

CLIMATE

Low-Carbon Development Programme

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, KMG intends to focus on a moderate, balanced, and consistent decarbonisation of its operations.

To address this challenge, in November 2024 KMG's Board of Directors approved KMG's Low-Carbon Development Programme 2060 ("LCDP 2060"), replacing the LCDP

2031, which had been in place since 2021. The LCDP 2060¹ provides for delivering on the targets to reduce CO₂ emissions from the 2019 levels by 15% by 2031 and to lower GHG emissions by 64% by 2060. As part of the programme, we drafted and approved the Action Plan 2060 (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.

Key indicators	Baseline year indicator in 2019	Indicator in 2023	Indicator in 2027	Target indicator in 2031	Target indicator in 2060
Reduction in direct and indirect CO ₂ emissions (Scope 1+2)	10.7 mln tonnes of CO ₂ e	10.9 mln tonnes of CO ₂ e (+2.0%)	10.7 mln tonnes of CO ₂ e (0%)	9.1 mln tonnes of CO ₂ e (-15%)	3.4 mln tonnes of CO ₂ e (-64%)
Reduction of methane emissions	54.2 thous. tonnes of CH ₄	70.5 thous. tonnes of CH ₄	56.9 thous. tonnes of CH ₄ (-20%)	36 thous. tonnes of CH ₄ (-32%)	2 thous. tonnes of CH ₄ (-96%)
Reduction of carbon intensity	–	+2%	0%	-15%	-60%
Reduction of methane intensity, tonnes of CH ₄ / thous. tonnes per year	3.28	3.28	2.62	1.6	0.29
Lower energy consumption	–			-15%	-60%
Share of renewable energy sources in KMG's electricity consumption mix vs the baseline	0.005% (211 MWh)	0.089%	10%	15%	50%
CO ₂ injection using the CCUS technology, thous. tonnes	–	–	–	9	421
CO ₂ injection in blue hydrogen production, thous. tonnes	–	–	–	–	172
SAF production, thous. tonnes per year	–	–	–	40	1,440

¹ For KMG's Low-Carbon Development Programme 2060, follow this link.



The programme seeks to systematise the Company's decarbonisation efforts and includes three low-carbon development scenarios through 2060:

Development scenarios	Targets for reducing GHG emissions by 2060	Initiatives
Realistic development scenario (energy efficiency and renewable energy sources (RES))	-48%	<ul style="list-style-type: none">• Energy efficiency and energy-saving initiatives at subsidiaries and associates• Launch of two large renewable energy projects with a total capacity of 1.2 GW in the Mangistau and Zhambyl regions
Green development scenario	-58%	<ul style="list-style-type: none">• Significant increase in the share of renewable energy.• Forest-climate offset² project• Organic reduction of emissions through operational excellence and upgrades of production facilities.• Inorganic reduction through the construction of RES facilities and/or purchase of clean energy with subsequent distribution within KMG Group
Deep decarbonisation scenario (innovations and offsets)	-64%	<ul style="list-style-type: none">• Energy efficiency measures at subsidiaries, construction of two RES facilities, and increasing the share of renewable energy• Carbon capture, utilisation, and storage (CCUS) projects.• Hydrogen energy development• Sustainable aviation fuel (SAF)• Carbon footprint offsetting through carbon sequestration in forest-climate offset projects and acquisition of offset credits and certificates

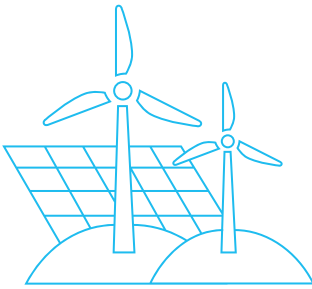
² Carbon offsetting.

Renewable energy development

KMG is actively developing renewable energy projects in partnership with Total Eren and Eni. These initiatives seek to reduce the carbon footprint, ensure a reliable power supply to production facilities, and diversify the

Company's business portfolio. We plan to build RES facilities with a total capacity of 1.2 GW in the Zhambyl and Mangistau regions.

Renewable energy projects



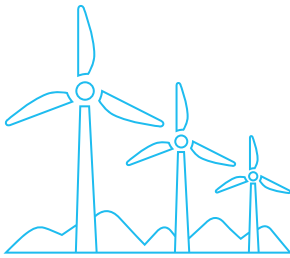
Zhanaozen hybrid power plant

On 18 January 2024 in Rome, KMG and Italy's Eni signed the joint confirmation agreement on the initiation of the Zhanaozen hybrid power plant construction project. This project will be the first hybrid solution in Kazakhstan combining three types of generation:

- 77 MW **wind power plant;**
- 50 MW **solar power plant;**
- 120 MW **gas power plant.**

The project is set to secure a reliable power supply to KMG's production facilities in the region. It will create up to 800 jobs during the construction phase and up to 80 permanent jobs in operation. The plant is slated to reach its full capacity by 4Q 2026.

In 2024, tender procedures to select EPC contractors for the solar and gas power plant facilities were finalised. On 16 July 2024, a ceremony to mark the start of the hybrid power plant's construction was held, with KMG and Eni management taking part. In December 2024, early works on the solar power plant site were completed, and construction and installation works for the main equipment began. Full completion of the project is expected by the end of 2026. The key partners in the project are Eni (51%) and KMG (49%).



Wind power plant in the Zhambyl Region (Mirny project)

On 1 November 2023, as part of French President Emmanuel Macron's official visit to Kazakhstan, a joint venture agreement was signed with Total for the construction of a 1 GW wind power plant (WPP). On 2 February 2024, the law on the intergovernmental agreement was ratified.

The WPP will be located in the settlement of Mirny and will be equipped with a 300 MW / 600 MWh energy storage system, ensuring stability of power supply and reducing risks associated with intermittent wind generation. Approximately 2,000 temporary jobs will be created during construction and up to 250 permanent jobs once the plant is put into operation. Commissioning is expected at the end of 2027.

The project plays a strategic role in the development of green energy in Kazakhstan, contributing to the reduction of CO₂ emissions and to KMG's Low-Carbon Development Programme. Feasibility study preparations have been completed, the region's wind potential has been analysed, and work is underway to select a supplier of key equipment. The project's key partners are Total Eren (60%), Samruk-Kazyna (20%), and KMG (20%).

Efforts to further renewable energy in Kazakhstan will continue after the completion of the above two projects, as part of pursuing the goals to increase the share of alternative and renewable energy in the country's energy mix to 15% by 2030 and to 50% by 2050, in line with the Concept for the Transition of the Republic of Kazakhstan to a Green Economy and Strategy Kazakhstan 2050. These goals contribute to unlocking Kazakhstan's untapped potential in the renewables sector.

Introduction of methane management

KMG pays special attention to reducing methane emissions as a potential tool to spearhead a carbon offset policy and minimise carbon footprint.

KMG joined the OGMP 2.0 (Oil & Gas Methane Partnership) methane emissions reporting framework and submitted its first methane emissions report on the OGMP 2.0 platform in May 2024.

Also in 2024, two KMG production facilities showcased LDAR (Leak Detection and Repair) methane leak detection and repair technologies: Mangistaumunaigaz and KazGPZ.

As part of the memorandum of cooperation with Tetra Tech engaged in the Power Central Asia (PCA) Activity, a webinar was held for KMG Group staff on methane emissions management; in June 2024, a methane emissions measurement campaign was conducted at the facilities of Ozenmunaigas and KazGPZ.

In 2024, KMG continued satellite-based monitoring of methane emissions jointly with the Oil and Gas Climate Initiative organisation.

Providing annual reporting on methane emissions, conducting measurement campaigns, implementing the LDAR programme for methane leakage detection and repair, and satellite monitoring are the key elements of KMG's methane management set to reduce methane emissions looking forward and to identify the potential for CO₂ emissions absorption.

CCUS project

KMG is running a pilot project to deploy carbon capture, utilisation and storage (CCUS) and explore the potential for CO₂ injection to enhance oil recovery from depleted oil reservoirs.

Screening of CO₂ emissions in the Atyrau and Mangistau regions has been completed. As a result, key groups of emission sources with a total volume of about 412 thous. tonnes of CO₂ were identified, and onshore infrastructure was assessed.

Given the high capital expenditures and operating expenses of the project, KMG is looking into an alternative concept involving a pilot plant with a capacity of 10–20 thous. tonnes of CO₂ per year. Currently, suitable sites are being selected jointly with Baker Hughes and Chevron.

Based on the screening results, Embamunaigas' gas treatment unit of the Prorva group of fields was found to be the main site that meets the criteria for the pilot.

In 2025, we plan to hold a science and technology council meeting and submit a document package to the Technical and Economic Evaluation Committee for decision-making on further implementation of the project.

In the long term, after 2040, we intend to implement a full-scale CCUS project with a forecast injection volume of up to 412 thous. tonnes of CO₂ per year.

Hydrogen energy development

KMG strategically positions itself in the hydrogen market by applying a step-by-step approach.

Key areas of activity include the production of blue hydrogen with carbon dioxide capture, use of renewable sources for green hydrogen production, and R&D of new technologies for hydrogen storage and transport.

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, low-carbon ammonia, and methanol production at Embamunaigas. To date, process modelling has been completed, and an economic assessment is underway based on a proposal from Casale.

A Surface Water Resource Atlas has been developed to assess the potential for green hydrogen production. An analytical calculator to determine the levelised cost of green hydrogen has been developed to estimate potential green hydrogen production projects. The atlas was presented at the 29th Conference of the Parties of the United Nations Framework Convention on Climate Change (COP29).

As part of laboratory work, samples of iron and titanium alloys were obtained to ensure safe storage and transportation of hydrogen. Successful completion of the project will enable KMG to obtain a technology for transporting low-carbon hydrogen to both domestic and international markets.

As part of the pilot for the production of green hydrogen, PFS efforts are in progress: analysis of technical specifications of the project, application for grant financing, and negotiation of contractual terms with the partner (Green Spark Limited).

Sustainable aviation fuel (SAF)

SAF is a low-carbon alternative to conventional Jet A-1 fuel; in its purest form, it reduces carbon emissions by 80%.

SAF and Jet A-1 are interchangeable, i.e. they can be blended in airport tanks alongside conventional fuels.

KMG is considering the possibility of producing SAF in Kazakhstan. To this end, in 2024, ICF SH&E Limited conducted feasibility study preparations to analyse supply, demand, and applicable technologies, with the capacity of the first SAF production plant set at 40 thous. tonnes per year.

Considering the results of the exercise, a feasibility study of the project is planned for 2025.

Forest-climate projects

To obtain offset credits, together with Chevron, KMG is running a project to create a green area around Pavlodar on an area of 2 thous. ha.

The potential for absorption of carbon dioxide GHG emissions on land plots was assessed in a desk study, as well as field studies and by way of soil analyses.

In general, within the LCDP framework, KMG is planning to implement six forest-climate projects.

International Renewable Energy Certificates (I-REC)

To reduce indirect GHG emissions, KMG purchased International Renewable Energy Certificates (I-REC) and made a claim for 10 mln MWh, an equivalent of expected electricity consumption by KMG's Corporate Centre in 2024.

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. KMG acquired certificates issued in 2024 by renewable energy producers 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.

Projects planned for 2025:

- feasibility study for the SAF production project;
- holding a scientific and technical council meeting and submitting a document package for decision-making on further implementation of the small-capacity CCUS project during the comprehensive feasibility study;
- 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;
- offset projects.

Climate reporting

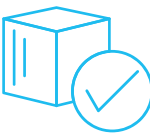
Starting from 2023, KMG is gradually integrating the recommendations of the TCFD international standard into its financial statements. In line with the Corporate Climate Governance Plan, we plan to model the impact of climate scenarios on the Company's financial performance.

KMG provides a full report on greenhouse gas (GHG) emissions, including Scope 1, 2, and 3. Prior to 2023, the Company disclosed Scope 3 emissions only under category 11 "Use of sold products". Starting from 2023, KMG expanded the disclosure to cover five categories¹.

This initiative will pave the way for the development of a strategy of cooperation with our suppliers and consumers to consistently reduce indirect emissions of KMG's products.

KMG has introduced a system of monitoring, accounting, and verification of GHG data. The Company seeks to maintain a comprehensive GHG inventory, analysing both direct and indirect emissions across the entire product life cycle. This approach aligns with international recommendations on GHG emission inventory and enables KMG to assess its carbon footprint as comprehensively as possible.

The GHG emission inventory is in line with international standards and methodologies, such as ISO 14064, GHG Protocol, and the Guidelines of the IPCC² under the United Nations Framework Convention on Climate Change (UNFCCC).



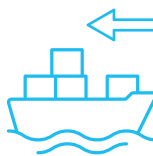
Purchased goods and services



Fixed assets



Fuel and energy related activities



Upstream transportation and distribution



Waste generated in operations



Business travel



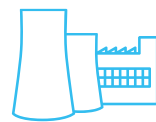
Employee commuting



Upstream leased assets



Downstream transportation and distribution



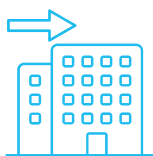
Processing of sold products



Use of sold products



End-of-life treatment of sold products



Downstream leased assets



Franchises



Investments

¹ Currently, KMG reports on five key categories within Scope 3:

- Category 3: Other indirect emissions related to energy consumption, including transmission losses.
- Category 6: Business travel emissions.
- Category 7: Employee commuting emissions.
- Category 9: Downstream transportation and distribution emissions.
- Category 11: Use of sold products emissions.

² Intergovernmental Panel on Climate Change, IPCC.

Climate change and greenhouse gas emissions

2024 highlights

CDP score

B

Utilisation of raw gas

98.9 %

Raw gas flaring rate

1.45 (IOGP¹ – 8.8)

Increase in energy consumption
(from the 2023 baseline)

7%

In 2024, CDP conducted another assessment for 2023, and KMG was rated at B. The two-notch increase in the rating indicates a significant improvement in our climate and environmental practices and management strategies compared to previous years (previously, the score was C for the period 2020–2022). According to the CDP report, direct carbon dioxide emissions at KMG Group totalled 7.4 mln tonnes of CO₂ (8.6 mln tonnes of CO₂e²) in 2023.

Indicator	Unit	2021	2022	2023
Scope 1 direct emissions	mln tonnes of CO ₂ e	10.6	8.1	8.6
Location-based Scope 2 indirect emissions	mln tonnes of CO ₂ e	3.3	3.3	3.5
Market-based Scope 2 indirect emissions	mln tonnes of CO ₂ e	3.3	3.2	3.4
Scope 3 indirect emissions	mln tonnes of CO ₂ e	62.1	61.8	55.7

The greenhouse gas emissions data were verified by independent accredited organisations' reports for each subsidiary or associate. Data for 2024 will be disclosed in KMG's sustainability reports and CDP report to be published in 4Q 2025. 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.

The main types of greenhouse gases emitted as a result of the Company's operations include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and are categorised according to the core activities: production, refining, and transportation.

The CO₂ emission intensity indicator for 2023 for the upstream business was 114 tonnes of CO₂ per 1,000 tonnes of hydrocarbons produced, which is 3% below the IOGP industry average of 116 tonnes of CO₂ per 1,000 tonnes of hydrocarbons produced. The methane emission intensity indicator for 2023 for the upstream business was 1.9 tonnes of CH₄ per 1,000 tonnes of hydrocarbons produced.

The CO₂ emission intensity indicator for 2023 in the downstream business was 238 tonnes of CO₂ per 1,000 tonnes of hydrocarbons produced.

KMG has developed and approved the methodology for monitoring and reporting on greenhouse gas emissions and the Internal Carbon Pricing Programme (the "ICP Programme").

The methodology defines key approaches to the recording and monitoring of GHG emissions across KMG subsidiaries and associates and provides a unified methodological basis for measuring GHG emissions across KMG subsidiaries.

The main goal of the ICP Programme is to assess and minimise the Company's financial risks associated with the tightening of carbon regulations, as well as to reallocate some investments from carbon-intensive projects to low-carbon ones. The introduction of internal pricing for carbon emissions is seen as a strategic tool to manage the risks associated with the impact of climate-related regulations on the Company's operations and helps create additional opportunities for upgrading production capacities and achieving KMG's GHG emission reduction targets.

For more details on KMG's contribution to climate action, see the [Sustainability Report](#).



Efficient use of raw gas

The reduction of gas flaring is a priority task for KMG Group. According to the approved Environmental Policy, the Company strives to achieve zero routine gas flaring by paying increasing attention to the responsible use of gas. Hence, over the last seven years, routine flaring has decreased by 89% (2017: 315.8 mln m³). Utilisation of raw gas in 2024 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 m³ of commercial gas per year was commissioned at Kazakhoil Aktobe's Kozhasai field.

In 2024, raw gas utilisation rate was 98.9%, with flaring at 1.45 tonnes per 1,000 tonnes of produced hydrocarbons (1.4 tonnes in 2023 and 1.5 tonnes in 2022), flat year-on-year and 84% lower than the IOGP industry average (8.8).

Raw gas flaring

Indicator	2022	2023	2024
Total raw gas flaring, mln m ³	35.7	33.3	35.2
Raw gas utilisation, %	98.8	98.9	98.9
Raw gas flaring rate, tonnes per 1,000 tonnes of produced hydrocarbons	1.5	1.4	1.45

KMG supports the World Bank's Zero Routine Flaring by 2030 initiative. Raw gas flaring reports under the Initiative are submitted on an annual basis to the World Bank's representative office in Kazakhstan.

Initiatives to reduce atmospheric emissions

At the Atyrau Refinery, 36 outdated burners were replaced in the furnaces of the EDD-ADU-2 process unit as part of an upgrade project. New burners equipped with ignition systems and flame failure sensors were manufactured by Italy's International Combustion Equipment S.r.l. The furnace upgrade project will reduce fuel consumption thanks to efficient combustion, decrease pollutant emissions with flue gases into the atmosphere, and save electricity at the induced draft fans of furnaces.

KazTransOil, as part of environmental initiatives at the Kasymov Refinery, completed the installation of a floating roof in the tank. It is a floating device placed inside the tank under the fixed cover. It isolates the oil surface from the gas space, preventing evaporation. This device can significantly reduce oil evaporation, decreasing air pollutant emissions by up to 80%. In 2024, their volume at KazTransOil's facilities dropped by 7% year-on-year. The Company also conducts regular industrial environmental control at all its facilities.

As part of the automated environmental monitoring information system, in line with paragraph 16, Article 418 of Kazakhstan's Environmental Code, operators of Category I facilities are required to have an automated emission monitoring system (AMS) as of 1 January 2023. The AMS monitors emission indicators at the main stationary sources of emissions and maintains an online connection with the information system of the authorised body.

The AMS is installed at Kazakhoil Aktobe, Mangistaumunaigaz, Atyrau Refinery, Pavlodar Refinery, and PetroKazakhstan Oil Products; data on emission indicators are transmitted in real time; KPI is finalising pre-commissioning and construction and installation works. Environmental control devices monitor emissions of soot, nitrogen oxides, and carbon monoxide in flue gases from furnaces and boilers. AMS not only helps monitor emission indicators but also, if necessary, adjust the operating mode of equipment to improve process performance.

For more details on air protection, see the [Sustainability Report](#).

¹ The International Association of Oil & Gas Producers.
² The CO₂ 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).

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.

To comply with KMG's Low-Carbon Development Programme, the Energy Policy of KMG, which applies to all subsidiaries, associates and contractors of KMG, as well as Regulations on Energy Saving and Efficiency at KMG Group were approved. KMG Group also conducted a targeted energy audit of process furnaces and boiler equipment at oil producing companies. Subsidiaries and associates (Karazhanbasmunai, Kazgermunai, Kazakhoil Aktobe, Kazakhturkmunay, Pavlodar Refinery, PetroKazakhstan Oil Products, and Caspi Bitum) also approved Regulations on Energy Saving and Efficiency.

- In 2024, KMG approved its Low-Carbon Development Programme 2060. The following strategic goals are planned in energy efficiency and resource saving:
- long-term strategic planning:** developing comprehensive plans to improve energy efficiency across KMG Group;
 - effective energy management:** ensuring transparent management of energy flows through reliable and measurable standards;
 - centralised monitoring:** centralised monitoring of operational processes in the field of energy efficiency (EE) improvement;
 - systemic approach to working with public authorities:** maintaining ongoing cooperation with public authorities on energy-saving initiatives;
 - sharing best practices:** sharing and rolling out robust EE practices throughout the Company;

- cost reduction and optimisation:** identifying and eliminating non-production costs while optimising the use of resources;
- improving profitability:** improving profitability by taking measures to reduce fuel and energy losses and eliminate inefficient costs;
- improved financial performance:** improving financial results through energy savings.

Energy consumption

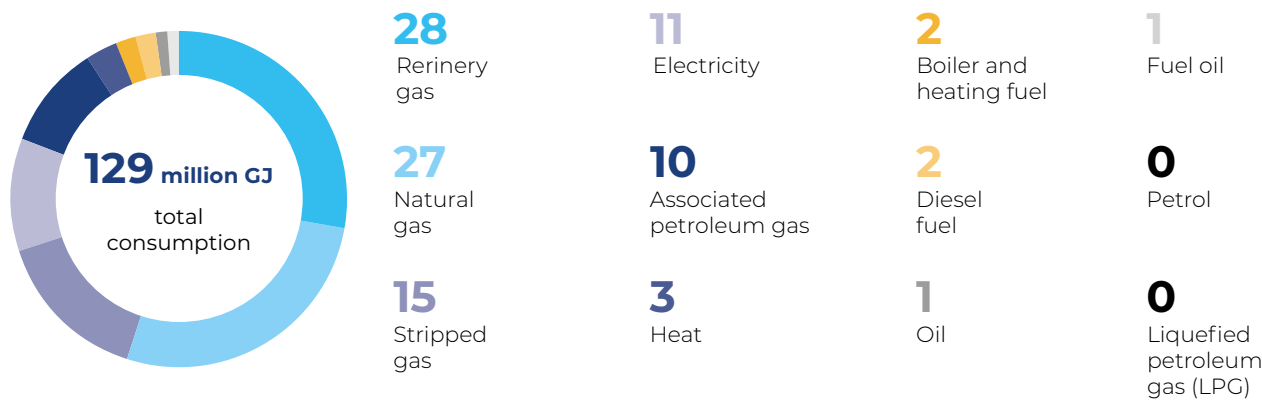
In 2024, total energy consumption amounted to 129 mln GJ, up 7% year-on-year (124.1 mln GJ), including 15.1 mln GJ in electricity, 3.9 mln GJ in heat, 1.8 mln GJ in motor fuel, and 108.5 mln GJ in boiler and heating fuel (with oil refinery gas, natural gas, stripped gas, electricity, and associated petroleum gas accounting for 28%, 27%, 15%, 11%, and 10% of the total energy consumption, respectively). Higher energy consumption ensued from new subsidiaries and associates, such as Dunga, Urikhtau Operating, Ural Oil and Gas, and KPI. The total energy consumption is divided among the following business segments: Upstream, Midstream, Downstream, and Petrochemicals.

In 2024, KMG Group's self-generated energy amounted to 737.5 thous. kWh in electricity and 5,440.6 thous. Gcal in heat.

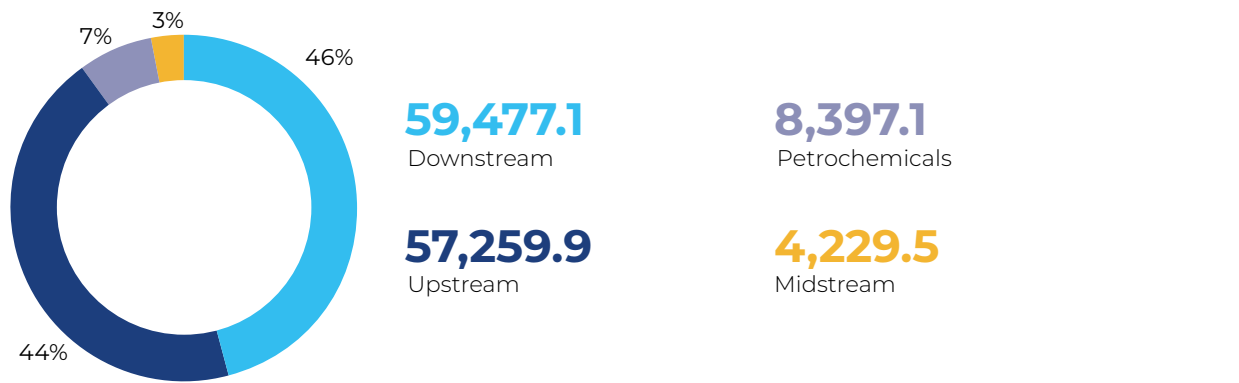
In accordance with the Rules for Determining the Tariff for the Support of Renewable Energy Sources, Atyrau Refinery and Mangistaumunaigaz purchased for internal use in 2024 from Financial Settlement Centre of Renewable Energy 10,832 thous. kWh of electricity produced by renewable energy facilities. In 2024, PetroKazakhstan Oil Products and Caspi Bitum solar panels generated 149.5 thous. kWh of electricity for street lighting.

Energy consumption by business segment

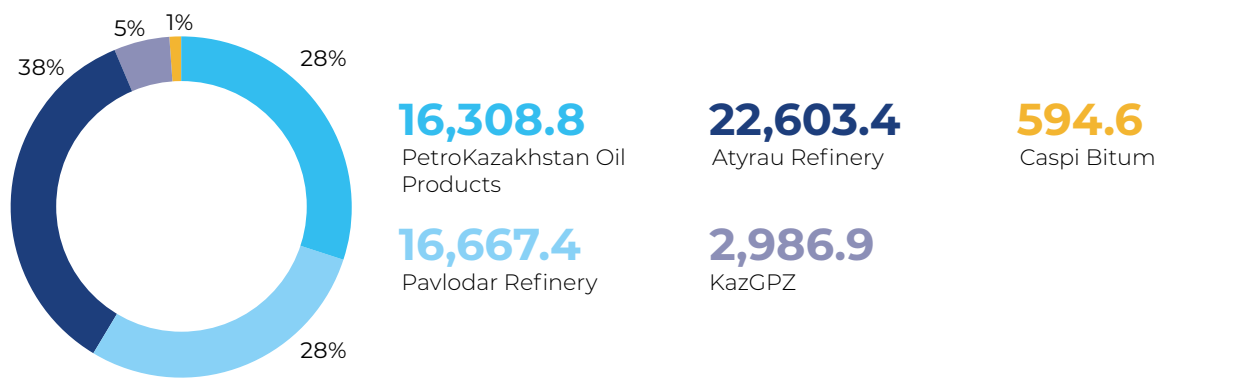
Resource consumption by energy type in 2024, %



Resource consumption by segment, thous. GJ



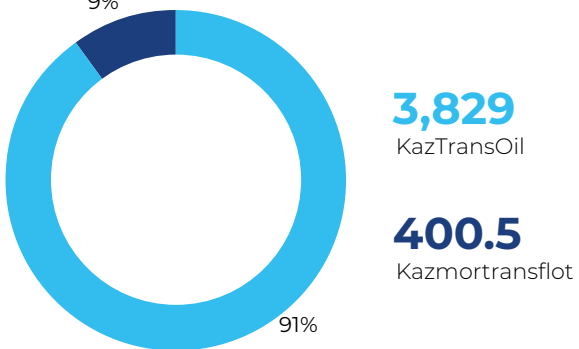
Downstream, thous. GJ



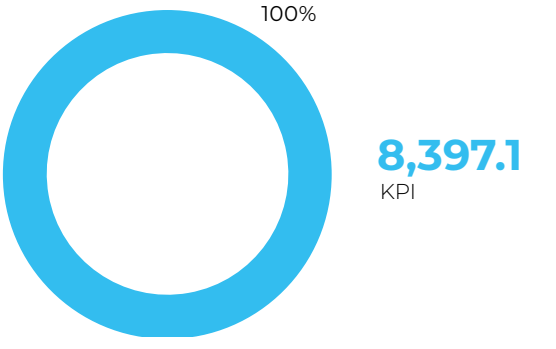
Upstream, thous. GJ



Midstream, thous. GJ



Petrochemicals, thous. GJ





Reducing energy consumption

The main strategic focus areas for energy saving and energy efficiency development in KMG Group include upgrade and replacement of process furnaces and boilers, installation of variable speed drives on pumps, thermal integration of process flows, modernisation of the lighting system, and more.

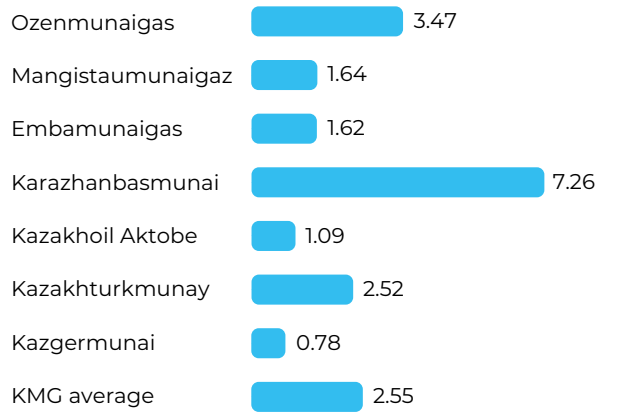
In 2024, a total of 70 initiatives were implemented to upgrade process equipment, replace gas burners in furnaces, introduce energy-saving technologies, optimise heat generation and consumption, and modernise lighting systems, etc. Estimated annual savings of fuel and energy amounted to 2,361 thous. GJ, equivalent to a reduction of GHG emissions by 174.9 thous. tonnes of CO₂. The effect in physical terms is 48,114 thous. kW of electricity, 22,334 Gcal of heat, 21,224 tonnes of boiler and heating fuel, 5,238 thous. m³ of dry stripped gas, and 29,003 thous. m³ of natural gas. Overall spending on the energy saving and energy efficiency initiatives was KZT 5,930 mln.

Energy intensity

In 2024, KMG Group's energy consumption in the upstream sector averaged at 2.55 GJ per tonne of hydrocarbon production, still 70% above the IOGP average for 2023, 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 Ozenmunaigas and Karazhanbasmunai. Karazhanbasmunai's energy consumption per tonne of produced hydrocarbons is five 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. Ozenmunaigas's energy consumption per tonne of hydrocarbons produced is more than two times higher than the IOGP global average due to 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.

Energy consumption per tonne of hydrocarbons produced, GJ/tonne



TCFD-aligned disclosure

TCFD

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 Climate change and greenhouse gas emissions Corporate risk management system
	b. Describe the management's role in assessing and managing climate-related risks and opportunities.	KMG's Development Strategy (Strategic Objective No. 4) Ensuring sustainable development KMG management's efficiency in the field of sustainable development Corporate risk management system
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 Key risks
	b. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	Market overview KMG's Development Strategy (Strategic Objective No. 4) Commitment to the UN SDGs (Goal 13) Low-Carbon Development Programme Climate change and greenhouse gas emissions Key risks
	c. Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2 °C or lower scenario.	Low-Carbon Development Programme
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 the UN SDGs (Goal 13) Low-Carbon Development Programme Climate change and greenhouse gas emissions Key risks
	b. Describe the organisation's processes for managing climate-related risks.	Climate change and greenhouse gas emissions Key risks
	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
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 Objective No. 4) Commitment to the UN SDGs (Goal 13) Climate change and greenhouse gas emissions Low-Carbon Development Programme Energy saving and efficiency improvement program KMG management's efficiency in the field of sustainable development
	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
	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 Objective No. 4) Commitment to the UN SDGs (Goal 13) Climate change and greenhouse gas emissions Low-Carbon Development Programme