value of 1,000 tenge	1
Par value of 921 tenge	1
Par value of 858 tenge	1
Par value of 838 tenge	1
Par value of 704 tenge	1
Par value of 592 tenge	1
Par value of 500 tenge	458,450,766
Share capital (thousands of tenge)	**916,540,545**

As at December 31, 2023 and 2022, the Company had only one class of issued shares. As at December 31, 2023 and 2022, common shares in the number of 239,440,103 were authorized, but not issued. In 2023, there was no issuance of any ordinary share.

Dividends

In 2023, based on the decision of Shareholders, the Company declared and paid off dividends for 2022 of 491.71 tenge per common share in the total of 300,002 million tenge (2022: declared and paid-off dividends for 2021 of 327.80 tenge per common share in the total of 199,997 million tenge).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

27. EQUITY (continued)

Dividends (continued)

In 2023, the Group declared and paid-off dividends to the non-controlling interest holders of KTO, KMGI in the total amount of 1,500 million tenge and 1,572 million tenge, respectively (2022: 2,296 million tenge and 1,975 million tenge, respectively).

Transactions with Samruk-Kazyna

In 2023, Samruk-Kazyna purchased the Company placed bonds for 70,000 million tenge. The difference between the fair value and nominal amount of bonds of 30,824 million tenge was recognized as an increase in equity within transactions with Samruk-Kazyna in the consolidated statement of changes in equity *(Note 34)*.

In 2023, Samruk-Kazyna received a loan from KMG Karachaganak LLP in the amount of 25,000 million tenge. The difference between the fair value and nominal amount of bonds of 4,226 million tenge was recognized as transactions with Samruk-Kazyna in the consolidated statement of changes in equity.

In 2022, the Company provided Samruk-Kazyna additional interest-free financial aid tranches of 23,605 million tenge under a long-term financial aid agreement signed on December 25, 2015, with a current maturity in 2022 *(Note 34)*. The difference between the fair value and nominal amount of the additional tranches of 1,906 million tenge was recognized as a decrease in equity within transactions with Samruk-Kazyna in the consolidated statement of changes in equity.

In September 2022, the Company placed bonds for 751,631 million tenge at a coupon interest rate of 3.00% per annum and due in 2035. The coupon rate is below market rate. Samruk-Kazyna purchased the bonds. The difference between the fair value and nominal amount of bonds of 380,477 million tenge was recognized as transactions with Samruk-Kazyna in the consolidated statement of changes in equity *(Notes 28 and 34)*.

In September 2022, within the exercising of the Option the Group is due to Samruk-Kazyna in the amount of 738.8 million US dollars (equivalent to 350,321 million tenge per exchange rate at the date of recognition). The payable was recognized at fair value upon initial recognition. The difference between the fair value and nominal amount of the payable of 7,426 million tenge was recognized as transactions with Samruk-Kazyna in the consolidated statement of changes in equity *(Notes 7 and 34)*.

Distributions to Samruk-Kazyna

In 2023, in accordance with the Government decree on the construction of social objects in Zhana-ozen town and housing for the residents, living in Zhana-ozen town, the Group accrued liabilities and paid for 120 million tenge (2022: 10,199 million tenge and 2,398 million tenge, respectively).

In July 2022, based on the decision of Samruk-Kazyna and Cooperative, Kashagan declared and paid-off dividends in the amount of 1,133.4 million U.S. dollars (equivalent to 529,789 million tenge). Due to the recognition of the acquisition of Kashagan under common control the Group recognized dividends distributed to the former shareholder of Kashagan as Distributions to Samruk-Kazyna in the amount of 566.7 million U.S. dollars (equivalent to 263,671 million tenge) *(Note 7)*.

Contributions from the related party

In 2023, SKO, a previous shareholder of Polimer, made a contribution to the share capital of Polimer for 14,155 million tenge (2022: 3,322 million tenge). In 2022 Polimer also accounted for discount in the amount of 2.896 million tenge in the consolidated statement of changes in equity on a loan received from SKO. In 2022, SKO, a previous shareholder of KLPE, made a contribution to the share capital of KLPE for 3,742 million tenge.

Due to the acquisition of KLPE under common control *(Note 7)* the Group recognized this as contribution from the related party in the consolidated statement of changes in equity.

Acquisitions of joint ventures

In 2022 the difference between the consideration paid for acquisition of 49.5% interest in KPI and carrying value of identifiable assets and liabilities of KPI at the date of acquisition was recognized as distribution to Samruk-Kazyna and presented in the line *«Acquisition of joint ventures»* in consolidated statement of changes in equity in the amount of 74,743 million tenge *(Note 7)*.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

27. EQUITY (continued)

Acquisitions of joint ventures (continued)

In 2022 the difference between the consideration paid for acquisition of 49% interest in Petrosun for 1 tenge and the fair value of identifiable assets and liabilities of Petrosun at the date of acquisition in the amount of 10,989 million tenge was recognized as a contribution from Samruk-Kazyna and presented in the line *«Acquisition of joint ventures»* in consolidated statement of changes in equity *(Note 8)*.

In 2022 the difference between the consideration paid for acquisition of 49.9% ownership interest in Silleno from SKO in the amount of 816 million tenge and the carrying value of investment in Silleno in the amount of 120 million tenge was recognized as contribution from Samruk-Kazyna and presented in the line *«Acquisition of joint ventures»* in consolidated statement of changes in equity.

Other distribution to the shareholders

In 2023, in accordance with the Order of the President of the RK on the construction of the Sport Complex as a result of his working visit to the West Kazakhstan region dated March 9, 2023, the Company recognized an obligation for the construction of the Sport Complex for the total amount of 17,925 million tenge *(Note 30)* and recognized it in the consolidated statement of changes in equity. The Company made an advance payment in the amount of 8,962 million tenge.

Book value per share

In accordance with the decision of KASE dated October 4, 2010 financial statements shall disclose book value per share (ordinary and preferred) as of the reporting date, calculated in accordance with the KASE rules.

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
Total assets	**16,942,712**	16,656,890
Less: intangible assets	**874,930**	918,261
Less: total liabilities	**6,548,315**	6,789,464
Net assets	**9,519,467**	8,949,165
Number of ordinary shares	**610,119,493**	610,119,493
Book value per ordinary share (in thousand tenge)	**15,603**	14,668

Earnings per share

In thousand tenge	**2023**	2022 (restated)
Weighted average number of common shares for basic and diluted earnings per share	**610,119,493**	610,119,493
Basic and diluted earnings per share	**1,574**	2,095

Non-controlling interests

The following tables illustrate information of subsidiaries in which the Group has significant non-controlling interests:

		December 31, 2023		December 31, 2022	
	Country of incorporation and operation	**Non-controlling shares**	**Carrying value**	Non-controlling shares	Carrying value
Rompetrol Downstream S.R.L.	Romania	**45.37%**	**67,535**	45.37%	66,468
KTO	Kazakhstan	**10.00%**	**59,156**	10.00%	53,642
Rompetrol Petrochemicals S.R.L.	Romania	**45.37%**	**18,572**	45.37%	17,464
KMG EP	Kazakhstan	**0.28%**	**8,215**	0.28%	8,119
Rompetrol Vega	Romania	**45.37%**	**(25,320)**	45.37%	(23,768)
Rompetrol Rafinare S.A.	Romania	**45.37%**	**(253,347)**	45.37%	(212,487)
Other			**25,785**		29,021
			(99,404)		(61,541)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

27. EQUITY (continued)

Non-controlling interests (continued)

The following tables illustrate summarized financial information of subsidiaries on a stand-alone basis, in which the Group has significant non-controlling interests as at December 31, 2023 and for the year then ended:

In millions of tenge	Rompetrol Downstream S.R.L.	KTO	Rompetrol Petrochemicals S.R.L.	KMG EP	Rompetrol Vega	Rompetrol Rafinare S.A.
Summarized statement of financial position						
Non-current assets	**123,201**	**812,534**	**1,784**	**1,190,313**	**22,949**	**123,516**
Current assets	**216,576**	**132,793**	**39,749**	**1,546,121**	**11,676**	**76,687**
Non-current liabilities	**(66,489)**	**(216,157)**	**(433)**	**(91,794)**	**(42,739)**	**(148,648)**
Current liabilities	**(124,441)**	**(112,746)**	**(168)**	**(217,704)**	**(47,693)**	**(609,932)**
Total equity	**148,847**	**616,424**	**40,932**	**2,426,936**	**(55,807)**	**(558,377)**
Attributable to:						
Equity holder of the Parent Company	**81,312**	**557,268**	**22,360**	**2,418,721**	**(30,487)**	**(305,030)**
Non-controlling interests	**67,535**	**59,156**	**18,572**	**8,215**	**(25,320)**	**(253,347)**
Summarized statement of comprehensive income						
Revenue	**1,012,646**	**290,386**	**–**	**1,184,834**	**108,639**	**1,696,983**
Profit/(loss) for the year from continuing operations	**5,439**	**69,508**	**3,125**	**37,360**	**(4,278)**	**(98,216)**
Total comprehensive income/(loss) for the year, net of tax	**2,352**	**70,146**	**2,440**	**34,250**	**(3,422)**	**(90,054)**
Attributable to:						
Equity holder of the Parent Company	**1,285**	**63,131**	**1,333**	**34,154**	**(1,869)**	**(49,195)**
Non-controlling interests	**1,067**	**7,015**	**1,107**	**96**	**(1,553)**	**(40,859)**
Dividends declared to non-controlling interests	**–**	**(1,500)**	**–**	**–**	**–**	**–**
Summarized cash flow information						
Operating activity	**(44,926)**	**87,839**	**5**	**144,334**	**2,501**	**(988,089)**
Investing activity	**(3,264)**	**(160,028)**	**–**	**(319,182)**	**(2,470)**	**(64,948)**
Financing activity	**49,441**	**64,418**	**–**	**55,725**	**(31)**	**1,118,004**
Net increase/(decrease) in cash and cash equivalents	**1,251**	**(8,485)**	**5**	**(124,491)**	**–**	**64,967**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

27. EQUITY (continued)

Non-controlling interests (continued)

The following tables illustrate summarized financial information of subsidiaries on a stand-alone basis, in which the Group has significant non-controlling interests as at December 31, 2022 and for the year then ended:

In millions of tenge	Rompetrol Downstream S.R.L.	KTO	Rompetrol Petrochemicals S.R.L.	KMG EP	Rompetrol Vega	Rompetrol Rafinare S.A.
Summarized statement of financial position						
Non-current assets	93,101	652,668	3,210	1,047,369	31,254	119,520
Current assets	166,214	119,379	36,121	1,600,377	15,215	48,757
Non-current liabilities	(16,185)	(149,990)	(664)	(83,988)	(43,795)	(85,885)
Current liabilities	(96,635)	(91,602)	(176)	(202,509)	(55,058)	(550,715)
Total equity	**146,495**	**530,455**	**38,491**	**2,361,249**	**(52,384)**	**(468,323)**
Attributable to:						
Equity holder of the Parent Company	80,027	476,813	21,027	2,353,130	(28,616)	(255,836)
Non-controlling interests	66,468	53,642	17,464	8,119	(23,768)	(212,487)
Summarized statement of comprehensive income						
Revenue	1,178,244	255,627	–	1,294,096	122,133	2,233,851
Profit/(loss) for the year from continuing operations	13,557	45,582	858	708,225	(16,794)	50,548
Total comprehensive income/(loss) for the year, net of tax	**21,156**	**55,416**	**3,370**	**721,462**	**(19,076)**	**15,768**
Attributable to:						
Equity holder of the Parent Company	11,557	49,874	1,841	719,442	(10,421)	8,614
Non-controlling interests	9,599	5,542	1,529	2,020	(8,655)	7,154
Dividends declared to non-controlling interests	–	(1,000)	–	(16)	–	–
Summarized cash flow information						
Operating activity	36,791	73,513	(3,149)	218,119	4,570	67,361
Investing activity	14,540	(47,288)	3,150	(222,714)	(1,012)	(16,045)
Financing activity	(44,507)	17,011	–	(2,390)	(3,490)	(50,443)
Net increase/(decrease) in cash and cash equivalents	**6,824**	**44,659**	**1**	**2,189**	**68**	**873**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

28. BORROWINGS

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
Fixed interest rate borrowings	**3,253,754**	3,595,474
Weighted average effective interest rates	**5.36%**	6.41%
Floating interest rate borrowings	**503,340**	558,912
Weighted average effective interest rates *(Note 35)*	**8.93%**	8.61%
	3,757,094	4,154,386

As at December 31, 2023 and 2022, borrowings are denominated in the following currencies:

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
US dollar	**3,018,895**	3,152,169
Tenge	**700,223**	715,804
Euro	**24,850**	23,069
Russian ruble	**–**	245,349
Other currencies	**13,126**	17,995
	3,757,094	4,154,386

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
Current portion	**391,358**	369,489
Non-current portion	**3,365,736**	3,784,897
	3,757,094	4,154,386

As at December 31, 2023 and 2022, the bonds comprised:

In millions of tenge	**Issuance amount**	**Redemption date**	**Interest**	**December 31, 2023**	December 31, 2022
Bonds					
KASE 2023	70 billion KZT	2033	0.50% (11.74% effective interest rate)	**41,375**	–
KASE 2022	751.6 billion KZT	2035	3.00% (14.5% effective interest rate)	**392,158**	379,306
Bonds LSE 2020	750 million USD	2033	3.50%	**343,005**	349,059
AIX 2019	150 million USD	2024	5.00%	**19,800**	34,385
Bonds LSE 2018	1.5 billion USD	2048	6.375%	**673,677**	685,181
Bonds LSE 2018	1.25 billion USD	2030	5.375%	**569,892**	579,391
Bonds LSE 2018	0.5 billion USD	2025	4.75%	**–**	232,586
Bonds LSE 2017	1.25 billion USD	2047	5.75%	**552,309**	561,160
Bonds LSE 2017	1 billion USD	2027	4.75%	**454,062**	460,655
Total				**3,046,278**	3,281,723

On April 26, 2023, the Company made an early repayment of Eurobonds in the amount of 501 million US dollars (equivalent to 227,520 million tenge), including premium for early repayment and coupon payment with an interest rate of 4.75% and maturity in 2025.

On April 27 and November 22, 2023, the Company placed bonds for 70,000 million tenge at a coupon interest rate of 0.50% per annum and due in 2033. Samruk-Kazyna purchased the bonds. The coupon rate of the bonds is below market rate. The difference between the fair value and nominal amount of bonds of 30,824 million tenge was recognized as a transaction with Samruk-Kazyna in the consolidated statement of changes in equity *(Note 27)*.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

28. BORROWINGS (continued)

As at December 31, 2023 and 2022, the borrowings comprised:

In millions of tenge	**Issuance amount**	**Redemption date**	**Interest**	**December 31, 2023**	December 31, 2022 (restated)
Loans					
The Syndicate of banks (Unicredit Tiriac Bank, ING Bank, BCR, Raiffeisen Bank, Alpha Bank, Garanti Bank, OTP Bank)	531.8 million USD[1]	2026	ROBOR 1M+2% SOFR O/N+2.5% SOFR1M+2.5% SOFR 1M+2.75%	**141,506**	26,270
Halyk bank JSC (Halyk bank)	151 billion KZT	2024-2025	11.00%	**94,999**	135,062
Development bank of Kazakhstan JSC (DBK)	157 billion KZT	2024-2026	7.00% - 7.99%	**80,992**	100,694
Bank of Tokyo-Mitsubishi UFJ, Ltd (London Branch)	200 million USD	2024	COF[2] (5.37%) + 1.80%	**62,800**	17,415
Halyk bank	66.7 billion KZT	2032	Key Rate of National Bank of RK + 2.50%	**47,391**	29,761
Lukoil Kazakhstan Upstream	–	After the start of commercial mining	O/N SOFR + 2.85%	**47,363**	12,876
Cargill	100 million USD	2024	SOFR 3M+2.612% SOFR 3M+2.98%	**46,176**	70,165
BCP	170 million USD	2024	COF (5.75%) + 1.50%	**37,893**	–
Halyk bank	31 billion KZT	2024	17.75-18.75%	**31,487**	46,460
Credit Agricole	150 million USD	2024	COF (5.6%) + 2.00%	**26,936**	30,934
The Syndicate of banks (BCR, Raiffeisen Bank, OTP, Alpha, Garanti)	83 million EUR	2029	EURIBOR 6M + 3.00%	**24,844**	21,411
Banca Transilvania	57.96 million EUR	2024	SOFR 1M + 2.50% EURIBOR 1M + 2.50%	**15,710**	16,739
ING Bank NV	250 million USD	2024	COF (5.55%) + 2.00%	**13,839**	31,871
OTP Bank	119 million RON	2030	ROBOR 3M + 1.10%	**10,964**	11,801
VTB Bank (PJSC)	38 billion RUB	2027	Key Rate of Central Bank of Russia Federation + 2.25%	**–**	245,349
DBK	843.6 million USD	2023	10.99%	**–**	20,483
NATIXIS	250 million USD	2024	COF (5.44%) + 2.00%	**–**	18,165
Samruk-Kazyna Ondeu LLP	13.9 billion KZT	2023	0.1-10%	**–**	11,052
Other	–	–	–	**27,916**	26,155
Total				**710,816**	872,663

[1] *265.9 million USD with revolving credit facility;*

[2] *Cost of funding.*

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

28. BORROWINGS (continued)

In 2023, KMGI received Syndicated loan (Unicredit Tiriac Bank, ING Bank, BCR, Raiffeisen Bank) used to finance its working capital for the total amount of 307 million US dollars (equivalent to 140,232 million tenge), on a net basis.

In 2023, KMGI partially repaid a Syndicated Loan (Unicredit Tiriac Bank, ING Bank, BCR, Raiffeisen Bank) in the amount of 73.94 million US dollars (equivalent to 33,734 million tenge), including interest.

In 2023, KMGI received a loan from Bank of Tokyo-Mitsubishi UFJ. Ltd to finance working capital for 101 million US dollars (equivalent to 45,855 million tenge), on a net basis, at the rate of COF (5.37%) + 1.80% per annum and maturity in 2024.

In 2023, KMGI partially repaid a loan from Cargill in the amount of 61.46 million US dollars (equivalent to 28,039 million tenge), including interest.

In 2023, KMGI partially repaid a loan from NATIXIS in the amount of 42 million US dollars (equivalent to 19,240 million tenge), including interest.

In 2023, KMGI received a loan from BCP to finance working capital for 83 million US dollars (equivalent to 38,031 million tenge), on a net basis, at the rate of COF (5.7481%) + 1.50% per annum and maturity in 2024.

In 2023, Atyrau Refinery LLP (further Atyrau refinery) made full repayment of the loan from VTB Bank (PJSC) for 42,371 million Rubles (equivalent to 213,729 million tenge), including accrued interest.

The decrease in the carrying amount of the loan from VTB Bank (PJSC) denominated in Russian rubles during the twelve months ended December 31, 2023 was due to the impact of the exchange rate in the amount of KZT 54,373 million.

In 2023, Atyrau refinery partially repaid loans from Halyk Bank for a total amount of 102,674 million tenge, respectively, including interest.

In 2023, Atyrau refinery received a loan from Halyk Bank in the amount of 31,410 million tenge at an interest rate of 17.75-18.75% per annum and maturing in 2024 for the purpose of repayment of current liabilities.

In 2023, Atyrau refinery and Pavlodar refinery partially repaid a loan from the Development Bank of Kazakhstan in the total amount of 31,261 million tenge, including interest.

In 2023, Atyrau refinery made full repayment of a loan from Development Bank of Kazakhstan in the amount of 21,400 million tenge, including interest.

In 2023, Main Waterline LLP received a loan from Halyk Bank in the amount of 11,800 million tenge at the interest rate of the Key rate of the National Bank of the Republic of Kazakhstan +2.50% and maturing in 2032 for the reconstruction and expansion of the Astrakhan-Mangyshlak main water pipeline (1st stage).

In 2023, based on the notification of the Ministry of Energy of RK on the termination of the subsoil use contract, the Company derecognized the loan of Eni Isatai B.V. for the Isatai project in the amount of 4,377 million tenge (*Note 17*).

In January 2022, Atyrau refinery made early full repayment of the loan from Eximbank for 604 million US dollars (equivalent to 259,459 million tenge), including accrued interest. For the repayment was used the cash reserved in November 2021.

In 2012, Atyrau refinery paid an insurance premium to China Export & Credit Insurance Corporation in the amount of 85 million USD (equivalent to 12,820 million tenge) under a loan Agreement with Eximbank. In connection with the early repayment of the loan, China Export & Credit Insurance Corporation returned the part of the insurance premium in December 2022 in the amount of 16 million USD (equivalent to 7,370 million tenge).

In 2022, KTO received a long-term loan from Halyk Bank for 29,593 million tenge with the key rate of the NB RK + 2.50% and maturity of 4 years to finance the first stage of the project "Reconstruction and expansion of the main water pipeline "Astrakhan-Mangyshlak".

In 2022, KMGI partially redeemed Syndicated loan (Unicredit Tiriac Bank, ING Bank, BCR, Raiffeisen Bank) used to finance its working capital for the total amount of 191.48 million US dollars (equivalent to 88,258 million tenge).

In 2022, KMGI received a long-term syndicated loan (BCR, Raiffeisen Bank, OTP, Alpha, Garanti) to finance the construction of the cogeneration power plant for 42 million euro (equivalent to 20,196 million tenge) at the rate of 6M Euribor + 3.00% per annum and maturity of 7 years.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

28. BORROWINGS (continued)

In 2022, KMGI received a loan from NATIXIS to finance working capital for 39 million USD (equivalent to 18,097 million tenge) at the rate of COF (4.65%) + 2.00% per annum and maturity in 2023.

In 2022, KMGI received a long-term loan from OTP Bank JSC to finance the extension and development of gas stations for 25 million USD (equivalent to 11,404 million tenge) at the rates of Robor 3M + 1.10% per annum and maturity of 8 years.

In 2022, KMGI received a long-term loan from Cargill bank to finance working capital for 25 million USD (equivalent to 23,047 million tenge) at the rates of SOFR 3M+2.98% per annum and maturity till the year 2024.

In 2022, Atyrau refinery made partial repayment of the loans from DBK for 60 million US dollars (equivalent to 27,550 million tenge), including accrued interest.

In 2022, KMGI received a loan from Credit Agricole to finance working capital for 17 million USD (equivalent to 7,833 million tenge) at the rates of COF (4.60%) + 2.00% per annum and maturity till the year 2024.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

28. BORROWINGS (continued)

Changes in liabilities arising from financing activities:

In millions of tenge	2023 Short-term loans	2023 Long-term loans	2023 Bonds	2023 Total	2022 (restated) Short-term loans	2022 (restated) Long-term loans	2022 (restated) Bonds	2022 (restated) Total
On January 1	**173,053**	**699,611**	**3,281,722**	**4,154,386**	162,772	892,376	2,706,199	3,761,347
Received in cash	**138,787**	**176,517**	**70,000**	**385,304**	87,401	146,681	751,632	985,714
Return of insurance premium in cash	**–**	**–**	**–**	**–**	–	7,370	–	7,370
Repayment of principal in cash	**(95,296)**	**(329,830)**	**(241,106)**	**(666,232)**	(86,481)	(136,755)	(1,091)	(224,327)
Repayment of principal and interest by reserved cash	**–**	**–**	**–**	**–**	–	(259,459)	–	(259,459)
Interest accrued	**17,198**	**68,901**	**185,686**	**271,785**	9,861	80,772	168,536	259,169
Commission for the early redemption of the loan *(Note 17)*					–	4,498	–	4,498
Interest paid*	**(17,030)**	**(63,606)**	**(173,836)**	**(254,472)**	(9,779)	(65,873)	(156,377)	(232,029)
Discount *(Note 27)*	**–**	**–**	**(30,824)**	**(30,824)**	–	(2,896)	(380,477)	(383,373)
Foreign currency translation	**(2,297)**	**(2,526)**	**(46,152)**	**(50,975)**	8,233	7,673	187,440	203,346
Foreign exchange loss	**42**	**(53,380)**	**(1,520)**	**(54,858)**	1,046	27,842	5,863	34,751
Derecognition of loan *(Note 17)*	**–**	**(4,377)**	**–**	**(4,377)**	–	–	–	–
Other	**–**	**5,050**	**2,307**	**7,357**	–	(2,618)	(3)	(2,621)
On December 31	**214,457**	**496,360**	**3,046,277**	**3,757,094**	173,053	699,611	3,281,722	4,154,386
Current portion	**214,457**	**125,152**	**51,749**	**391,358**	173,053	147,355	49,081	369,489
Non-current portion	**–**	**371,208**	**2,994,528**	**3,365,736**	–	552,256	3,232,641	3,784,897

* *The repayment of the interest is classified in the consolidated statement of cash flows as operating cash flows.*

In January 2022, Atyrau refinery made early full repayment of the loan from Eximbank for 604 million US dollars (equivalent to 259,459 million tenge), including accrued interest. For the repayment the cash reserved in November 2021 was used.

Covenants

The Group is required to comply with the financial and non-financial covenants under the terms of loan agreements. As of December 31, 2023 and 2022, the Group complied with all financial and non-financial covenants.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

28. BORROWINGS (continued)

Hedge of net investment in the foreign operations

As at December 31, 2023, certain borrowings denominated in foreign currency were designated as hedge instrument for the net investment in the foreign operations. These borrowings are being used to hedge the Group's exposure to the US dollar foreign exchange risk on these investments. In 2023, a gain of 46,152 million tenge (2022: loss of 187,440 million tenge) on the translation of these borrowings were transferred to other comprehensive income and offset against translation gains of the net investments in foreign operations.

There is an economic relationship between the hedged item and the hedging instrument as the net investment creates a translation risk that will match the foreign exchange risk on the US Dollars borrowings. The Group has established a hedge ratio of 1:1 as the underlying risk of the hedging instrument is identical to the hedged risk component. The hedge ineffectiveness will arise when the amount of the investment in the foreign subsidiary becomes lower than the amount of the fixed rate borrowings. As at December 31, 2023 and 2022, there was no ineffective portion of the hedge.

29. LEASE LIABILITIES

Future minimum lease payments under leases together with the present value of the net minimum lease payments comprised the following:

In millions of tenge	Minimum lease payments December 31, 2023	Minimum lease payments December 31, 2022	Present value of minimum lease payments December 31, 2023	Present value of minimum lease payments December 31, 2022
Within one year	**19,767**	16,629	**17,400**	15,682
Two to five years inclusive	**49,777**	23,368	**26,128**	16,770
After five years	**89,424**	61,176	**61,752**	49,102
	158,968	101,173	**105,280**	81,554
Less: amounts representing finance costs	**(53,688)**	(19,619)	**–**	–
Present value of minimum lease payments	**105,280**	81,554	**105,280**	81,554
Less: amounts due for settlement within 12 months	**(19,767)**	(16,629)	**(17,400)**	(15,682)
Amounts due for settlement after 12 months	**139,201**	84,544	**87,880**	65,872

As at December 31, 2023, interest calculation was based on effective interest rates ranging from 2.95% to 20.65% (December 31, 2022: from 2.95% to 19.00%).

Changes in lease liabilities for the year ended December 31, 2023 and 2022:

In millions of tenge	2023	2022
On January 1	**81,554**	74,421
Additions of leases	**55,740**	14,219
Interest accrued *(Note 17)*	**7,420**	4,188
Repayment of principal	**(26,933)**	(19,709)
Interest paid	**(1,936)**	(1,389)
Foreign exchange loss	**1,964**	(1,629)
Foreign currency translation	**(1,442)**	3,089
Modification	**3,938**	11,120
Early termination	**(15,025)**	(4,404)
Other	**–**	1,648
On December 31	**105,280**	81,554

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

30. PROVISIONS

In millions of tenge	Asset retirement obli-gations	Provision for environ-mental obligation	Provision for taxes	Other	Total
As at December 31, 2021 (restated)	209,460	63,186	10,362	6,736	289,744
Foreign currency translation	9,164	3,286	238	325	13,013
Change in estimate	(117,668)	4,755	–	(408)	(113,321)
Unwinding of discount *(Notes 17)*	12,087	5,722	–	138	17,947
Provision for the year	15,987	9,998	1,785	43,220	70,990
Recovered	(61)	–	(1,070)	(608)	(1,739)
Use of provision	(97)	(5,594)	(392)	(1,006)	(7,089)
As at December 31, 2022 (restated)	128,872	81,353	10,923	48,397	269,545
Foreign currency translation	**(1,506)**	**(1,062)**	**(44)**	**(333)**	**(2,945)**
Change in estimate	**10,019**	**(1,198)**	**–**	**142**	**8,963**
Unwinding of discount *(Note 17)*	**10,556**	**2,719**	**–**	**123**	**13,398**
Provision for the year	**57,996**	**416**	**482**	**31,608**	**90,502**
Business combination *(Note 6)*	**4,346**	**–**	**–**	**–**	**4,346**
Recovered	**(356)**	**–**	**(4,319)**	**(28,364)**	**(33,039)**
Use of provision	**(1,222)**	**(5,167)**	**(68)**	**(4,518)**	**(10,975)**
As at December 31, 2023	**208,705**	**77,061**	**6,974**	**47,055**	**339,795**

Detailed description of significant provisions, including critical estimates and judgments used, is included in *Note 4*.

Current portion and long-term portion are segregated as follows:

In millions of tenge	Asset retirement obliga-tions	Provision for environ-mental obligation	Provision for taxes	Other	Total
Current portion	**2,847**	**3,751**	**6,974**	**20,004**	**33,576**
Long-term portion	**205,858**	**73,310**	**–**	**27,051**	**306,219**
As at December 31, 2023	**208,705**	**77,061**	**6,974**	**47,055**	**339,795**
Current portion	1,739	6,082	10,923	40,035	58,779
Long-term portion	127,133	75,271	–	8,361	210,765
As at December 31, 2022 (restated)	128,872	81,353	10,923	48,396	269,544

Other provisions

Asset retirement obligations and other provisions accrued for the year ended December 31, 2023, mainly include provisions disclosed in *Note 36.*

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

31. TRADE ACCOUNTS PAYABLE AND OTHER FINANCIAL AND NON-FINANCIAL LIABILITIES

In millions of tenge	December 31, 2023	December 31, 2022 (restated)
Trade accounts payable	**663,930**	565,092
Other financial liabilities		
Due to employees	**72,970**	67,073
Other trade payables	**42,562**	32,048
Derivative financial instruments	**114**	1,598
Payables to Samruk-Kazyna for exercising the Option (*Notes 7 and 34*)	**–**	164,937
Other	**49,050**	33,244
	164,696	298,900
Current portion	**145,953**	283,820
Non-current portion	**18,743**	15,080
	164,696	298,900
Other non-financial liabilities		
Contract liabilities	**153,962**	117,817
Other	**15,328**	16,950
	169,290	134,767
Current portion	**131,513**	93,219
Non-current portion	**37,777**	41,548
	169,290	134,767

As of December 31, 2023, and 2022, trade accounts payable were denominated in the following currencies:

In millions of tenge	December 31, 2023	December 31, 2022 (restated)
US dollars	**444,674**	322,797
Tenge	**153,016**	127,848
Romanian Leu	**51,244**	72,676
Euro	**8,157**	34,638
Other currency	**6,839**	7,133
Total	**663,930**	565,092

As at December 31, 2023 and 2022, trade accounts payable and other financial liabilities were not interest bearing.

Derivative financial instruments

The Group uses different commodity derivatives as a part of price risk management in trading of crude oil and petroleum products.

Statement of financial position:

	December 31, 2023	December 31, 2022
Derivative financial asset (in other financial assets)	**–**	681
Derivative financial liability (in other financial liabilities)	**(114)**	(1,598)
Derivative financial liability, net	**(114)**	(917)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

31. TRADE ACCOUNTS PAYABLE AND OTHER FINANCIAL AND NON-FINANCIAL LIABILITIES (continued)

Derivative financial instruments (continued)

Statement of comprehensive income:

	2023	2022
Realized losses from derivatives on petroleum products in production expenses *(Note 12)*	**(69)**	121,539

A movement in derivatives assets/(liabilities) is shown below:

	2023	2022
On January 1	**(917)**	8,838
Effective hedge in OCI	**849**	(11,872)
Inventory	**(60)**	1,524
Translation difference	**14**	593
On December 31	**(114)**	(917)

Derivative financial instruments are initially measured at fair value on the contract date, and are re-measured to fair value at subsequent reporting dates. Changes in the fair value of derivative financial instruments are recognized in profit or loss as they arise.

The Group has the following hedge transactions that qualify for fair value hedge:

Transaction	Hedged item	Risk hedged	Hedging instrument
Commodity purchase / sell at fixed price	Base operating stock (BOS) – meaning crude oil, feedstock, diesel, gasoline and jet Priced operational stock above or below BOS	Commodity price risk	Swap, Future, Purchase put / call option
Foreign exchange risk related to monetary item	Monetary item not in the functional currency of the Group	Change in foreign exchange rate	Swap, currency forward
Foreign exchange risk related to a firm commitment	Firm commitment not denominated in the functional currency of the Group	Change in foreign exchange rate	Swap, currency forward
Fair value risk related to fixed interest rates	Receivable or liability at fixed interest rate	Interest related fair value risk	Swap

The Group has the following hedge transactions that qualify for cash flow hedge:

Transaction	Hedged item	Risk hedged	Hedging instrument
Forecasted commodity purchase / sell	Forecasted refinery margin basket and forecasted Dated Brent differential	Commodity price risk	Swap, Future, Purchased put / call option
EUA certificates	Forecasted EUA certificates purchase	EUA certificate price risk	Futures

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

32. OTHER TAXES PAYABLE

In millions of tenge	**December 31, 2023**	December 31, 2022 (restated)
Rent tax on crude oil export	**37,557**	38,445
Mineral Extraction Tax	**30,485**	35,277
VAT	**23,233**	49,969
Individual income tax	**9,424**	8,002
Social tax	**7,620**	7,094
Withholding tax from non-residents	**1,957**	1,875
Excise tax	**1,537**	2,175
Other	**4,687**	5,660
	116,500	148,497

33. INCOME TAX EXPENSES

As at December 31, 2023 income taxes prepaid of 33,051 million tenge (2022: 36,167 million tenge) are mainly represented by corporate income tax. As at December 31, 2023 income taxes payable of 28,285 million tenge (2022: 66,648 million tenge) are mainly represented by corporate income tax.

Income tax expense comprised the following for the years ended December 31, 2023 and 2022:

In millions of tenge	**2023**	2022 (restated)
Current income tax		
Corporate income tax	**117,003**	204,159
Withholding tax on dividends and interest income	**86,287**	49,120
Excess profit tax	**691**	1,673
Deferred income tax		
Corporate income tax	**110,134**	123,855
Excess profit tax	**(10,391)**	239
Withholding tax on dividends	**(33,376)**	113,331
Income tax expenses	**270,348**	492,377

In Romania by Emergency Ordinance no. 186 issued December 28, 2022, a solidarity contribution was imposed on profits in the fossil fuel sector. The solidarity contribution is payable by companies operating in the crude oil, natural gas, coal, and refinery sectors on taxable profits of 2022 and 2023 exceeding 120% of the average taxable profit of the preceding four years, 2018 to 2021, at a rate of 60%. If the average taxable profit related to the period 2018-2021 is negative, for the purpose of calculating the solidarity contribution, it is considered that the average taxable profit is equal to zero. As of December 31, 2023, KMGI recognized income tax in the amount of 31.1 million US dollars (equivalent to 14,141 million tenge) (2022: 124.9 million US dollars, equivalent to 57,584 million tenge).

A reconciliation of income tax expenses applicable to profit before income tax at the statutory income tax rate (20% in 2023 and 2022) to income tax expenses was as follows for the years ended December 31:

In millions of tenge	**2023**	2022 (restated)
Profit before income tax	**1,194,809**	1,798,937
Statutory tax rate	**20%**	20%
Income tax expense on accounting profit	**238,962**	359,787
Share in profit of joint ventures and associates	**(55,703)**	(87,797)
Other non-deductible expenses and non-taxable income	**45,869**	112,247
Effect of different corporate income tax rates	**74,959**	92,045
Excess profit tax	**(9,700)**	1,912
Change in unrecognized deferred tax assets	**(24,039)**	14,183
Income tax expenses	**270,348**	492,377
Income tax expenses	**270,348**	492,377
	270,348	492,377

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

33. INCOME TAX EXPENSES (continued)

Deferred tax balances, calculated by applying the statutory tax rates effective at the respective reporting dates to the temporary differences between the tax basis of assets and liabilities and the amounts reported in the consolidated financial statements, are comprised of the following at December 31:

	2023					2022 (restated)				
In millions of tenge	**Corporate income tax**	**Excess profit tax**	**Withholding tax**	**Total**	**Recognized in profit and loss**	Corporate income tax	Excess profit tax	Withholding tax	Total	Recognized in profit and loss
Deferred tax assets										
Property, plant and equipment	**23,019**	**–**	**–**	**23,019**	**(934)**	23,953	–	–	23,953	1,190
Tax loss carryforward	**683,285**	**–**	**–**	**683,285**	**(2,191)**	685,476	–	–	685,476	3,017
Employee benefits related accruals	**7,628**	**–**	**–**	**7,628**	**1,004**	6,624	–	–	6,624	1,648
Impairment of financial assets	**8,105**	**–**	**–**	**8,105**	**8,104**	1	–	–	1	–
Environmental liability	**3,031**	**–**	**–**	**3,031**	**(728)**	3,759	–	–	3,759	670
Other	**105,081**	**10,334**	**–**	**115,415**	**68,187**	85,114	–	–	85,114	(2,231)
Less: unrecognized deferred tax assets	**(551,341)**	**–**	**–**	**(551,341)**	**24,039**	(575,380)	–	–	(575,380)	(14,183)
Less: deferred tax assets offset with deferred tax liabilities	**(223,313)**	**–**	**–**	**(223,313)**	**(35,364)**	(187,949)	–	–	(187,949)	30,581
Deferred tax assets	**55,495**	**10,334**	**–**	**65,829**	**62,117**	41,598	–	–	41,598	20,692
Deferred tax liabilities										
Property, plant and equipment	**773,061**	**540**	**–**	**773,601**	**205,420**	567,641	597	–	568,238	114,788
Undistributed earnings of joint ventures and associates	**–**	**–**	**571,270**	**571,270**	**(33,376)**	–	–	615,747	615,747	113,331
Other	**5,209**	**–**	**–**	**5,209**	**(8,196)**	2,974	–	–	2,974	(583)
Less: deferred tax assets offset with deferred tax liabilities	**(223,313)**	**–**	**–**	**(223,313)**	**(35,364)**	(187,949)	–	–	(187,949)	30,581
Deferred tax liabilities	**554,957**	**540**	**571,270**	**1,126,767**	**128,484**	382,666	597	615,747	999,010	258,117
Net deferred tax liability	**499,462**	**(9,794)**	**571,270**	**1,060,938**		341,068	597	615,747	957,412	–
Deferred tax expense					**66,367**					237,425

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

33. INCOME TAX EXPENSES (continued)

Deferred corporate income tax and excess profit tax are determined with reference to individual subsoil use contracts. Deferred corporate income tax is also determined for activities outside of the scope of subsoil use contracts. A deferred tax asset is recognized only to the extent that it is probable that future taxable profits will be available against which the asset can be utilized. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realized. Unrecognized deferred tax asset arising mainly from tax losses carry forward amounted to 551,341 million tenge as at December 31, 2023 (2022: 575,380 million tenge).

Tax losses carry forward as at December 31, 2023 and 2022 in the RK expire for tax purposes after ten years from the date they are incurred.

The movements in the deferred tax liability/(asset) were as follows:

	2023				2022 (restated)			
In millions of tenge	**Corporate income tax**	**Excess profit tax**	**Withholding tax**	**Total**	Corporate income tax	Excess profit tax	Withholding tax	Total
Net deferred tax liability as at January 1	**341,068**	**597**	**615,747**	**957,412**	203,789	358	465,891	670,038
Foreign currency translation	**(7,263)**	**–**	**(11,101)**	**(18,364)**	13,308	–	36,525	49,833
Tax expense/(income) during the year recognized in profit and loss	**110,134**	**(10,391)**	**(33,376)**	**66,367**	123,855	239	113,331	237,425
Tax expense during the year recognized in other comprehensive income	**327**	**–**	**–**	**327**	116	–	–	116
Business combination *(Note 6)*	**55,196**	**–**	**–**	**55,196**	–	–	–	–
Net deferred tax liability as at December 31	**499,462**	**(9,794)**	**571,270**	**1,060,938**	341,068	597	615,747	957,412

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

34. RELATED PARTY DISCLOSURES

Terms and conditions of transactions with related parties

Related party transactions were made on terms agreed between the parties that may not necessarily be at market rates, except for certain regulated services, which are provided based on the tariffs available to related and third parties. Outstanding balances at the year-end are mainly unsecured and interest free and settlement occurs in cash, except as indicated below. The Group recognizes allowances for ECL on amounts owed by related parties.

Transactions balances

The following table provides the balances of transactions with related parties as at December 31, 2023 and 2022:

In millions of tenge	December 31,	Due from related parties	Due to related parties	Cash and deposits placed with related parties	Borrowings payable to related parties
Samruk-Kazyna entities	**2023**	**93,745**	**4,392**	**5,911**	**453,333**
	2022	38,476	168,368	–	413,691
Associates	**2023**	**8,681**	**2,962**	**–**	**–**
	2022	16,348	3,431	–	–
Other state-controlled parties	**2023**	**46,897**	**1,419**	**–**	**80,992**
	2022	72,003	666	–	121,177
Joint ventures	**2023**	**173,119**	**235,725**	**–**	**–**
	2022	167,284	187,172	–	–

Due from/to related parties

Samruk-Kazyna entities

As at December, 31, 2023 due from related parties were mainly represented by the bonds receivable from the Samruk-Kazyna of 20,963 million tenge, net of expected credit losses (December 31, 2022: 19,599 million tenge) and trade receivables for crude oil by JSC "NC Kazakhstan Temir Zholy" for 30,677 million tenge.

As at December 31, 2023, the Company sold its 25% interest in Butadien LLP, a joint venture, with a carrying value of 8,621 million tenge *(Note 22)* to Samruk-Kazyna for a consideration of 8,531 million tenge. As a result, the Company lost its joint control over Butadien LLP.

As at December 31, 2023, payable due to Samruk-Kazyna for the exercised Option was fully repaid for 364 million US dollars (equivalent to 163,770 million tenge) *(Notes 7 and 31)*.

As at December 31, 2022 the financial aid provided to Samruk-Kazyna has been fully repaid by setting of against the payable for the acquisition of 49.50% ownership interest in KPI for 91,175 million tenge *(Note 7)*, payable for the acquisition of 49.9% ownership interest in Silleno for 816 million tenge and the part of the payable for exercising the Option for 424,587 million tenge *(Note 7)*.

Other state-controlled parties

During 2023, the Group purchased short-term notes of NB RK in the total amount of 451,598 million tenge with an interest rate of 15.96%, as well as short-term notes of NB RK acquired in 2022 and 2023 in the amount of 425,263 million tenge were redeemed.

During 2022, the Group short-term notes of NB RK in the total amount of 87,000 million tenge, out of which notes in the amount of 17,000 million tenge were redeemed.

Joint ventures

As at December 31, 2023 due from joint ventures were mainly represented by the loans given to PKOP of 25,975 million tenge (December 31, 2022: 53,889 million tenge), UGL of 54,980 million tenge (December 31, 2022: 63,622 million tenge) *(Note 25)*.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

34. RELATED PARTY DISCLOSURES (continued)

Due from/to related parties (continued)

Joint ventures (continued)

As at December 31, 2023 due to joint ventures were mainly represented by accounts payable for crude oil to TCO for 181,831 million tenge (December 31, 2022: 153,610 million tenge).

Borrowings payable to related parties

Samruk-Kazyna entities

In 2023, Samruk-Kazyna purchased the Company placed bonds for 70,000 million tenge. The difference between the fair value and nominal amount of bonds of 30,824 million tenge was recognized as transactions with Samruk-Kazyna in the consolidated statement of changes in equity *(Note 27)*.

In September 2022, Samruk-Kazyna purchased the Company placed bonds for 751,631 million tenge. The difference between the fair value and nominal amount of bonds of 380,477 million tenge was recognized as transactions with Samruk-Kazyna in the consolidated statement of changes in equity *(Notes 27 and 28)*.

Other state-controlled parties

As at December 31, 2023 the borrowings payable to related parties are represented by loans received from DBK by Atyrau refinery and Pavlodar refinery of 80,992 million tenge (December 31, 2022: 121,177 million tenge) *(Note 28)*.

Transactions turnover

The following table provides the total amount of transactions, which have been entered into with related parties during 2023 and 2022:

In millions of tenge		Sales to related parties	Purchases from related parties	Interest earned from related parties	Interest incurred to related parties
Samruk-Kazyna entities	**2023**	**158,392**	**33,705**	**4,058**	**39,795**
	2022	50,371	11,768	44,760	15,618
Associates	**2023**	**12,742**	**81,497**	**194**	**–**
	2021	18,705	67,615	235	–
Other state-controlled parties	**2023**	**346**	**31,349**	**5,421**	**12,475**
	2022	9,631	18,228	577	15,501
Joint ventures	**2023**	**439,502**	**1,709,923**	**17,540**	**–**
	2022	305,922	2,119,070	12,469	4

Sales to related parties / purchases from related parties

Joint ventures

In 2023, sales to joint ventures were mainly represented by transportation and cargo servicing provided to TCO for 22,613 million tenge (2022: 20,204 million tenge), transportation charges and oil servicing provided to MMG for 67,755 million tenge and for 137,855 million tenge, respectively (2022: 58,141 million tenge and 116,223 million tenge, respectively).

In 2023, purchases from joint ventures were mainly attributable to purchases of crude oil from TCO to perform the oil delivery customer contract for 1,602,095 million tenge (2022: 1,976,760 million tenge).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

34. RELATED PARTY DISCLOSURES (continued)

Key management employee compensation

Total compensation to key management personnel (members of the Boards of directors and Management boards of the Group) included in general and administrative expenses in the accompanying consolidated statement of the comprehensive income was equal to 7,769 million tenge and 7,375 million tenge for the years ended December 31, 2023 and 2022, respectively. Compensation to key management personnel mainly consists of contractual salary and performance bonus based on operating results.

35. FINANCIAL RISK MANAGEMENT, OBJECTIVES AND POLICIES

The Group's principal financial instruments mainly consist of borrowings, loans given, financial guarantees, cash and cash equivalents, bank deposits as well as accounts receivable and accounts payable. The Group is exposed to interest rate risk, foreign currency risk and credit risk. The Group further monitors the market risk and liquidity risk arising from all financial instruments.

Market risk

The Group takes on exposure to market risks. Market risks arise from open positions in interest rate, currency, and securities, all of which are exposed to general and specific market movements. The Group manages market risk through periodic estimation of potential losses that could arise from adverse changes in market conditions and establishing appropriate margin and collateral requirements. The sensitivity analyses in the following sections relate to the position as of December 31, 2023 and 2022.

Foreign currency risk

As a result of significant borrowings and accounts payable denominated in the US dollars and rubles, the Group's consolidated statement of financial position can be affected significantly by movement in the US dollar and ruble/ tenge exchange rates. The Group also has transactional currency exposures. Such exposure arises from revenues in the US dollars and rubles. The Group has a policy on managing its foreign currency risk in US dollar by matching US dollar and ruble denominated financial assets with US dollar and ruble denominated financial liabilities. The following table demonstrates the sensitivity to a reasonably possible change in the US dollar exchange rate, with all other variables held constant, of the Group's profit before income tax (due to changes in the cash flows of monetary assets and liabilities). The sensitivity of possible changes in exchange rates for other currencies are not considered due to its insignificance to the consolidated financial results of Group's operations.

In millions of tenge	Increase/ (decrease) in tenge to US dollar exchange rate	Effect on profit before tax
2023	**+14%**	**(224,731)**
	(14%)	**224,731**
2022	+21%	(404,338)
	(21%)	404,338

In millions of tenge	Increase/ (decrease) in tenge to RUB exchange rate	Effect on profit before tax
2023	**+29%**	**(38)**
	(29%)	**38**
2022	+22%	(54,044)
	(22%)	54,044

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

35. FINANCIAL RISK MANAGEMENT, OBJECTIVES AND POLICIES (continued)

Market risk (continued)

Interest rate risk

Interest rate risk is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term borrowings with floating interest rates. The Group's policy is to manage its interest rate cost using a mix of fixed and variable rate borrowings.

The following table demonstrates the sensitivity to a reasonably possible change in interest rates, with all other variables held constant, of the Group's profit before income tax (through the impact on floating rate borrowings). There is no significant impact on the Group's equity.

In millions of tenge	Increase/ decrease in basis points	Effect on profit before tax
2023	**+3.97**	**(19,982)**
SOFR	**−3.97**	**19,982**
2022		
LIBOR	+2.45	(12,989)
	−2.45	12,989

Credit risk

The Group trades only with recognized, creditworthy parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivable balances are monitored on an ongoing basis with the result that the Group's exposure to bad debts is not significant. The maximum exposure is the carrying amount as disclosed in *Note 24*. There are no significant concentrations of credit risk within the Group.

With respect to credit risks arising on other financial assets of the Group, which comprise cash and cash equivalents, bank deposits, loans and receivables from related parties and other financial assets, the Group's exposure to credit risks arises from default of the counterparty, with a maximum exposure equal to the carrying amount of these instruments.

The table below shows the risk profile of the Group's cash and cash equivalents, short-term and long-term deposits held in banks as at December 31, 2023 and 2022 using the Fitch credit ratings, or in their absence, using their equivalent rates in S&P and Moody's:

	As at December 31	
	2023	2022
AA- to A+	**19%**	15%
A to A-	**58%**	41%
BBB+ to BBB-	**18%**	41%
BB+ to BB-	**5%**	2%
B+ to B-	**–**	1%

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in raising funds to meet commitments associated with its financial liabilities. Liquidity risk may result from an inability to sell a financial asset quickly at close to its fair value.

Liquidity requirements are monitored on a regular basis and management ensures that sufficient funds are available to meet any commitments as they arise.

The table below summarizes the maturity profile of the Group's financial liabilities as at December 31, 2023 and 2022 based on contractual undiscounted payments.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

35. FINANCIAL RISK MANAGEMENT, OBJECTIVES AND POLICIES (continued)

Liquidity risk (continued)

In millions of tenge	Due less than one month	Due later than one month but not later than three months	Due later than three months but not later than one year	Due later than one year but not later than five years	Due after 5 years*	Total
As at December 31, 2023						
Borrowings*	**38,896**	**1,329**	**503,846**	**1,413,755**	**4,738,778**	**6,696,604**
Trade accounts payable	**122,306**	**340,634**	**200,991**	**–**	**–**	**663,931**
Financial guarantees**	**–**	**64**	**–**	**46,555**	**–**	**46,619**
Lease liabilities	**3,478**	**2,035**	**11,886**	**27,833**	**60,617**	**105,849**
Other financial liabilities	**71,323**	**24,605**	**69,792**	**25,441**	**414**	**191,575**
	236,003	**368,667**	**786,515**	**1,513,584**	**4,799,809**	**7,704,578**
As at December 31, 2022 (restated)						
Borrowings*	45,216	2,028	508,484	1,868,769	4,988,819	7,413,316
Trade accounts payable	105,697	297,295	162,100	–	–	565,092
Lease liabilities	2,890	1,720	12,410	39,080	26,216	82,316
Other financial liabilities	56,278	19,598	366,088	18,544	–	460,508
	210,081	**320,641**	**1,049,082**	**1,926,393**	**5,015,035**	**8,521,232**

* *The Group excludes from the maturity profile table the borrowings payable to project partners under the carry-in financing agreements, due to the uncertainty of maturity of these loans. As of December 31, 2023, the borrowings due to partners were 57,656 million tenge (December 31, 2022: 23,768 million tenge).*

** *The Group includes financial guarantees to the maturity profile table, however, the cash outflow in relation to financial guarantees is subject to certain conditions. Financial guarantee is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because of specified debtor fails to make payment when due in accordance with the original or modified terms of debt instrument. In 2023 and 2022 there was no significant instances of financial guarantees execution.*

Capital management

The primary objective of the Group's capital management is to maximise the shareholder value. The Group manages its capital to ensure that Group will be able to continue as a going concern while maximising the return to stakeholders through the optimisation of the debt and equity balance.

The Company seeks to maintain a prudent capital structure to support its capital investment plans and maintain investment grade credit rating through the cycle. Maintaining sufficient financial flexibility is considered strategically important to mitigate industry cyclicality while also enabling the pursuit of organic and inorganic investment opportunities. The Company has a comprehensive and disciplined internal approval process for capital expenditures, new projects and debt incurrence.

For the purpose of the Group's capital management, the capital structure of the Group consists of borrowings disclosed in *Note 28* less cash *(Note 26)* and short-term deposits *(Note 21)* and equity, comprising share capital, additional paid-in capital, other reserves and retained earnings as disclosed in *Note 27*.

The Group's management regularly reviews the capital structure. As part of this review, management considers the cost of capital and the risks associated with each class of capital. Also to achieve this overall objective, the Group's capital management, among other things, aims to ensure that it meets financial covenants attached to borrowings that define capital structure requirements. There have been no breaches of the financial covenants of any borrowing in the years ended December 31, 2023 and 2022 *(Note 28)*.

In millions of tenge	December 31, 2023	December 31, 2022 (restated)
Borrowings	**3,757,094**	4,154,386
less: cash, cash equivalents and short-term bank deposits	**2,111,776**	2,000,552
Net debt	**1,645,318**	2,153,834
Equity	**10,394,397**	9,867,426
Capital and net debt	**12,039,715**	12,021,260

No changes were made in the overall strategy, objectives, policies or processes for managing capital during the years ended December 31, 2023 and 2022.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

35. FINANCIAL RISK MANAGEMENT, OBJECTIVES AND POLICIES (continued)

Fair values of financial instruments

The carrying amount of the Group financial instruments as at December 31, 2023 and 2022 are reasonable approximation of their fair value, except for the financial instruments disclosed below:

	December 31, 2023					December 31, 2022 (restated)				
			Fair value by level of assessment					Fair value by level of assessment		
In millions of tenge	Carrying amount	Fair value	Level 1	Level 2	Level 3	Carrying amount	Fair value	Level 1	Level 2	Level 3
Bonds receivable from Samruk-Kazyna	**20,963**	**16,797**	**–**	**16,797**	**–**	19,595	20,138	–	20,138	–
NB RK notes	**43,708**	**43,708**	**–**	**43,708**	**–**	70,192	70,192	–	70,192	–
Loans and receivables due from related parties at fair value through profit and loss	**99,901**	**99,901**	**–**	**–**	**99,901**	130,690	130,690	–	–	130,690
Loans given to related parties at amortized cost, lease receivables from joint venture	**48,299**	**48,502**	**–**	**–**	**48,502**	29,254	29,242	–	–	29,242
Fixed interest rate borrowings	**3,253,754**	**3,051,997**	**2,452,370**	**599,627**	**–**	3,595,474	3,166,699	2,476,894	689,805	–
Floating interest rate borrowings	**503,340**	**503,340**	**–**	**503,340**	**–**	558,912	558,912	–	558,912	–

The fair value of bonds receivable from the Samruk-Kazyna and other debt instruments have been calculated by discounting the expected future cash flows at market interest rates.

All financial instruments for which fair value is recognized or disclosed are categorized within the fair value hierarchy, based on the lowest level input that is significant to the fair value measurement as a whole, as follows:

- Level 1 − quoted (unadjusted) market prices in active markets for identical assets or liabilities;
- Level 2 − valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable;
- Level 3 − valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

There were no transfers between Level 1 and Level 2 during the reporting period, and no transfers into or out of Level 3 category.

For assets and liabilities that are recognized at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period. There were no changes in the Group's valuation processes, valuation techniques, and types of inputs used in the fair value measurements during the year.

35. FINANCIAL RISK MANAGEMENT, OBJECTIVES AND POLICIES (continued)

Fair values of financial instruments (continued)

The significant unobservable inputs used in the fair value measurements categorized within Level 3 of the fair value hierarchy are shown below:

	Valuation technique	Significant unobservable inputs	Range as of December 31, 2023	2022
Loans given to related parties at amortized cost, lease receivables from joint venture	Discounted cash flow method	Interest and discount rate	**7.30-18.5%**	6.4-18.9%
Financial guarantee issued			**7.8%**	–

36. CONTINGENT LIABILITIES AND COMMITMENTS

Operating environment

Kazakhstan continues economic reforms and development of its legal, tax and regulatory frameworks as required by a market economy. The future stability of the Kazakhstan economy is largely dependent upon these reforms and developments and the effectiveness of economic, financial and monetary measures undertaken by the Government.

Commodity price risk

The Group generates most of its revenue from the sale of commodities, primarily crude oil and oil products. Historically, the prices of these products have been volatile and have fluctuated widely in response to changes in supply and demand, market uncertainty, the performance of the global or regional economies and cyclicality in industries. Prices may also be affected by the Government actions, including the imposition of tariffs and import duties, speculative trades, an increase in capacity or oversupply of the Group's products in its main markets. These external factors and the volatility of the commodity markets make it difficult to estimate future prices. A substantial or extended decline in commodity prices would materially and adversely affect the Group's business and the consolidated financial results and cash flows of operations. The Group mainly does not hedge its exposure to the risk of fluctuations in the price of its products.

Taxation

Tax legislation and regulatory framework of the Republic of Kazakhstan are subject to constant changes and allow for different interpretations. Instances of inconsistent opinions between local, regional and national tax authorities are not unusual. The current regime of penalties and interest related to reported and discovered violations of Kazakhstan's tax laws are severe. Penalties are generally 80% of the taxes additionally assessed and interest is assessed at the refinancing rate established by the National Bank of the Republic of Kazakhstan multiplied by 1.25. As a result, penalties and interest can amount to multiples of any assessed taxes. Fiscal periods remain open to review by the authorities in respect of taxes for five calendar years preceding the year of review.

Management believes that as at December 31, 2023 its interpretation of the relevant legislation is appropriate and that it is probable that the Group's tax positions will be sustained, except as provided for or otherwise disclosed in these consolidated financial statements.

Transfer pricing control

Transfer pricing control in Kazakhstan has a very wide scope and applies to many transactions that directly or indirectly relate to international business regardless of whether the transaction participants are related or not. *The transfer pricing legislation* requires that all taxes applicable to a transaction should be calculated based on market price determined in accordance with the arm's length principle. The law on transfer pricing came into force in Kazakhstan from January 1, 2009. The law is not explicit and there is little precedence with some of its provisions. Moreover, the law is not supported by detailed guidance for application of transfer pricing control to various types, as a result, there is a risk that the tax authorities may take a position that differs from the Group's position, which could result in additional taxes, fines and interest. As at December 31, 2023 management believes that its interpretation of the transfer pricing legislation is appropriate and that it is probable that the Group's positions with regard to transfer pricing will be sustained.

36. CONTINGENT LIABILITIES AND COMMITMENTS (continued)

Comprehensive tax audit at oil refineries of the Group

All three major oil refineries in the Group, Atyrau refinery, Pavlodar refinery and Shymkent refinery were subject to a comprehensive tax audit covering periods of a few years (up to 2020) in 2020-2022. As a result of the audits, the total amount of additional charges for VAT for 37,728 million tenge, for income tax for 17,830 million tenge, for other taxes for 476 million tenge, including penalties for all additional charges of 8,959 million tenge and reduction in tax carry-forward losses for 119,871 million tenge.

Atyrau refinery, Pavlodar refinery and Shymkent refinery did not agree with the assessment and appealed to the Ministry of Finance of RK. Shymkent refinery partially appealed one of the notifications regarding the amount of additional taxes and penalties for 3.694 million tenge. However, on February 15, 2024, the Civil Chamber of the Supreme Court canceled the decision in favor of Shymkent refinery made on November 15, 2021 by the Civil Chamber of the Shymkent City Court. Shymkent refinery continues to work to appeal the decision.

At all three refineries there are additional accruals on similar issues for VAT in the total amount of 33,709 million tenge, for corporate income tax 12,146 million tenge, including penalties on all additional accruals and a reduction in carry-forward losses for 15,040 million tenge.

Legal issues and claims

The civil litigation at KMGI

Faber Invest & Trade Inc. (further Faber), the non-controlling shareholder of KMGI subsidiaries, resumed several previous civil filings in 2020, one of which challenged the increase in the Rompetrol Rafinare Constanta, the KMGI subsidiary, share capital in 2003-2005. The hearings have been held periodically, but no final decisions were made. On July 13, 2021, the court rejected the complaint of Faber. However, Faber appealed against this decision. Based on the results of the hearing in December 2021, the court granted the complaint and returned the case for reconsideration.

Most of Faber's lawsuits were dismissed by the Supreme Court in May and September 2022, including an appeal filed by Faber challenging Faber's corporate documents approving the bond issue and paying off historical budget debts filed after the statute of limitations, hence the first judgment in favor of Rompetrol Rafinare Constanta became final. Faber filed the same lawsuit for the third time, but now in the court of Constanta. In January 2023, hearings were held on the claims filed by Faber. Faber withdrew its claims in two cases, and the court postponed the decision. The next hearing in the Faber case is scheduled for March 2023.

The Group believes that its position regarding Faber's new application will be resolved in a similar manner to other similar proceedings resolved in favor of the Group. Accordingly, the Group did not recognize a provision in this case as of December 31, 2023.

Civil legal dispute between the National Mineral Resources Agency (NAMR) and Oilfield Exploration Business Solutions S.A (OEBS), subsidiary of KMGI, at the Focsani field

On December 17, 2019 OEBS has been noticed by the NAMR that a Request for Arbitration would have been filed in to ICC Paris for an alleged breach by OEBS of the Concession Agreement as regards the exploration block near Focsani. Starting from that period, OEBS was in dispute with NAMR. On July 29, 2022 the Court decided to oblige OEBS to pay 10.1 million U.S. dollars from a total NAMR claim of 20 million U.S. dollars. In 2022, the Group recognized a provision in the amount of 10.1 million dollars (equivalent to 4,673 million tenge (*Note 30*). As at December 31, 2023, the Group had not made any payments to NAMR, and the Group believes that no changes to the assessment of provision are required.

Competition investigation in Moldova

Since the beginning of 2021, Rompetrol Moldova (further RPM), a subsidiary of KMGI operating in Moldova, is involved in an investigation and related court proceedings initiated by the Competition Council of Moldova (further CCM) alleging RPM agreed with other industry players on retail prices for petroleum products. RPM is challenging the competition report prepared by the CCM investigation division that forms the basis for the allegations in accordance with applicable regulations. A few attempts to dismiss the said report were unsuccessful with the latest ruling rejecting RPM's request to dismiss the report issued by the local court on May 26, 2022. RPM has filed an appeal and a first hearing is scheduled for March 21, 2023. In 2022, the Group recognized a provision in the amount of 12 million dollars (equivalent to 5,552 million tenge) *(Note 30)*. During 2023, RPM filed in an appeal and the first hearing was scheduled for October 4, 2023, however, the court rejected the appeal. The second appeal was filed in on January 24, 2024. A hearing date has not been scheduled. As at December 31, 2023 the Group believes that no changes to the assessment of provision are required.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

36. CONTINGENT LIABILITIES AND COMMITMENTS (continued)

The case of arbitration between KazRosGas LLP, a joint venture of the company, (further KRG) and Karachaganak Petroleum Operating B.V. (further KPO)

On August 23, 2022, the Secretariat of the International Chamber of Commerce in Paris submitted to KRG a Notice of Initiation of Arbitration Proceedings by KPO, which is the operator under the Final Production Sharing Agreement for the contract area of the Karachaganak oil and gas condensate field dated January 27, 1997, with amendments and additions (further FPSA)**.** KPO intends to increase the gas sale price under the existing Karachaganak Gas Purchase and Sale Agreement. If the gas price is agreed later than October 1, 2022, KRG and KPO shall recalculate the gas price for the period from October 1, 2022 to the date of the price agreement.

In October 2022, a working group was established to develop a negotiating position of the Kazakh side on the peaceful settlement of the dispute over the arbitration process between the KRG and KPO, chaired by the First Vice Minister of Energy of RK. The working group also includes representatives of the Ministry of Energy of RK, JSC "NC "QazaqGaz", KMG and KRG.

In August 2023, the Tribunal approved the Procedural Timetable for the Arbitration (further Arbitration Timetable), according to which the final hearing is scheduled for the week of November 18, 2024, and the deadline for the Tribunal to make decision is until the end of March 2025.

On September 29, 2023, KPO sent a detailed claim to the Tribunal and this claim was provided to KRG. According to the Arbitration Timetable, the KRG provides a response to the claim by December 22, 2023. Following the meeting on December 22, 2023, the KRG's response to the KPO claim was prepared and sent to Arbitration. In January, 2024, a meeting was held between the Ministry of Energy of the Republic of Kazakhstan, KPO, KMG and the KRG for the purpose of a peaceful settlement. The agreement has not been yet reached. Still, the Group believes that the risk of loss is not probable as of December 31, 2023.

The case of an administrative offense of the Pavlodar refinery initiated by the Department of Agency for protection and development of competition of RK (hereafter – Antimonopoly agency) of the Pavlodar region

In 2022 the Prosecutor's Office of the Pavlodar region together with the Antimonopoly agency conducted an inspection of the Pavlodar refinery operations for compliance with the legislation of the RK in the field of oil and petroleum products turnover, labor, tax and antimonopoly legislation for 2020-2021. On March 16, 2022 Antimonopoly agency issued the Conclusion which stated that Pavlodar refinery set monopolistically high tariff for oil refining services. On July 25, 2022, Antimonopoly agency of the Pavlodar region initiated an administrative offence and issued a Protocol to the Specialized Court for Administrative Offenses of Pavlodar city for setting by the Pavlodar refinery monopolistically high tariff for oil refining services in 2021 and to confiscate revenue for 2021 of 21,961 million tenge and impose fine of 6,226 million tenge.

On June 9, 2023, Specialized Court for Administrative Offenses of Pavlodar city issued a resolution to terminate administrative proceedings. On June 30, 2023, Decree on the consumption of administrative proceedings and the cancellation of the protocol entered into legal force. As a result, in June 2023, Pavlodar refinery recovered a provision accrued in 2022 in the amount of 28,187 million tenge and recognized in other operating income *(Note 30).*

Environmental issues

In 2021, a new Environmental Code came into force, which increases the responsibility of industrial enterprises for environmental pollution, and also provides for the introduction of a waste management hierarchy and the construction of waste energy recycling plants. According to the Environmental Code, facilities belonging to category I after the cessation of operation of facilities that have a negative impact on the environment must eliminate the consequences of the operation of such facilities and provide the authorized body in the field of environmental protection with financial security for obligations related to the elimination of the consequences of the activity within three years, starting July 1, 2021. In accordance with the Environmental Code of the Republic of Kazakhstan, the Company has legal obligations to dismantle and liquidate fixed assets and restore land plots. As of December 31, 2023, the Group's largest oil refineries: Atyrau and Pavlodar Oil Refineries recognized a provision in the amount of 39,271 million tenge *(Note 30)*, which is equal to the present value of future cash outflows associated with the dismantling of the plant and land reclamation. For tax purposes, the Company did not take into an account these expected expenses as part of deferred taxes, since it does not expect taxable profit after the liquidation of assets.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

36. CONTINGENT LIABILITIES AND COMMITMENTS (continued)

Environmental audits

The Atyrau Region Department of Ecology of the Environmental Regulation and Supervision Committee at the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan (hereinafter referred to as the "Department of Ecology") undertook an inspection of the onshore facilities of North Caspian Operating Company N.V., which is the operator under the Production Sharing Agreement for the North Caspian Sea (hereinafter referred to as the "Operator"). Based on the results of the inspection, the Operator was issued an order to rectify violations. One of the specific issues highlighted pertains to the overstocking of sulfur in the amount of 1,020 thousand tons.

The Operator did not agree with the inspection results and hence, filed an administrative lawsuit to dispute the aforementioned order. On June 14, 2023, the Specialized Inter-District Administrative Court of Astana made a ruling in favour of the Operator in relation to the disputed sulfur storage. On February 27, 2024 the SIAC of Astana considered the appeal from the Department of Ecology and ruled against the Operator. This ruling will be appealed in the Supreme Court. Should the Operator be held accountable as per the administrative ruling, the fine amount will be determined in line with the Administrative Code of the Republic of Kazakhstan. As at December 31, 2023 no provisions pertaining to this inspection have been recognized by the Group.

Cost recovery audits

Kashagan has a share of 16.88% in the North Caspian Production Sharing Agreement dated November 18, 1997, as amended (further PSA).

KMG Karachaganak LLP, subsidiary of the Company, has a share of 10% in the Final Production Sharing Agreement in respect of the contract area of the Karachaganak oil and gas condensate field dated January 27, 1997, as amended (further FPSA).

Under the base principles of the PSA and FPSA, the RK transferred to the participants of these agreements (further Contractors) the exclusive rights to conduct activities in the subsurface areas, but did not transfer neither ownership rights, nor lease rights to these areas. Thus, all extracted and processed oil (i.e. the hydrocarbons produced) are the property of the RK.

Subsoil use operations are carried out on the basis of reimbursement of certain expenditures and the RK reimburses such expenditures to Contractors not in cash but in the form of the portion of oil production, thereby allowing Contractors to recover their expenditures (further Recoverable Costs) and earn profit.

PSA and FPSA provides for a procedure of expense reimbursement and determine the list of expenses that are not Recoverable Costs.

PSA LLP conducts audits of Recoverable Costs as an organization authorized to act on behalf of the RK within the framework of the PSA and FPSA (further the Authorized Body).

The RK and the Contractors under the PSA and FPSA (except for Kashagan and KMG Karachaganak LLP) have a number of disputes concerning the application of certain PSA and FPSA provisions, which are subject to arbitration and expert determination under the PSA and FPSA. The Contractors consider that they have acted in accordance with the PSA and FPSA, the RK laws and applicable standards and best practices. As of December 31, 2023, the Republic of Kazakhstan and the Contractors have appointed their arbitrators.

Kazakhstan local market obligation

The Government requires oil companies in the RK to supply a portion of the products to meet the Kazakhstan domestic energy requirement on an annual basis, mainly to maintain oil products supply balance on the local market and to support agricultural producers during the spring and autumn sowing and harvest campaigns.

Kazakhstan local market oil prices are significantly lower than export prices and even lower than the normal domestic market prices determined in an arm-length transaction. If the Government does require additional crude oil to be delivered over and above the quantities currently supplied by the Group, such supplies will take precedence over market sales and will generate substantially less revenue (not less than cost of production) than crude oil sold on the export market, which may materially and adversely affect the Group's business, prospects, consolidated financial position and performance.

In 2023, in accordance with its obligations, the Group delivered to the Kazakhstan market 7,619 thousand tons of crude oil, including its share in the joint ventures and associates in the total volume of 2,639 thousand tons (2022: 7,951 thousand tons, including its share in the joint ventures and associates of 3,044 thousand tons).

36. CONTINGENT LIABILITIES AND COMMITMENTS (continued)

Commitments under subsoil use contracts

As at December 31, 2023, the Group had the following commitment (net of VAT) related to minimal working program in accordance with terms of licenses, production sharing agreements and subsoil use contracts, signed with the Government, including its share in joint ventures and associate:

In millions of tenge	Capital expenditures, including joint ventures and associates	Capital expenditures of joint ventures and associates	Operational expenditures, including joint ventures and associates	Operational expenditures of joint ventures and associates
Year				
2024	**342,291**	**25,633**	**76,014**	**69,296**
2025	**262,118**	**7,690**	**22,549**	**11,650**
2026	**285,609**	**10,933**	**20,392**	**12,330**
2027	**352,313**	**6,344**	**18,876**	**13,026**
2028-2049	**340,207**	**7,316**	**41,345**	**13,567**
Total	**1,582,538**	**57,916**	**179,176**	**119,870**

As at December 31, 2022 commitments (net of VAT) under subsoil use contracts included:

In millions of tenge	Capital expenditures, including joint ventures and associates	Capital expenditures of joint ventures and associates	Operational expenditures, including joint ventures and associates	Operational expenditures of joint ventures and associates
Year				
2023	314,158	15,136	80,598	76,125
2024	223,085	7,513	14,328	9,804
2025	306,900	7,930	14,803	10,206
2026	339,652	8,434	14,927	10,368
2027-2048	230,333	9,766	31,573	11,225
Total	**1,414,128**	**48,779**	**156,229**	**117,728**

Oil supply commitments

As of December 31, 2023, Kashagan had commitments under the oil supply agreements in the total amount of 3.0 million tons (December 31, 2022: 4.5 million tons). The monetary equivalent is determined based on the market prices at the moment of realization.

Other contractual commitments

As at December 31, 2023, the Group, had other capital commitments related to acquisition and construction of long-lived assets of approximately 166,049 million tenge, net of VAT, including its share in joint ventures commitments of 15,465 (as at December 31, 2022: 240,794 million tenge, net of VAT, including its share in joint ventures commitments of 13,346 million tenge).

As at December 31, 2023, the Group had commitments in the total amount of 93,919 million tenge (as at December 31, 2022: 152,824 million tenge) under the investment programs approved by the joint order of Ministry of Energy of RK and *Committee on Regulation of Natural Monopolies and Protection of Competition of the Ministry of National Economy of RK* to facilitate production units.

Non-financial guarantees

As of December 31, 2023 and 2022, the Group has outstanding performance guarantees issued in favour of third parties whereas it provides guarantee should its joint venture or associate fail to perform their obligations under the natural gas purchase-sale, transportation and other agreements.

As of December 31, 2023 and 2022, the management of the Group believes that there were no expected cases of non-performance from the guaranteed parties and, accordingly, no obligations related to the above stated non-financial contingencies were recognized.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

37. SEGMENT REPORTING

The Group's operating segments have their own structure and management according to the type of the produced goods and services provided. Moreover, all segments are strategic directions of the business which offer different types of the goods and services in different markets. The functions have been defined as the operating segments of the Group because they are segments a) that engages in business activities from which revenues are generated and expenses incurred; b) whose operating results are regularly reviewed by the Group's chief operating decision makers to make decisions.

The Group's activity consists of three main operating segments: exploration and production of oil and gas, oil transportation, and refining and trading of crude oil and refined products. The Group presents the Company's activities separately in Corporate segment, since the Company performs not only the functions of the parent company, but also carries out operational activities. The remaining operating segments have been aggregated and presented as other operating segment due to their insignificance.

Disaggregation of revenue by types of goods and services is presented in *Note 9* to the consolidated financial statements.

As at December 31, 2023 and 2022 disaggregated revenue mainly represents sales and services made to the external parties by the following operating segments:

	December 31, 2023					
In millions of tenge	**Exploration and production of oil and gas**	**Oil transpor-tation**	**Refining and trading of crude oil and refined products**	**Corporate**	**Other**	**Total**
Sales of crude oil and gas	**887,301**	**–**	**3,740,824**	**–**	**–**	**4,628,125**
Sales of refined products	**4,948**	**–**	**2,008,452**	**823,828**	**11,693**	**2,848,921**
Refining of oil and oil products	**–**	**–**	**248,058**	**–**	**–**	**248,058**
Oil transportation services	**–**	**218,890**	**1,892**	**5,172**	**188**	**226,142**
Other revenue	**17,519**	**48,112**	**145,676**	**1,668**	**155,322**	**368,297**
Total	**909,768**	**267,002**	**6,144,902**	**830,668**	**167,203**	**8,319,543**

	December 31, 2022 (restated)					
In millions of tenge	Exploration and production of oil and gas	Oil transporta-tion	Refining and trading of crude oil and refined products	Corporate	Other	Total
Sales of crude oil and gas	668,270	–	3,925,701	–	–	4,593,971
Sales of refined products	4,334	–	2,577,156	775,804	12,566	3,369,860
Refining of oil and oil products	–	–	204,390	–	–	204,390
Oil transportation services	–	184,042	1,493	1,810	188	187,533
Other revenue	25,318	46,324	122,484	1,451	141,750	337,327
Total	697,922	230,366	6,831,224	779,065	154,504	8,693,081

Segment performance is evaluated based on revenues, net profit and adjusted EBITDA, which are measure on the same basis as in the consolidated financial statements.

EBITDA is a supplemental non-IFRS financial measure used by management to evaluate segments performance, and is defined as earnings before depreciation, depletion and amortization, impairment of property, plant and equipment, exploration and evaluation assets, intangible assets and assets classified as held for sale, exploration expenses, impairments of joint ventures and associates, finance income and expense, income tax expenses.

EBITDA, % is calculated as EBITDA of each reporting segment divided by the total EBITDA.

Eliminations and adjustments represent the exclusion of intra-group turnovers. Inter-segment transactions were made on terms agreed to between the segments that may not necessarily comply with market rates, except for certain regulated services, which are provided based on the tariffs available to related and third parties.

Geographic information

The Group's property, plant and equipment *(Note 18)* are located in the following countries:

In millions of tenge	**2023**	2022 (restated)
Kazakhstan	**6,627,783**	6,320,568
Other countries	**553,423**	673,433
	7,181,206	6,994,001

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

37. SEGMENT REPORTING (continued)

The following represents information about profit and loss for 2023 and assets and liabilities as at December 31, 2023 of operating segments of the Group:

In millions of tenge	Exploration and production of oil and gas	Oil transportation	Refining and trading of crude oil and refined products	Corporate	Other	Eliminations and adjustments	Total
Revenues from sales to external customers	909,768	267,002	6,144,902	830,668	167,203	–	8,319,543
Revenues from sales to other segments	1,415,539	165,242	180,601	81,526	145,221	(1,988,129)	–
Total revenue	**2,325,307**	**432,244**	**6,325,503**	**912,194**	**312,424**	**(1,988,129)**	**8,319,543**
Cost of purchased oil, gas, petroleum products and other materials	(47,394)	(19,317)	(5,434,580)	(544,457)	(44,376)	1,468,243	(4,621,881)
Production expenses	(534,569)	(252,477)	(395,067)	(212,249)	(244,880)	419,520	(1,219,722)
Taxes other than income tax	(424,909)	(19,181)	(17,673)	(122,151)	(10,166)	–	(594,080)
Transportation and selling expenses	(191,482)	(10,514)	(99,055)	(10,505)	–	66,031	(245,525)
General and administrative expenses	(43,104)	(17,453)	(56,193)	(50,932)	(24,992)	14,882	(177,792)
Share in profit of joint ventures and associates, net	356,257	85,161	70,926	–	21,833	–	534,177
EBITDA	**1,440,106**	**198,463**	**393,861**	**(28,100)**	**9,843**	**(19,453)**	**1,994,720**
EBITDA, %	**72%**	**10%**	**20%**	**(1%)**	**–**	**(1%)**	
Depreciation, depletion and amortization	(415,759)	(39,611)	(132,971)	(3,549)	(9,314)	–	(601,204)
Finance income	16,904	10,701	38,305	120,971	16,157	(55,793)	147,245
Finance costs	(28,780)	(8,774)	(116,256)	(193,272)	(6,952)	31,961	(322,073)
Impairment of property, plant and equipment, intangible assets and exploration expenses	(130,502)	(1,658)	(100,809)	–	2,389	–	(230,580)
Income tax expenses	(154,885)	(9,307)	(36,969)	(67,780)	(1,407)	–	(270,348)
Profit/(loss) for the year from continuing operations	**218,275**	**35,510**	**79,165**	**662,071**	**(11,719)**	**(58,841)**	**924,461**
Other segment information							
Investments in joint ventures and associates	4,056,464	536,576	129,442	–	98,945	–	4,821,427
Capital expenditures	389,846	193,008	153,989	44,097	22,597	–	803,537
Allowances for obsolete inventories, expected credit losses on trade receivables, loans and receivables from related parties, other current financial assets and impairment of other current non-financial assets	(14,486)	(7,365)	(50,362)	(35,150)	(10,850)	–	(118,213)
Assets of the segment	**11,568,853**	**1,475,597**	**3,093,384**	**1,863,189**	**428,372**	**(1,486,683)**	**16,942,712**
Liabilities of the segment	**1,627,121**	**370,240**	**1,844,841**	**4,549,994**	**136,991**	**(1,980,872)**	**6,548,315**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

37. SEGMENT REPORTING (continued)

The following represents information about profit and loss for 2022 and assets and liabilities as at December 31, 2022 of operating segments of the Group:

In millions of tenge	Exploration and production of oil and gas	Oil transportation	Refining and trading of crude oil and refined products	Corporate	Other	Eliminations and adjustments	Total
Revenues from sales to external customers*	697,922	230,366	6,831,224	779,065	154,504	–	8,693,081
Revenues from sales to other segments*	1,569,854	151,266	154,147	82,486	125,585	(2,083,338)	–
Total revenue*	2,267,776	381,632	6,985,371	861,551	280,089	(2,083,338)	8,693,081
Cost of purchased oil, gas, petroleum products and other materials*	(39,249)	(18,645)	(6,007,073)	(471,008)	(38,972)	1,614,771	(4,960,176)
Production expenses*	(470,203)	(211,538)	(433,634)	(189,323)	(218,212)	378,669	(1,144,241)
Taxes other than income tax*	(534,565)	(17,376)	(15,358)	(100,782)	(9,840)	–	(677,921)
Transportation and selling expenses*	(166,841)	(15,212)	(78,555)	(9,415)	–	64,671	(205,352)
General and administrative expenses*	(32,854)	(17,123)	(51,531)	(30,453)	(30,682)	2,164	(160,479)
Share in profit of joint ventures and associates, net*	819,011	136,499	57,587	–	(21,787)	–	991,310
EBITDA*	1,843,075	238,237	456,807	60,570	(39,404)	(23,063)	2,536,222
EBITDA, %*	73%	9%	18%	3%	(2%)	(1%)	
Depreciation, depletion and amortization*	(308,695)	(44,760)	(141,362)	(2,820)	(9,263)	–	(506,900)
Finance income*	556,187	4,212	19,747	137,177	16,776	(613,496)	120,603
Finance costs*	(28,673)	(6,908)	(127,869)	(717,341)	(5,972)	578,708	(308,055)
Impairment of property, plant and equipment, intangible assets and exploration expenses*	(11,653)	472	(9,682)	–	946	–	(19,917)
Income tax expenses*	(307,826)	(53,133)	(80,692)	(49,215)	(1,511)	–	(492,377)
Profit/(loss) for the year from continuing operations*	1,474,001	42,027	30,477	(168,543)	(39,315)	(32,087)	1,306,560
Other segment information							
Investments in joint ventures and associates	4,179,880	582,862	102,569	–	82,092	–	4,947,403
Capital expenditures*	321,014	68,276	111,714	17,678	16,283	–	534,965
Allowances for obsolete inventories, expected credit losses on trade receivables, loans and receivables from related parties, other current financial assets and impairment of other current non-financial assets	(6,197)	(10,966)	(47,786)	(28,912)	(9,066)	–	(102,927)
Assets of the segment	11,637,703	1,373,621	3,004,932	1,445,989	386,151	(1,191,506)	16,656,890
Liabilities of the segment	1,427,150	311,632	1,988,310	4,584,712	120,799	(1,643,139)	6,789,464

* *Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2021 and reflect adjustments made, refer to Note 7.*

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (continued)

38. SUBSEQUENT EVENTS

On February 21, 2024, KMG signed a purchase and sale agreement with PJSC Tatneft, a third party, for a sale of 50% shares of Karaton Operating Ltd., a wholly owned subsidiary of KMG, for cash consideration of 18.2 million US dollars (equivalent to 8,255 million tenge on the date of disposal of the subsidiary). As a result, the Group lost control over the subsidiary and recognized investment in joint venture.

APPENDIX

Report on Compliance / Non-Compliance With The Principles and Provisions of the Corporate Governance Code of JSC NC Kazmunaygas

This report is prepared in furtherance of item 6 of the Code and covers information on KMG's compliance / non-compliance with the principles and provisions of the Code.

In general, at year-end 2023, KMG was in compliance with the provisions and principles of the Code, taking into account the following aspects:

1. **In line with item 6.1, Chapter 5, Section 1 of the KMG Code,** "the Chairman of the Board of Directors is elected by a decision of the sole shareholder; if the Chairman of the Board of Directors is elected from among the Fund's representatives, the Board of Directors elects a senior independent director from among the independent directors."

This requirement of the Code was not complied with in KMG during the reporting period. A Board of Directors member representing the majority shareholder (the Fund) was elected as the Chairman of the Board of Directors by the resolution of the General Meeting of Shareholders of KMG dated 14 August 2023 (Minutes No. 4/2023); however, the senior independent director was not elected from among the independent directors of the Board of Directors.

At the same time, in order to fulfil this requirement of the Code, the Company's Corporate Governance Improvement Plan for 2024–2025 (the "Plan") provides for the election of a senior independent director from among the independent directors of the Board of Directors.

2. **In line with item 2, Chapter 1, Section 2 of the Code,** "It is recommended to provide an optimal asset structure for the Fund's Organisations. In a Holding company, the parent company can be established in the form of a joint stock company. Other organisations are recommended to be established in the form of limited liability partnerships. In Organisations already established in the form of a joint stock company, it is recommended to consider the possibility of reorganisation into the form of a limited liability partnership, taking into account economic, legal and other aspects and ensuring the interests of the Fund group. When establishing new Organisations, the preferred organisational and legal form is a limited liability partnership. The establishment of new Organisations in the form of a joint stock company is permitted in exceptional cases, such as the planned future sale of the Organisation's shares on the stock market."

These requirements of the Code were generally complied with in KMG during the reporting period. KMG takes a consistent effort to optimise its asset structure. KMG's preferred form for new legal entities is a limited liability partnership as recommended by the Code. In 2023, the Company neither created joint stock companies nor reorganised existing joint stock companies into limited liability partnerships. Still, the work on optimising the KMG Group asset structure will continue in accordance with the approved plans / programmes[1].

3. **In line with item 14, Chapter 1, Section 2 of the Code** "The Boards of Directors of the Fund and Organisations shall ensure the implementation of the standards of business ethics and their observation. All officials and employees of the Fund and Organisations shall sign a statement confirming their familiarisation with the Code of Business Ethics and regularly reaffirm their knowledge of the Code.

   Training of officials and employees that is aimed at understanding of the Code of Business ethics, the role of the Ombudsman and the availability of the whistleblowing system shall be organised on a regular basis in the Fund and Organisations."

These requirements of the Code were generally complied with in KMG as of 31 December 2023. KMG conducts its business in a fair, honest and transparent manner while also paying special attention to the observance of these principles by our colleagues and partners. To this effect, KMG approved the Code of Business Ethics, Anti-Corruption Policy, Conflict of Interest Policy for Employees and Officials, and the Counterparty Due Diligence Policy.

Every year, the Company conducts training for new hires and existing employees as regards compliance with ethical standards, commitments and conduct of employees. On top of that, employees provide a written statement of their commitment to observe the Code of Business Ethics and the Anti-Corruption Policy. At the same time, the Company takes a consistent effort to collect written acknowledgements from all its employees that they have read and understood the Code of Business Ethics.

Furthermore, KMG's Compliance Service conducts annual anti-corruption training. On 28 September 2023, a workshop on effective corruption countering, with the participation of a representative of the Anti-Corruption Agency of the Republic of Kazakhstan, was held for the middle and top management, and on 6 November 2023, a conflict of interest training course was held for all employees. However, no assessment of knowledge of the Code of Business Ethics was conducted in 2023.

4. **In line with item 5, Chapter 3, Section 2 of the Code,** "Sustainable development shall be integrated in:
   1. management system;
   2. development strategy;
   3. key processes, including risk management, planning (long-term (strategy), medium-term (5-year development plan) and short-term (annual budget) periods), accountability, risk management, HR management, investments, operational activities and other as well as in the decision-making process at all levels – from bodies (General Meeting of Shareholders (the Sole Shareholder), Board of Directors, Executive Body), to ordinary employees."

This requirement of the Code was generally complied with in KMG during the reporting period. In 2020, KMG's Board of Directors adopted a resolution to approve the Sustainability Management System Guidelines, which include a description of the stakeholder engagement process, integration of sustainability principles into key processes and monitoring, annual reporting on sustainable development, implementation of priority areas (initiatives) in the field of sustainable development, enhancement and maintenance of a sustainability culture, risk identification and assessment, documentation management, and measurements of performance in the area of sustainable development. At the same time, the work continues to integrate sustainable development into key processes.

5. **In line with item 3.6, Chapter 5, Section 2 of the Code** "Members of the Board of Directors shall fulfil their responsibilities and adhere to the following principles in their activities:
   act with due diligence, skill and prudence – members of the Board of Directors are recommended to continuously improve their knowledge in areas relevant to the Board of Directors' competencies and the performance of their duties on the Board of Directors and its committees, including such areas as legislation, corporate governance, risk management, finance and audit, sustainable development, knowledge of the industry and the specifics of the organisation's activities; in order to understand the current issues related to the organisation's operations, members of the Board of Directors shall regularly visit the key facilities of the organisation and hold meetings with employees."

This requirement of the Code was generally complied with in KMG during the reporting period. The Chairman of KMG's Management Board regularly visited the Company's key facilities, however all members of the Board of Directors did not visit the Company's key facilities.

At the same time, in order to fulfil this requirement of the Code, the Plan provides for visits of the Board of Directors' members to KMG's key facilities and meetings with employees.

6. **In line with item 6, Chapter 5, Section 2 of the Code** "The process of selecting members of the Board of Directors shall be transparent and carried out with the involvement of the Board of Directors of the Fund (in relation to Boards of Directors of the companies) and the organisation.", "In organisations with several shareholders, the process of electing members of the Board of Directors and the Chairman of the Board of Directors shall be carried out in accordance with the Law of the Republic of Kazakhstan On Joint Stock Companies and the organisation's charter. In these organisations, it is recommended that the Nomination and Remuneration Committee of the organisation's Board of Directors be involved in determining the composition and required skills and competencies of the Board of Directors and candidates for the Board of Directors."

This requirement of the Code was generally not complied with in KMG during the reporting period. When updating the composition of the Board of Directors in 2023, neither the Board of Directors nor the Nomination and Remuneration Committee were involved in this process; the Board of Directors of the Fund was represented by the Chairman of the Management Board of the Fund,

[1] KMG Group is reducing the number of its legal entities as part of the privatisation and divestment programmes. On 29 December 2020, the Government of the Republic of Kazakhstan approved the Comprehensive Privatisation Plan for 2021–2025 covering 51 KMG Group companies, including 22 within the IPO perimeter (Decree No. 908).
On 1 November 2023, the Board of Directors passed a resolution to approve the Non-Strategic Asset (NSA) List (Minutes No. 22/2023, item 7). The same Board of Directors' resolution declared void the NSA List approved by the Board of Directors' resolution dated 11 November 2022.
The Government of the Republic of Kazakhstan, by its Resolution No. 44 dated 2 February 2022 On Amending Resolution No. 908 of the Government of the Republic of Kazakhstan On Certain 2021–2025 Privatisation Matters dated 29 December 2020, amended the Comprehensive Privatisation Plan for 2021–2025 (Resolution No. 523 dated 2 August 2022) approved by Government Resolution No. 908 dated 29 December 2020 with due consideration of the Key Criteria (Principles) approved by Government Resolution No. 44. As a result, some of KMG Group's assets were included in Government Resolution No. 908.

who is a member of the Board of Directors of the Fund. However, based on the results of assessment of the Board of Directors' activities for 2023 through self-assessment, one of the measures to improve the Board of Director's performance is to have KMG's General Meeting of Shareholders approve a document regulating the process of searching, selecting and electing members of the Board of Directors, which, among other things, would ensure:

- active participation of the Chairman of the Board of Directors and the Chairman of the Nomination and Remuneration Committee in the process of searching and selecting candidates for members of the Board of Directors;
- transparency of the process of searching and selecting candidates for members of the Board of Directors;
- review of the resumes of all candidates for members of the Board of Directors by the Nomination and Remuneration Committee;
- submitting for consideration by KMG's General Meeting of Shareholders only those candidates for members of the Board of Directors who have been approved by the Nomination and Remuneration Committee.

7. **In line with item 6, Chapter 5, Section 2 of the Code**
"No person shall be involved in making decisions related to his/her own nomination, election and re-election."

This requirement of the Code was generally complied with in KMG during the reporting period. However, at the General Meeting of Shareholders of KMG dated 27 June 2023 (Minutes No. 3/2023) Yelzhas Otynshiyev acted as an authorised representative of the major shareholder of KMG, the Fund, and, among other matters, voted on the matter of his own election to the Board of Directors. That said, the Fund's representative voted in accordance with the position determined by the Fund's Management Board.

8. **In line with item 10, Chapter 5, Section 2 of the Code**
"Remuneration for a member of the Board of Directors shall be set in accordance with the methodology developed by the Fund, taking into account the expected positive effect for the Organisation from the person's participation in the Board of Directors."
In organisations with several shareholders, the relevant rules for remuneration of members of the Board of Directors shall be developed on the basis of the Fund's methodology and approved by the General Meeting of Shareholders."

This requirement of the Code was generally complied with in KMG during the reporting period, as the remuneration for members of the Board of Directors was set by the resolution of the General Meeting of Shareholders.

Also, in order to fulfil this requirement of the Code, the Plan provides for the development of relevant rules for remuneration of members of the Board of Directors based on the Fund's methodology.

9. **In line with item 11, Chapter 5, Section 2 of the Code,**
"Committees are established to conduct a detailed analysis and develop recommendations on a range of the most important matters prior to their consideration by the Board of Directors. The final decision on matters considered by the committees is made by the Board of Directors."

This requirement of the Code was partially complied with in KMG. To conduct a detailed analysis and develop recommendations on a range of the most important matters prior to their consideration by the Board of Directors, the following previously established Board of Directors' Committees operated during the reporting period:

1. the Audit Committee of the Board of Directors;
2. the Strategy and Portfolio Management Committee of the Board of Directors;
3. the Nomination and Remuneration Committee of the Board of Directors;
4. the Health, Safety, Environment and Sustainable Development Committee of the Board of Directors.

The final decision on matters considered by the Board of Directors' Committees is made directly by the Board of Directors, except for matters in the areas of risk management and internal control, where final decisions are made by the Audit Committee. According to the Plan, the matter of making the necessary amendments to the KMG Charter so that decisions on these matters are made by the Board of Directors is included in the agenda of the Annual General Meeting of Shareholders.

10. **In line with item 12, Chapter 5, Section 2 of the Code**
"The recommended frequency of meetings of the Board of Directors is 8–12 meetings per year."

This requirement of the Code was generally not complied with in KMG in 2023, with 14 ordinary and 10 extraordinary meetings held, which is twice the recommended frequency of meetings.

11. **In line with item 12, Chapter 5, Section 2 of the Code**
"Materials for the meetings of the Board of Directors shall be sent at least 7 calendar days in advance, and for more important matters as determined by the Charter of the organisation, at least 15 business days in advance, unless otherwise specified in the Charter. The list of important matters includes, but is not limited to, the development strategy, development plan, motivational KPIs for the CEO and members of the executive body, annual report, and participation in the establishment of other legal entities.

Items for which materials are provided late shall not be included in the agenda of the Board of Directors meeting. In case of inclusion of such items in the agenda, the Chairman of the Board of Directors shall be provided with a compelling justification for their inclusion."

This requirement of the Code was generally complied with in KMG during the reporting period. Materials for the meetings of the Board of Directors are sent at least 7 calendar days in advance, and for more important matters as determined by KMG's Charter, at least 15 business days in advance, unless otherwise specified in the Charter. However, in 2023, there were cases where materials were provided and items included in the agenda with delays. In such cases, the responsible individuals submit a request, signed by the Chairman / Acting Chairman of KMG's Management Board, to include an additional item on the agenda of the Board of Directors meeting as well as a compelling justification for this inclusion.

12. **In line with item 12, Chapter 5, Section 2 of the Code,**
"The Board of Directors is recommended to conduct an audit of previously adopted resolutions. Both the resolution itself and the process of adopting it shall be analysed. It is recommended to audit previously adopted resolutions as part of the Board of Directors' self-assessment."

This requirement of the Code was generally complied with in KMG during the reporting period. The audit of previously adopted resolutions of the Board of Directors is part of the external assessment of the Board of Directors' performance conducted once every three years. However, during the self-assessment of the Board of Directors' performance for the reporting period, no audit of the Board of Directors' resolutions was conducted.

13. **In line with item 14, Chapter 5, Section 2 of the Code,**
"The process, timing and procedure for assessing the performance of the Board of Directors, its committees and members of the Board of Directors shall be clearly regulated by internal documents of the organisation. The Chairman and members of the Board of Directors shall undergo training on how to conduct the assessment."

This requirement of the Code was not complied with in KMG during the reporting period. The process, timing and procedure for assessing the performance of the Board of Directors, its committees and members of the Board of Directors are governed by the Regulations on the Performance Assessment of the Board of Directors, Committees of the Board of Directors, the Chairman, Members of the Board of Directors and the Corporate Secretary of KMG, approved by the Board of Directors' resolution dated 4 October 2018 (Minutes No. 14/2018, item 19). However, in 2023, the Chairman and members of the Board of Directors received no training on conducting the assessment.

14. **In line with item 3, Chapter 6, Section 2 of the Code,**
"The chief supervising the function of risk management and internal control is recommended not to be a risk owner, which provides for his independence and objectiveness. Combination of the functions on risk management and internal control with the functions associated with economic planning, corporate finance, treasury, taking investment decisions is prohibited. Combination with other functions is permissible, if there is no material conflict of interest."

This requirement of the Code was generally complied with in KMG during the reporting period. In line with KMG's current organisational structure, the Risk Management and Internal Control Service (the "RMICS") reports directly to the Deputy Chairman of the Management Board for Strategy, Investment and Business Development. The RMICS Head does not own any risk, which means there is no conflict of interest. Moreover, the RMICS Head is an independent participant of the Executive Body's Committees and has full voting right as a representative of the risk management unit.

15. **In line with item 4, Chapter 6 Section 2 of the Code,**
"The Board of Directors shall approve the overall level of risk appetite and tolerance levels in relation to key risks, which must be enshrined in the company's internal documents."

This requirement of the Code was not complied with in KMG during the reporting period. The risk appetite, consolidated risk register, risk map and risk management action plan, as well as risk tolerance levels and KMG's register of key risk indicators are approved by the Audit Committee.

In order to fulfil this requirement of the Code, the Plan provides for the amendments to the KMG Charter to add matters related to the approval of the above documents to the remit of the Board of Directors.

Major and interested-party transactions

Major transactions

In the reporting period, no transactions recognised as major transactions under the Law of the Republic of Kazakhstan On Joint Stock Companies and KMG's internal documents were made by the Board of Directors or the General Shareholders' Meeting.

Interested-party transactions

Kalamkas-Sea–Khazar–Auezov

On 9 February 2023, KMG and LUKOIL concluded a number of agreements on the development project for the Kalamkas-Sea–Khazar–Auezov subsoil block in Kazakhstan's part of the Caspian Sea. These included a parties' agreement, sale and purchase agreement for a 50% interest in Kalamkas-Khazar Operating LLP, and a financing agreement for the operator's activities. The documents set out the subsoil user's rights and obligations in joint development. Thus, LUKOIL became KMG's strategic partner in developing this subsoil block of the Caspian Sea shelf. The value of the block that is the subject of the interested-party transaction is 18% of the total book value of KMG's assets.

GLOSSARY

1P reserves – Proved reserves

2P reserves – Proved plus Probable reserves

3P reserves – Proved plus Probable plus Possible reserves

4ICP – Fourth Injection Compressor Project

5TL – 5th Trunkline

A&M – Agriculture & Mechanical

AC- Audit Committee

AG – Amangeldy Gas LLP

AGP – Asia Gas Pipeline

AIFC – Astana International Financial Centre

APG – Associated petroleum gas

APC – The Automated Process Control

BSc – Bachelor of Science

BCMS – business continuity management system

BATNEEC – Best Available Techniques not

Entailing Excessive Costs

BTUs – quadrillion

BP – British Petroleum

bln – billion

bcf – billion cubic feet

bln m³ – billion cubic meters

BGR-TBA – Bukhara gas-bearing region – Tashkent-BishkekAlmaty

BSGP – Beineu-Shymkent Gas Pipeline

BTUs – quadrillion

Code – KMG Corporate Governance Code

CFO – Chief Financial Officer

CDP – Carbon Disclosure Project

CPC – Caspian Pipeline Consortium

CFO – Cash flow from operating activities

CJSC – Closed joint-stock company

CNODC – China National Oil and Gas Exploration and Development Company

CFO – Chief Financial Officer

CNG – compressed natural gas

CNPC – China National Petroleum Corporation

CRMS – the corporate risk management system

CFA – Chartered Financial Analyst

Code – KMG Corporate Governance Code

COVINA – Companhia Vidreira Nacional

CDP – Carbon Disclosure Project

CNG – Compressed natural gas

Capex – Capital expenditures

CITIC – China International Trust and Investment Corporation

DBK – Development Bank of Kazakhstan

DTP – Digital Transformation Program

D&O – Directors and Officers

EP – Exploration & Production

ENPF – JSC Unified Accumulative Pension Fund

ESG – Environmental, social and corporate governance

ECB – European Central Bank

EIA – Environmental Impact Assessment Exporting Countries

EBITDA – Earnings before interest, taxes, depreciation and amortization

EIA – Electronic Industries Alliance

ESG – Environmental Social Governance

EDP – Electricidade de Portugal

E&E – exloration and evaluation

EY – Ernst & Young

FCF – Free cash flow

FDI – Foreign direct investment

FAR – Fatality Accident Rate

FGP – the Future Growth Project

FPSA – the Final Production Sharing Agreement

FC – Finance Committee

GJ – gigajoule

Gcal – gigacalorie

GHG – Greenhouse gas

GPS – Global Positioning System

GGFR – Global Gas Flaring Reduction Partnership

GRI – Global Reporting Initiative

GDP – Gross Domestic Product

GRI – Global Reporting Initiative's

G&A – General and administrative

GTU – Gas Treatment Unit

GHG – Greenhouse Gas

HDPE – high-density polyethylene

HSE – Health, safety and environment

HSE & SD Com – Health, Safety, Environment and Sustainable

Development Committee

ICA – Intergas Central Asia

IPO – Initial public offering

IMF – International Monetary Fund

IT – Information Technology

IOGP – International Association of Oil & Gas Producers

ISO – International Organization for Standardization

IPIECA – International Petroleum Industry Environmental Conservation Association

IFRS – International Financial Reporting Standards

ICS – internal control system

IAS – Internal Audit Service

INED – Independent Non-Executive Director

JSC – Joint stock company

JV – Joint venture

JM – Jerónimo Martins

KMG – Joint stock company National company KazMunaiGas

KTO – KazTransOil

KCP – Kazakhstan-China Pipeline

KMG EP – KazMunaiGas Exploration Production

KMGI – Kazmunaigas International

KPI – Key performance indicator

KMTF – Kazmortransflot

KZT – Kazakhstan tenge

KTG – KazTransGas

KTGA – KazTransGas Aimak

kWh – Kilowatt-hour

KPI – Key Performance Indicators

KTL – Complex Technology Lines

KRI – key risk indicator

KASE- Kazakhstan Stock Exchange JSC

KGDBN – KPC Gas Debottlenecking Project

LNG – liquefied natural gas

LDPE – low-density polyethylene

LPG – Liquefied petroleum gas

LLP – limited liability Partnership

LTIR – Lost Time Incident Rate

LLB – Bachelor of laws

MMboe – million barrels of oil equivalent

mln – million

MBA – Master in Business Administration MMtoe= million tonnes of oil equivalent

MIT – Massachusetts Institute of Technology

thous. – thousand

MS – Management system

MRM – Maintenance and repair management

MVP – The Minimum Viable Product

MT – MunaiTas

MNC – Offshore Oil Company

M&A – Mergers and Acquisitions

mln tonnes – million tonnes

NBK – the National Bank of Kazakhstan

NC – National company

NCOT – National oil transportation company

NED – Non-Executive Director

NCS PSA – The North Caspian Sea Production Sharing Agreement

NMC – National Mining Company

NOGC – National Oil and Gas Company

NMSC – National Maritime Shipping Company

NYSE – New York Stock Exchange

NRC – Nomination and Remuneration Committee

NCOC – North Caspian Operating Company

OHSAS – Occupational Health and Safety Assessment Series

OECD – Organisation for Economic Co-operation and Development

OPEC – The Organization of the Petroleum

OGPP – Orenburg Gas Processing Plant

OJSC – Open joint stock company

plc- Public limited company

PRMS – Petroleum Resources Management System

PJSC – Public joint-stock company

PKOP – PetroKazakhstan Oil Products LLP

PSA – Production Sharing Agreement

ROACE – Return on Avarage Capital Employed

R&D – Research and Development

SJSC – State joint stock company

SPE – Society of Petroleum Engineers

SSI – Social Stability Index

SACP – stand-alone credit profile

Samruk-Kazyna JSC, the Fund – Sovereign Wealth, Fund Samruk-Kazyna Joint-Stock Company

SDG – Sustainable Development Goals

SEP – Stanford Executive Program

S&P – Standard & Poor's

SACP – Stand-alone credit profile

SPMC – Strategy and Portfolio Management Committee

TCO – Tengizchevroil

UN – United Nations

UNGC – UN Global Compact

UGS – underground gas storage

USD – United States dollar

UK – United Kingdom

WWF – World Wide Fund for Nature

WPMP – the Wellhead Pressure Management Project

WEC – World Energy Council

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Ombudsman

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On issues of interaction with shareholders and investors

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- E-mail: ir@kmg.kz

Public relations

- Tel: +7 (7172) 78 91 49
- E-mail: press@kmg.kz

Sponsorship and Charity

The single charity operator of Samruk-Kazyna corporate group is Samruk-Kazyna Trust Social Projects Development Foundation

- Tel: +7 (7172) 57-68-98
- E-mail: info@sk-trust.kz

Environment, health and safety

- E-mail: hse@kmg.kz

Sustainable development

- E-mail: sustainability@kmg.kz

Procurements

- Tel: +7 (7172) 78 61 80
- All procurement of goods, works and services of the company are held under the Procurement Procedure of JSC «National welfare Fund «Samruk-Kazyna» in an electronic format on the website.
- JSC NC «KazMunayGas» does not sell petroleum products.
- We also remind you that since April 1, 2019, the operation of gas stations is carried out by a new owner – "Petro-retail" LLP

Hotline

You may inform on any violations of the Code of conduct, including cases of corruption, discrimination, unethical behavior and other violations. We guarantee. Confidentiality and anonymity. Processing of 100% of messages.

Hotline

- Hotline telephone number: +7 (800) 080 47 47
- WhatsApp messenger via number: +7 (771) 191 88 16
- Internet portal: www.sk-hotline.kz
- E-mail: mail@sk-hotline.kz

Hotline «Nysana»

- Hotline telephone number: +7 (800) 080 30 30
- WhatsApp messenger via number: +7 (702) 075 30 30
- Internet portal: nysana.cscc.kz
- E-mail: nysana@cscc.kz
- Call center «Nysana» accepts free calls for all social and labor violations 24/7

ҚазМұнайГаз NATIONAL COMPANY ҰЛТТЫҚ КОМПАНИЯСЫ

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