

SUSTAINABLE DEVELOPMENT KPIs OF KMG'S MANAGEMENT

LOW-CARBON DEVELOPMENT PROGRAMME

Reducing our carbon footprint is key to KMG's future sustainability

In order to deliver against strategic sustainability targets for 2022, the following motivational KPIs were approved for the Chairman of the Management Board (corporate KPIs) related to the introduction of the sustainable development management system:

Implementation of investment projects, including the Tazalyq sustainability project, a new desalination plant in Kenderly, a new gas processing plant in Zhanaozen, along with the upgrade and expansion of the Astrakhan–Mangyshlak water pipeline.

- Lost Time Incident Rate (LTIR),
- ESG risk rating.

Corporate sustainability KPIs for 2023 are more ambitious than those set for 2022:

- A comprehensive OHS indicator aimed at reducing LTIR, and identifying and communicating, among other things, unsafe workplace conditions and hazardous factors across the Group.

- Carbon footprint reflecting the evolution of KMG's GHG emissions in the reporting year relative to the baseline year of 2021.
- For deputy Chairmen of the Management Board, the following sustainability KPIs are planned for 2023:
- implementation of investment projects, including a number of sustainability projects;
 - delivery against the Action Plan to implement the 2022–2031 Low-Carbon Development Programme for relevant domains;
 - an ESG rating at 29.



Today, decarbonisation of industry as part of climate change mitigation has solid positions on global political, investment and trade agenda.

Reducing the carbon footprint is the critical factor in fighting global warming.

The sustainability and long-term horizon of decarbonisation are set forth by the Paris Agreement on climate change, which sets a global goal to hold temperature increase to 1.5 °C by 2100 and achieve a reduction of CO2 emissions of 25% by 2030, 70% by 2050, and 100% by 2070 (full decarbonisation).

Kazakhstan in turn supports international initiatives to step up efforts and enhance ambitions towards achieving the Paris Agreement goals, taking on voluntary commitment to have greenhouse gas emissions reduced by 15% by 2030 from the 1990 level.

In November 2020, President of the Republic of Kazakhstan Kassym-Jomart Tokayev spoke at a climate change conference and announced that Kazakhstan is ready to take action on climate change and achieve carbon neutrality by 2060. To that end, a Doctrine for Carbon Neutrality of Kazakhstan by 2060 was drafted in 2022.

KMG developed a Low-Carbon Development Programme for 2022–2031 as a single low-carbon development agenda that streamlines the Company's efforts in the realm of carbon footprint reduction.

As part of implementing KMG's 2022–2031 Low-Carbon Development Programme approved in November 2021, the Company developed and approved an Action Plan for 2022–2031.

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. Implementation of 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.

As part of the Action Plan implementation, a GHG Emission Monitoring and Reporting Methodology and the Internal Carbon Pricing (ICP) Programme have been developed.

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 and associates.

The methodology was developed in accordance with the Environmental Code of the Republic of Kazakhstan, as well as international standards for calculating GHG emissions applicable to ESG reporting.

The main goal of developing 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 carbon pricing is seen as a strategic tool to manage the risks associated with the impact of climate-related regulations on the Company's operations and to create additional opportunities for upgrading production capacities and achieving KMG's GHG emission reduction targets.

The ICP Programme describes key areas for ICP mechanisms, approaches to their implementation,

relevant global experience, as well as general proposals on the ICP use across KMG with a view to shaping further development of the Company's GHG emissions management system. The detailed development of mechanisms and their implementation in KMG's internal regulations are scheduled for 2023.

In 2022, KMG and Chevron (NYSE: CVX), through its subsidiary Chevron Munaigas Inc., announced a memorandum of understanding to explore potential lower carbon business opportunities in Kazakhstan.

KMG and Chevron plan to explore the potential for joint projects in carbon capture, utilisation and storage (CCUS), methane leakage management and energy efficiency.

The cooperation between KMG and Chevron is part of both companies' efforts

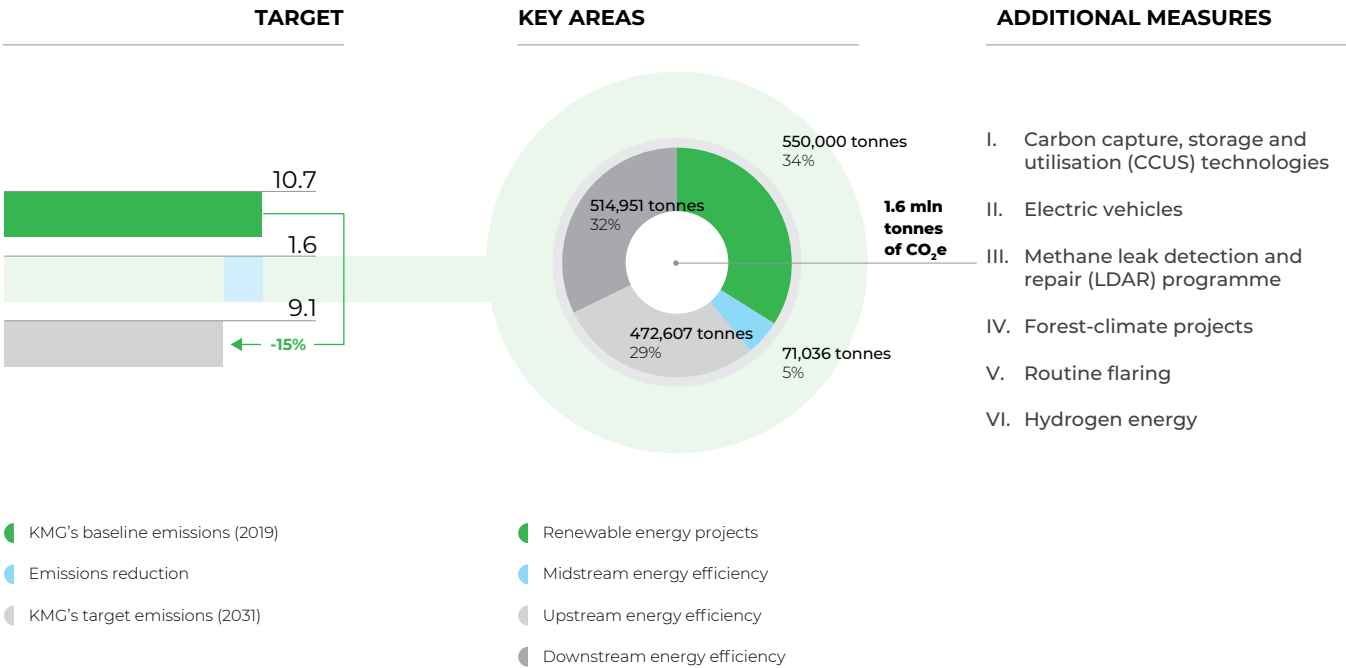
to support Kazakhstan's commitment to achieving carbon neutrality by 2060.

In June 2022, KMG and the EBRD signed a memorandum of understanding regarding strategic cooperation on decarbonisation.

The aim of the cooperation is to support KMG in reducing its carbon footprint by implementing its Low-Carbon Development Programme and to enhance its effectiveness.

The parties will focus on enhancing KMG's reporting capabilities in line with the TCFD recommendations and on exploring opportunities for financing projects to reduce our carbon footprint, including those in areas of energy efficiency, renewable energy, low-carbon hydrogen generation and the use of carbon dioxide capture and storage technologies.

KMG’s 2022–2031 low-carbon development programme



Target indicators

KMG’s strategic focuses in carbon footprint reduction

Nº	Indicator	Baseline year indicator (2019)	Target indicator (2031)
Key indicator			
1	Reduction of direct and indirect CO ₂ emissions	10.7 mln tonnes of CO ₂ e	-15% (1.6 mln tonnes of CO ₂ e)
Targets			
2	Reduction of carbon intensity		-10%
	Hydrocarbon production	147.6 tonnes of CO ₂ e / thous. toe of produced hydrocarbons	132.9 tonnes of CO ₂ e / thous. toe of produced hydrocarbons
	Large refineries	330.3 tonnes of CO ₂ e / thous. tonnes of oil	297.3 tonnes of CO ₂ e / thous. tonnes of oil
	Bitumen production	54.4 tonnes of CO ₂ e / thous. tonnes of oil	49 tonnes of CO ₂ e / thous. tonnes of oil
	Gas processing	1.1 tonnes of CO ₂ e / thous. m ³ of gas	1 tonne of CO ₂ e / thous. m ³ of gas
	Transportation	9.3 tonnes of CO ₂ e / thous. tonnes of oil	8.3 tonnes of CO ₂ e / thous. tonnes of oil
3	Reduction of carbon intensity		-10%
	Hydrocarbon production	2,281.3 MJ / thous. toe of produced hydrocarbons	2,053.2 MJ / thous. toe of produced hydrocarbons
	Large refineries	3,732.4 MJ / tonne of oil	3,359.2 MJ / tonne of oil
	Bitumen production	650.1 MJ / tonne of oil	585.1 MJ / tonne of oil
	Gas processing	3,296.5 MJ / thous. m ³ of gas	2,966.7 MJ / thous. m ³ of gas
	Transportation	120.9 MJ / tonne of oil	108.9 MJ / tonne of oil
4	Share of renewable energy in KMG's electricity balance from the baseline	0.005% (211 MWh)	15% (600.000 MWh)
5	Routine flaring	0.43%	0% (29.8 thous. tonnes of CO ₂ e)
6	Implementation of the Programme for Quantification, Control, Detection and Repair of Methane Leaks (LDAR)	0%	100% coverage of subsidiaries and associates engaged in production
7	Forest-climate projects	0	2,000 ha (10–16 thous. tonnes of CO ₂ e annually)
8	Introduction of the energy management service	Partial coverage of subsidiaries and associates	100% coverage of subsidiaries and associates
9	Carbon Disclosure Project climate rating	C (knowledge of climate impacts and issues)	A/A- (implementing current best practices)
10	Annual allocation of funds for implementation of low-carbon projects	0	At least 10% of CAPEX (USD 130–150 mln)

In 2022, 49 low-carbon development initiatives were implemented as planned, with annual fuel and energy savings totalling 1.504 mln GJ, including 33,448 thous. kWh in electricity, 1,531 Gcal in heat, 25,292 tonnes in boiler and heating fuel, and 7,570 thous. m³ of natural gas. This translates into a 106,965 thous. reduction in CO₂ emissions.

Intention to embed TCFD reporting

- KMG has formally announced its intention to embed reporting consistent with the TCFD principles, with a focus on assessing climate-related risks and their financial impact on the Company's operations.
- To prepare the initial disclosure, KMG has signed a memorandum of understanding with the EBRD for strategic cooperation on decarbonisation, whereby the EBRD will support KMG in drafting its first TCFD report.



HEALTH, SAFETY AND ENVIRONMENT

Industrial safety, occupational health and environmental protection

For all Samruk-Kazyna companies, 2022 was declared the Year of Safety. KMG is committed to sustainable development and takes a responsible attitude to the environment and social stability across its footprint. The Company's topmost priority is employee safety.

Sustainability principles inform the Company's economic, environmental and social development. One of KMG's key ESG

challenges is carbon emissions from operating activities and emissions from using the Company's products.

Aware of the nature and scale of our footprint, we strive to build our operations on such important principles as sustainable use of natural resources, health and safety of employees in all business lines and local communities, and environmental protection.

We have made a significant progress in improving environmental protection thanks to effective corporate standards, an eco-friendly corporate culture and continuous improvements in management. We aim to achieve a zero footprint, which means no impact on the environment whatsoever.

Participation in initiatives and programmes

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

WORLD BANK GROUP
The World Bank's Zero Routine Flaring by 2030 initiative

CDP
CDP climate programme

Global Methane Initiative
Global Methane Initiative

SUSTAINABLE DEVELOPMENT GOALS
UN 17 Sustainable Development Goals initiative

CASPIAN ENVIRONMENT PROGRAMME
Caspian Environmental Protection Initiative — CEPI

Performance highlights

Social highlights

Indicator	2020	2021	2022
Lost Time Incident Rate (LTIR)	0.29 ¹	0.31	0.36
Fatal Accident Rate (FAR)	0.00	2.93	1.00
Fatalities	0	1	1

Environmental highlights

Indicator	2020	2021	2022
NO _x emissions, tonnes per 1.000 tonnes of produced hydrocarbons	0.22	0.24	0.31
SO _x emissions, tonnes per 1.000 tonnes of produced hydrocarbons	0.23	0.22	0.21
APG flaring rate, tonnes per 1.000 tonnes of produced hydrocarbons	2.2	2.1	1.5

¹ — Data without hours worked of KazTransGas.