

# APPENDICES

About the Report .....	174
Key ESG Indicators .....	181
Independent Assurance Report .....	195
GRI Content Index .....	198
SASB Index .....	205
Abbreviations and Terms .....	208



**ҚазМұнайГаз**  
NATIONAL COMPANY ҰЛТТЫҚ КОМПАНИЯСЫ



**INVESTING  
IN THE FUTURE**

# ABOUT THE REPORT

GRI 2-2, GRI 2-3, GRI 2-4

NC KazMunayGas JSC has been publishing sustainable development reports annually since 2008, and since 2012 it has been publishing reports in accordance with the GRI Sustainability Reporting Standards (GRI). This report reflects KMG's commitment to transparency and accountability to its stakeholders and covers key aspects of sustainable development, including economic, environmental, and social performance.

The 2024 Sustainable Development Report has been prepared in accordance with the GRI Standards, including the sector-specific standard GRI 11: Oil and Gas Sector 2021. The reporting period is the calendar year from January 1 to December 31, 2024.

To ensure the objectivity and reliability of the disclosed information, the report underwent external verification. The assurance provider was selected through a competitive procurement process in line with the procedures of Samruk-Kazyna JSC.

The reporting boundaries include KMG and its subsidiaries and dependent entities in which the Company holds 50% or more of the voting shares (ownership interest), as well as legal entities whose operations are under KMG's control (see section *"Reporting Boundaries" for details*).

To ensure comparability and data consistency, information is presented in a multi-year dynamic format.

## REPORTING BOUNDARIES

The reporting boundaries of NC KazMunayGas JSC encompass subsidiaries and dependent entities in which KMG directly or indirectly holds 50% or more

The Sustainable Development Report is approved by the KMG Board of Directors and is communicated to stakeholders by publishing on the corporate website and distributing the printed version.

KMG's Sustainable Development reports are available in Kazakh, Russian, and English on the KMG website: <https://www.kmg.kz/en/sustainable-development/>. An interactive version of the Report is also published in Kazakh, Russian, and English on the KMG website: <https://www.kmg.kz/en/sustainable-development/>.

The report has been prepared in line with the GRI Standards, enabling comparison of performance across different reporting periods.

Guided by international sustainable development initiatives, KMG is a signatory to the UN Global Compact and integrates the Sustainable Development Goals (SDGs) into its core activities. This report outlines the Company's progress within these frameworks.

The purpose of this report is to inform stakeholders about the Company's strategic priorities, its efforts in the area of sustainable development, and ESG initiatives that contribute to the creation of long-term value for society and the business.

of the voting shares (ownership interest), as well as legal entities whose operations KMG is entitled to control.

## CONSOLIDATED REPORTING

AS OF DECEMBER 31, 2024, THE CONSOLIDATED FINANCIAL STATEMENTS INCLUDE THE FOLLOWING ENTITIES:

Exploration Production KazMunayGas JSC	National Maritime Shipping Company Kazmortransflot LLP
Oil Company KazMunayTeniz LLP	Cooperative KazMunayGas PKI U.A.
KMG Karachaganak LLP	Atyrau Oil Refinery LLP
KazakhTurkMunay LLP	Pavlodar Petrochemical Plant LLP
KMG Kashagan B.V.	KMG International N.V.
Dunga Operating GmbH	KMG Drilling&Services LLP
KazTransOil JSC	

### REPORTING BOUNDARIES BY SECTION AND INDICATOR

- **Corporate Governance:** Includes all KMG subsidiaries and dependent entities, regardless of ownership share.
- **Financial and Operating Results:** Presented based on consolidated financial reporting prepared in accordance with International Financial Reporting Standards (IFRS).
- **Human Resource Management:** Covers entities with the largest number of employees.
- **Social Policy:** Applies to key subsidiaries involved in the implementation of social programs.
- **Industrial Safety and Occupational Health:** Covers key production companies.
- **Water Resource Management:** Involves enterprises with significant water use.
- **Greenhouse Gas Emissions:** Includes the largest entities operating in oil and gas exploration, production, and processing.
- **Air Emissions Control:** Covers entities with the highest emission volumes.
- **Associated Gas Utilization:** Applies to companies with the most substantial volumes of associated petroleum gas.
- **Energy Use and Efficiency:** Encompasses the most energy-intensive operations.
- **Waste Management:** Includes the largest entities involved in oil and gas exploration, production, and processing.



## PERIMETER OF DISCLOSURES

Disclosure	Economic Impacts								Social Policy							
	Value Created							Anti-corruption	Local Communities				Employment Practice			
	GRI 201-1	GRI 201-4	GRI 203-1	GRI 203-2	GRI 204-1	GRI 205-1	GRI 205-2	GRI 205-3	GRI 413-1	GRI 414-1	GRI 2-27	GRI 2-7	GRI 2-8	GRI 2-21	GRI 2-30	GRI 401-1
<b>KMG Group Company</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NC KazMunayGas JSC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
KazMunayGas Exploration Production JSC	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
KazMunayTeniz MNC LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓		✓
KMG Karachaganak LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kazakhturkmunay LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
KMG Kashagan B.V.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dunga Operating GmbH	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓		✓
KazTransOil JSC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NMSK KazMorTransFlot LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Atyrau Refinery LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pavlodar Oil Chemistry Refinery LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
KMG Drilling&Services LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Ozenmunaigas JSC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Embamunaigas JSC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oil Construction Company LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oil Services Company LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Urikhtau Operating LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
KazGPP LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Magistralny Vodovod LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
UDTV LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ken-Kurylys-Service LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Petrotrans Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Cooperative KazMunaiGaz U.A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
KMG Finance Sub B.V.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
KMG International N.V.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Batumi Oil Terminal LLC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Batumi Sea Port LLC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Green Energy LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Bolashak Operating LLP (former Zhambyl Petroleum LLP)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		
KMG Barlau LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
KMG PetroChem LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓

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Disclosure	Economic Impacts								Social Policy							
	Value Created					Anti-corruption			Local Communities			Employment Practice				
	GRI 201-1	GRI 201-4	GRI 203-1	GRI 203-2	GRI 204-1	GRI 205-1	GRI 205-2	GRI 205-3	GRI 413-1	GRI 414-1	GRI 2-27	GRI 2-7	GRI 2-8	GRI 2-21	GRI 2-30	GRI 401-1
KMG-Security LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ozenmunaiservice LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polymer Production LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
KazMunayGasService LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
KMG-Kumkol LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
KMG Engineering LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
KMG-Aero LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Oil Transport Corporation LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mangistaumunaigas JSC	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
Kazakhoil Aktobe LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
Karazhanbasmunay JSC	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
PetroKazakhstan Oil Products LLP	✓	✓	✓	✓	✓	✓	✓	✓						✓		
CASPI BITUM JV LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓	✓	
Kazgermunai JV LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
KMG Systems & Services LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Kazakhstan Petrochemical Industries Inc LLP	✓	✓	✓	✓	✓	✓	✓	✓						✓		
Munaitelcom LLP	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Ural Oil & Gas LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
KMG EP-Catering LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓
Al-Farabi Operating LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
Mangistauenergomunai LLP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Karaton Operating Ltd.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		
Rompetrol Rafinare SA (Petromidia)	✓	✓	✓	✓	✓	✓	✓	✓						✓		
Vega Refinery	✓	✓	✓	✓	✓	✓	✓	✓						✓		
Isatay Operating Company LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
AK SU KMG LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓		✓
TH KazMunaiGaz B.V.	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓		✓
KMG EP Netherlands Energy Coöperatief	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓		✓
Kalamkas-Khazar Operating LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
Petrosun	✓	✓	✓	✓	✓	✓	✓	✓						✓		
Becturly Energy Operating LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
Kurmangazy Petroleum LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		
Professional Geo Solutions Kazakhstan LLP	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓		

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## DISCLOSURE BREAKDOWN

GRI 201-1	Directly Created and Distributed Economic Value	GRI 404-3	Percentage of Employees Receiving Regular Performance and Career Development Reviews
GRI 201-4	Financial assistance received from government	GRI 403-8	Occupational Health and Safety Management System
GRI 203-1	Investments in Infrastructure and Supported Services	GRI 403-9	Work-related injuries
GRI 203-2	Significant Indirect Economic Impacts	GRI 302-1	Energy consumption within the organization
GRI 204-1	Proportion of Spending on Local Suppliers	GRI 302-3	Energy intensity
GRI 205-1	Operations Assessed for Corruption Risks	GRI 302-4	Reduction in energy consumption
GRI 205-2	Communication and Training on Anti-corruption Policies and Procedures	GRI 303-3	Water withdrawal
GRI 205-3	Confirmed Corruption Incidents and Actions Taken	GRI 303-4	Water discharge
GRI 413-1	Operations with local community engagement, impact assessments, and development programs	GRI 303-5	Water consumption
GRI 414-1	New Suppliers Screened Using Social Criteria	GRI 304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
GRI 2-7	Employees	GRI 304-3	Protected or restored habitats
GRI 2-8	Non-employee workers	GRI 304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations
GRI 2-21	Pay Ratio: the ratio of the total annual compensation of the highest-paid employee to the median annual compensation of all other employees	GRI 305-1	Direct GHG emissions (Scope 1)
GRI 2-27	Compliance with laws and regulations	GRI 305-2	Indirect GHG emissions from energy consumption (Scope 2)
GRI 2-30	Collective bargaining agreements	GRI 305-3	Other indirect GHG emissions (Scope 3)
GRI 401-1	New Employees and Employee Turnover	GRI 305-4	GHG emissions intensity
GRI 401-2	Benefits Provided to Full-time Employees but Not to Temporary or Parttime Employees	GRI 305-5	Reduction of greenhouse gas emissions
GRI 401-3	Parental Leave	GRI 305-7	Emissions of NOx, SOx, and other significant air pollutants
GRI 405-1	Diversity of Governance Bodies and Employees	GRI 306-1	Waste generation and significant waste impacts
GRI 406-1	Discrimination Incidents and Corrective Actions Taken	GRI 306-2	Management of significant waste impacts
GRI 404-1	Average Hours of Training per Employee per Year	GRI 306-4	Waste directed for recycling
GRI 306-3	Waste generated	GRI 306-5	Waste directed to landfill

# KEY ESG DISCLOSURES

## PRODUCTION DISCLOSURES

Key Production Disclosures	Units	2022	2023	2024
<b>Oil &amp; Gas Sector</b>				
Crude oil and gas condensate production	thousand tonnes/ year	22,012	23,532	23,837
Crude oil and gas condensate production (daily)	thousand tonnes/ day	60,307	64,471	65,128
Natural and associated gas production	million m <sup>3</sup> /year	8,241	9,459	9,554
Natural and associated gas production (daily)	thousand m <sup>3</sup> /day	22,578	25,915	26,125
Number of drilling sites (>50% share)	units	65	66	67
Oil and gas processing	thousand tonnes	19,900	19,593	19,158
<b>Production of petroleum products, incl.</b>	<b>thousand tonnes</b>	<b>18,669</b>	<b>18,183</b>	<b>17,949</b>
Gasoline	thousand tonnes	5,330	5,628	5,566
Fuel oil	thousand tonnes	2,416	2,011	1,697
Vacuum gas oil (VGO)	thousand tonnes	482	179	258
Paraxylene	thousand tonnes	76	26	108
Diesel fuel	thousand tonnes	6,588	6,460	6,446
Benzene	thousand tonnes	9	23	28
Coke	thousand tonnes	377	630	630
Liquefied gas	thousand tonnes	846	878	883
Sulfur	thousand tonnes	60	108	102
Jet fuel	thousand tonnes	838	792	985
Furnace fuel	thousand tonnes	16	38	18
Bitumen	thousand tonnes	657	574	557
Commercial crude oil	thousand tonnes	231	242	201
Feedstock for carbon black	thousand tonnes	10	9,542	0
Light naphtha	thousand tonnes	2	1	1
Propylene	thousand tonnes		117	83
Other	thousand tonnes	730	468	388
Installed processing capacity	thousand tonnes/ day	75.8	75.8	75.8
Total oil transportation, incl.	million t/km	74,659	80,359	
via trunk pipelines	thousand tonnes	65,316	69,581	70,309
via maritime transport (tankers)	thousand tonnes	9,343	10,778	13,169

## ECONOMIC DISCLOSURES

### COMPLIANCE WITH LAWS AND REGULATIONS

GRI 2-27

Disclosure	2022	2023	2024
Total number of instances of non-compliance with laws and regulations, units	67	40	51
– of which resulted in fines	67	40	51
– of which resulted in non-monetary sanctions	0	0	0
Total number of non-compliance cases with paid fines, units	67	40	51
– imposed during the reporting period	58	39	50
– imposed in previous reporting periods	9	1	1
Total amount of fines paid for non-compliance with laws and regulations, KZT thousand	280,311	91,563	196,306
– imposed during the reporting period	204,796	85,937	195,118
– imposed in previous reporting periods	75,515	5,626.1	1,118.36

### DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED, KZT BILLION

GRI 201-1

Disclosure	2022	2023	2024
<b>Direct economic value generated</b>			
Total revenue	9,827	9,242	9,238
<b>Economic value distributed</b>			
Total expenses	8,521	8,315	8,144
<b>Economic value retained</b>			
Profit	1,307	927	1,094
Payments to providers of capital	701	558	552
Payments to state	1,176	1,162	1,079
Capital investments	535	804	716

KMG did not receive any financial assistance in monetary form from the state during the reporting period and does not make donations for state or political purposes. KMG does not engage in lobbying or political financing. All forms of lobbying and political expenditures, including in-kind contributions, are considered.

## SOCIAL INFRASTRUCTURE INVESTMENTS, KZT BILLION

GRI 203-1

Disclosure	2022	2023	2024
Amount of significant infrastructure investments	12.0	5.6	3.7

## NUMBER OF OIL AND GAS FIELDS

Disclosure	2022	2023	2024
Total number of fields	66	67	68
Onshore fields	65	66	67
Offshore fields	1	1	1

## ENVIRONMENTAL DISCLOSURES

### WATER MANAGEMENT DISCLOSURES

GRI 303-3, GRI 303-4, GRI 303-5

Disclosure	2022	2023	2024
Total volume of water taken away excluding reservoir waters, thousand m <sup>3</sup>	83,707	80,437	83,072
Total water discharge, thousand m <sup>3</sup>	10,309	10,457	10,512
Total water consumption, thousand m <sup>3</sup>	83,707	80,437	83,072

Structure of Withdrawal, Discharge and Water Use as of the End of 2024, thousand m <sup>3</sup>	All regions	Water-scarce regions
<b>Total water withdrawal, thousand m<sup>3</sup></b>	<b>223,576</b>	<b>26,784</b>
<i>By source:</i>		
Surface water	34,774	3,421
Groundwater	24,796	17,463
Seawater	13,923	1,057
Municipal water supply	9,488	4,829
Formation water	140,504	–
Third-party water supply	92	14
<i>By water type:</i>		
Freshwater	37,396	10,372
Other water	45,675	16,413
<b>Total water discharge, thousand m<sup>3</sup></b>	<b>148,375</b>	<b>2,987</b>
<i>By discharge destination:</i>		
Groundwater reinjection	–	
groundwater (injection)	137,062	

Structure of Withdrawal, Discharge and Water Use as of the End of 2024, thousand m <sup>3</sup>	All regions	Water-scarce regions
Artificial water bodies (evaporation ponds, holding ponds, filtration fields)	10,512	
Transferred to third parties for treatment	801	
<i>By water type:</i>		
Freshwater	–	–
Other water	147,574	2,987
<b>Water consumption</b>	<b>83,071</b>	<b>26,784</b>

Additional Disclosures	2022	2023	2024
Volume of reused water (after treatment), thousand m <sup>3</sup>	5,522	7,195	8,460
Volume of recycled water, thousand m <sup>3</sup>	451,271	437,530	535,510
Volume of produced associated formation water, thousand m <sup>3</sup>	136,519	136,960	140,504
<i>Share of associated formation water reinjected</i>	99%	97%	98%

## GREENHOUSE GAS EMISSIONS

GRI 305-1, GRI 305-2, GRI 305-3, GRI 305-4

Scope 1. Direct Emissions		2022	2023	2024
Breakdown by Business Segment				
Production	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	2.4 / 2.8	2.33 / 3.44	2.64 / 3.98
Refining	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	5.1 / 5.2	5.01 / 5.03	4.92 / 4.94
Transportation	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	0.1 / 0.1	0.1 / 0.1	0.14 / 0.14
Breakdown by Country				
Kazakhstan	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	6.6 / 7.1	6.55 / 7.68	6.99 / 8.35
Romania	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	0.9 / 0.9	0.88 / 0.88	0.69 / 0.69
Georgia	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	0.02 / 0.02	0.02 / 0.02	0.02 / 0.02
Breakdown by Greenhouse Gas Type				
CO <sub>2</sub>	million t CO <sub>2</sub>	7.6	7.44	7.7
CH <sub>4</sub>	million t CO <sub>2</sub> -eq	0.4	1.11	1.34
N <sub>2</sub> O	million t CO <sub>2</sub> -eq	0.1	0.1	0.02
Scope 2 Indirect Emissions (Market-Based Method)	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	3.2 / 3.2	3.4/3.4	3.3 / 3.3
Scope 2 Indirect Emissions (Location-Based Method)	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	3.3 / 3.3	3.5/3.5	3.4 / 3.4
Scope 3 From Use of Sold Products	million t CO <sub>2</sub> / million t CO <sub>2</sub> -eq	61.6 / 61.8	54.6/54.8	59.1 / 59.2

## GREENHOUSE GAS EMISSIONS INTENSITY DISCLOSURES

	Production			Transportation			Refining		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
<b>Emissions Intensity – Scope 1</b>									
GHG Emissions Intensity Scope 1 (tonnes CO <sub>2</sub> per KZT million of revenue)	0.28	0.28	0.32	0.01	0.01	0.02	0.59	0.60	0.59
<b>Emissions Intensity – Scope 2</b>									
GHG Emissions Intensity Scope 2, local-based (tonnes CO <sub>2</sub> -eq per KZT million of revenue)	-	-	0.15	-	-	0.03	-	-	0.24
GHG Emissions Intensity Scope 2, market-based (tonnes CO <sub>2</sub> -eq per KZT million of revenue)	-	-	0.15	-	-	0.03	-	-	0.23

## AIR EMISSIONS DISCLOSURES

GRI 305-7

Volume of air pollutant emissions, thousand tonnes	2022	2023	2024
Nitrogen oxides (NOx)	16.00	15.27	15.22
Sulfur dioxide (SOx)	10.50	10.99	11.69
Carbon monoxide (CO)	13.71	22.96	21.50
Particulate matter (PM)	0.52	1.31	1.97
Other	79.86	68.93	66.38

Flaring of Raw Gas	2022	2023	2024
Total flaring volume of raw gas, million m <sup>3</sup>	35.70	33.35	35.20
Raw gas utilization rate, %	98.80	98.90	98.90
Flaring intensity, tonnes per 1,000 tonnes of hydrocarbons produced	1.50	1.40	1.45

## ENERGY CONSUMPTION DISCLOSURES

GRI 302-1, GRI 302-4

Energy consumption, thousand GJ	2022	2023	2024
<b>Consumption of non-renewable fuels</b>			
Liquid fuels, incl.:	1,557	1,578	1,805
Gasoline	70	58	93
Diesel	1,487	1,520	1,712
Boiler and furnace fuel, incl.:	5,954	17,846	5,221
Furnace oil	3,216	14,157	2,500
Crude oil	958	1,169	1,184
Mazut (fuel oil)	1,779	2,520	1,537



Energy consumption, thousand GJ	2022	2023	2024
Marine fuel (IFO fuel oil)	1		
Refinery gas	43,156	28,223	35,995
Associated petroleum gas	15,702	12,933	13,809
Gas consumption, incl.:	48,975	46,794	53,509
Natural gas	31,825	30,264	34,725
Stripped gas	17,053	16,461	18,718
LPG	97	69	65
<b>Total</b>	<b>115,344</b>	<b>107,373</b>	<b>110,339</b>
<b>Electricity and Heat Consumption</b>			
Energy from renewable sources	43	14	40
Electricity, incl.:	15,761	15,583	17,736
Purchased	13,231	12,919	15,081
Self-generated	2,530	2,663	2,655
Heat energy, incl.:	23,802	20,348	26,722
Purchased	3,534	3,818	3,943
Self-generated	20,268	16,529	22,779
<b>Total</b>	<b>39,563</b>	<b>35,931</b>	<b>44,458</b>
<b>Total Energy Consumption</b>	<b>132,152</b>	<b>124,125</b>	<b>129,403</b>

Energy Consumption by Segment, thousand GJ	2022	2023	2024
Oil & gas exploration and production	58,200	55,083	57,285
Oil & gas processing	68,654	64,423	59,492
Oil transportation	5,298	4,619	4,229
Petrochemicals (KPI)			8,397

Disclosure	2022	2023	2024
Energy Savings from Energy Efficiency Programs, thousand GJ	2,057	717	2,361

## WASTE MANAGEMENT

GRI 306-3, GRI 306-4, GRI 306-5

Waste generated by type, thousand tonnes	2022	2023	2024
Hazardous waste	382.4	383.1	358.0
<i>incl. drilling waste (drilling fluids and sludge)<sup>19</sup></i>	220.4	228.4	179.6
Non-hazardous waste <sup>20</sup>	37.2	52.8	79.7
<b>Total</b>	<b>419.5</b>	<b>435.9</b>	<b>437.7</b>

Disclosure	2023		2024	
Waste directed to processing/utilization, thousand tonnes	On Company sites	At contractor sites	On Company sites	At contractor sites
Hazardous waste <sup>21</sup>	825.2	736.4	1,131.2	321.7
<i>incl. drilling waste</i>	-	228.4	-	179.6
Non-hazardous waste	2.2	29.5	1.6	53.1
<b>Total:</b>	<b>827.4</b>	<b>765.9</b>	<b>1,132.7</b>	<b>374.9</b>
Waste sent for disposal and placement, thousand tonnes				
Hazardous waste	0.1	-	-	-
Non-hazardous waste	0.9	19.3	0.0	16.5
<b>Total</b>	<b>1.0</b>	<b>19.3</b>	<b>0.0</b>	<b>16.5</b>

## ENVIRONMENTAL PROTECTION EXPENDITURES

Environmental Protection Expenditures by Type of Activity	Unit	2022	2023	2024
Implementation of technologies, including:	KZT million	<b>777.0</b>	7,448.6	3,586.7
BAT	KZT million			
AMS	KZT million	777.0	906.6	1,533.8
Forest-climate projects	KZT million			
Energy efficiency	KZT million			
Research and development	KZT million	470.5	363.3	1,555.7
Emission payments, including:	KZT million	3,489.4	3,420.5	3,430.8
Standard emission fees (tax)	KZT million	3,482.3	3,411.0	3,429.6
Excess emission fees	KZT million	7.1	9.5	1.2
Other	KZT million	27,650.0	46,495	36,867.6
<b>Total:</b>	<b>KZT million</b>	<b>32,386.9</b>	<b>57,727.5</b>	<b>45,440.8</b>

<sup>19</sup> The decrease in 2024 is due to a decrease in the number of wells drilled in MMG and KBM.

<sup>20</sup> The growth in 2024 is associated with an increase in the volume of construction waste generated at the PNHS (reconstruction of the cooling tower, plant communications, etc.).

<sup>21</sup> Taking into account the recycling/utilization of historical and accumulated waste from previous periods.

## BIODIVERSITY DISCLOSURES

### *Location and scale of operational sites in relation to key biodiversity areas*

Site	Location	Key Biodiversity Areas (KBA)	Location in relation to KBA	Contract Area (km <sup>2</sup> )	Impact Mitigation Plan
Urikhtau	Mughalzhar District, Aktobe Region	State Nature Reserve of Local Importance "Kokzhide-Kumzhargan"	Partially overlaps	239.9	Hydrogeological monitoring
Alibekmola & Kozhasai	Mughalzhar District, Aktobe Region	Kokzhide Sands, Kokzhide Groundwater	Adjacent	156.5	Hydrogeological monitoring
Isatay	Central KCSK, Northern Mangystau Region	Special Environmentally Sensitive Zone of KCSK	Located within protected zone	1,060	Seasonal baseline studies, regular environmental monitoring
Abay	Northwest KCSK, Atyrau Region	Special Environmentally Sensitive Zone of KCSK	Located within protected zone	1,233.8	Seasonal baseline studies, regular environmental monitoring
Al-Farabi	Southern KCSK, Mangystau Region	Environmentally Sensitive Zone of KCSK	Does not intersect with KBA	6,046.6	Seasonal baseline studies, regular environmental monitoring
Kalamkas-Khazar	Northwestern Caspian Sea	Special Environmentally Sensitive Zone of KCSK	Located within protected zone	1,707.17	Seasonal baseline studies, regular environmental monitoring

## SOCIAL DISCLOSURES

### WORKFORCE STRUCTURE AND HEADCOUNT<sup>22</sup>

GRI 2-7, GRI 2-8, GRI 405-1

Disclosure	2022	2023	2024
<b>Total headcount</b>	<b>45,764</b>	<b>48,196</b>	<b>49,243</b>
<i>By gender:</i>			
<i>Men</i>	37,055	39,218	40,120
<i>Women</i>	8,709	8,978	9,123
<i>By age group:</i>			
<i>Under 30</i>	6,484	5,006	5,686
<i>30–50</i>	26,227	28,468	28,584
<i>Over 50</i>	13,052	14,722	14,973
<b>Outsourced personnel</b>	<b>2,980</b>	<b>3,209</b>	<b>3,357</b>

Category	Men	Women	Total
<b>GRI 405-1. Number of employees with disabilities</b>	459	102	561
<b>Republic of Kazakhstan</b>	428	95	523
Abai Region	1	-	1
Akmola Region	-	-	-
Aktobe Region	6	4	10
Almaty Region	-	-	-
Atyrau Region	107	20	127
West Kazakhstan Region	2	-	2
Zhambyl Region	-	1	1
Zhetysu Region	4	-	4
Karaganda Region	4	1	5
Kostanay Region	-	-	-
Kyzylorda Region	3	1	4
Mangystau Region	263	51	314
Pavlodar Region	15	6	21
North Kazakhstan Region	-	-	-
Turkistan Region	3	-	3
Ulytau Region	5	2	7
East Kazakhstan Region	-	-	-
Astana city	15	8	23
Almaty city	-	-	-
Shymkent city	-	1	1
<b>Outside the Republic of Kazakhstan</b>	<b>31</b>	<b>7</b>	<b>38</b>

<sup>22</sup> Starting from 2024, the KMG Group accounts for the headcount based on the payroll. In previous reporting periods, the actual headcount was considered. As a result, historical personnel data may differ.

Disclosure		Administrative and managerial personnel	Production Personnel
<b>Total</b>	<b>people</b>	<b>3,802</b>	<b>45,441</b>
<i>By gender:</i>			
<i>Men</i>	people	1,816	38,304
	%	48	84
<i>Women</i>	people	1,986	7,137
	%	52	16
<i>By age group:</i>			
<i>Under 30</i>	people	311	5,375
	%	8	12
<i>30-50</i>	people	2,724	25,860
	%	72	57
<i>Over 50</i>	people	767	14,206
	%	20	31

Disclosure		Management Board	Board of Directors
<b>Total</b>	<b>people</b>	<b>10</b>	<b>9</b>
<i>By gender:</i>			
<i>Men</i>	people	9	8
	%	90	89
<i>Women</i>	people	1	1
	%	10	11
<i>By age group:</i>			
<i>Under 30</i>	people	–	–
	%	–	–
<i>30-50</i>	people	6	5
	%	60	56
<i>Over 50</i>	people	4	4
	%	40	44

Category	Total	By Contract Type		By Working Time	
		Permanent	Temporary	Full-time	Part-time
<b>Total</b>	<b>49,243</b>	<b>48,195</b>	<b>1,048</b>	<b>49,157</b>	<b>86</b>
<i>By Gender</i>					
<i>Men</i>	40,120	39,333	787	40,065	55
<i>Women</i>	9,123	8,862	261	9,092	31
<i>By region</i>					
<i>Abai Region</i>	58	58	-	58	-
<i>Akmola Region</i>	23	23	-	22	1
<i>Aktobe Region</i>	1,132	1,106	26	1,130	2
<i>Almaty Region</i>	20	20	-	17	-
<i>Atyrau Region</i>	10,605	10,443	162	10,597	11
<i>West Kazakhstan Region</i>	699	661	38	699	-
<i>Zhambyl Region</i>	-	-	-	-	-
<i>Zhetysu Region</i>	179	175	4	179	-
<i>Karaganda Region</i>	770	769	1	769	1
<i>Kostanay Region</i>	-	-	-	-	-
<i>Kyzylorda Region</i>	265	246	19	265	-
<i>Mangystau Region</i>	22,026	21,609	417	22,002	24
<i>Pavlodar Region</i>	3,119	3,099	20	3,114	5
<i>North Kazakhstan Region</i>	85	85	-	85	-
<i>Turkistan Region</i>	228	226	2	226	2
<i>Ulytau Region</i>	647	642	5	644	3
<i>East Kazakhstan Region</i>	-	-	-	-	-
<i>Astana city</i>	2,120	2,089	31	2,114	6
<i>Almaty city</i>	16	16	-	16	-
<i>Shymkent city</i>	341	337	4	340	1
<i>Outside the Republic of Kazakhstan</i>	6,910	6,591	319	6,880	30



## EMPLOYEE HIRING AND TURNOVER DISCLOSURES

GRI 401-1

Category	Hired (persons)	Terminated (persons)	Turnover (%)
<b>Total</b>	<b>3,928</b>	<b>3,272</b>	<b>6.6%</b>
<i>By Age Groups</i>			
<i>Under 30 years</i>	1,087	583	1.2%
<i>30-50</i>	2,303	1,478	3.0%
<i>Over 50 years</i>	538	1,211	2.5%
<i>By Gender</i>			
<i>Men</i>	3,236	2,582	6.4%
<i>Women</i>	692	690	7.6%
<i>By Regions</i>			
<i>Abai Region</i>	4	4	-
<i>Akmola Region</i>	1	1	-
<i>Aktobe Region</i>	108	87	0.2%
<i>Almaty Region</i>	-	-	-
<i>Atyrau Region</i>	778	580	1.2%
<i>West Kazakhstan Region</i>	63	53	0.1%
<i>Zhambyl Region</i>	-	-	-
<i>Zhetysu Region</i>	8	6	-
<i>Karaganda Region</i>	56	73	0.1%
<i>Kostanay Region</i>	-	-	-
<i>Kyzylorda Region</i>	40	71	0.1%
<i>Mangystau Region</i>	1,037	889	1.8%
<i>Pavlodar Region</i>	224	198	0.4%
<i>North Kazakhstan Region</i>	2	6	-
<i>Turkistan Region</i>	8	9	-
<i>Ulytau Region</i>	21	22	-
<i>East Kazakhstan Region</i>	-	-	-
<i>Astana city</i>	483	347	0.7%
<i>Almaty city</i>	5	1	-
<i>Shymkent city</i>	55	42	0.1%
<i>Outside the Republic of Kazakhstan</i>	1,035	883	1.8%

Disclosure	2022	2023	2024
Hired (persons)	5,860	5,746	3,928
Terminated (persons)	3,697	2,124	3,272
Turnover (%)	6.0%	4.5%	6.6%

## EMPLOYEE TRAINING AND EVALUATION DISCLOSURES

GRI 404-1, GRI 404-3

Disclosure	2022	2023	2024
Investment in training (million KZT)	4,858	4,116	5,110
Average hours of training per employee	39	34	35
<i>By Gender</i>			
Men	34	32	38
Women	60	43	25
<i>By Employee Category</i>			
Administrative and Managerial Staff	88	40	43
Production Personnel	59	34	34

  

Disclosure	2022	2023	2024
Percentage of employees receiving regular performance and career development evaluations (%)	45	31	37
<i>By Gender</i>			
Men	45	30	38
Women	46	36	28
<i>By Employee Category</i>			
Administrative and Managerial Staff	46	33	41
Production Personnel	45	31	36

## MATERNITY LEAVE DISCLOSURES

GRI 401-3

Disclosure	Men	Women	Total
Number of employees eligible for maternity leave or parental leave (according to the Labor Code of Kazakhstan)	40,120	9,123	49,243
Number of employees who took maternity leave or parental leave	43	484	527
Number of employees who returned to work after maternity/paternity leave	22	185	207
Number of employees who returned to work in the previous year after maternity/paternity leave and continued to work for 12 months	8	141	149
Number of employees expected to return to work after maternity/paternity leave in the reporting year	16	166	182
Return rate	1.38	1.11	1.14
Retention rate	0.35	0.53	0.51

## OCCUPATIONAL HEALTH AND SAFETY SYSTEM DISCLOSURES<sup>23</sup>

GRI 403-8

Disclosure	Unit	2022		2023		2024	
		Staff	Outsourced workers	Staff	Outsourced workers	Staff	Outsourced workers
Employees covered by the occupational health and industrial safety management system	Persons	45,764	3,277	48,196	3,362	49,243	3,621
	%	100	100	100	100	100	100
Number of people and the percentage covered by the occupational health and safety management system that passed the internal audit procedure (production control systems)	Persons	22,379	–	30,990	–	49,243	–
	%	49	–	64	–	64	–
Number of subsidiaries (including parent company) with ISO 45001:2018 certification	Unit	22	–	27	–	29	–

Occupational Health and Industrial Safety Expenditures	Unit	2022	2023	2024
<b>Total amount spent to ensure compliance with industrial safety requirements, including:</b>	<b>KZT billion</b>	<b>23.7</b>	<b>29.9</b>	<b>23.45</b>
<i>Occupational health</i>	KZT billion	8.1	14	7.2
<i>Fire safety</i>	KZT billion	10.6	9.5	4.1
<i>Industrial safety</i>	KZT billion	2.8	3.7	10.1
<i>Training</i>	KZT billion	0.8	0.9	1.79
<i>Other</i>	KZT billion	1.4	1.8	0.26

<sup>23</sup> Names of subsidiaries and affiliates (including the parent company) that have an ISO 2018-45001 certificate of conformity: NC KazMunayGas JSC, Ken-Kurylyservice LLP, Atyrau Refinery LLP, Atyrau Refinery LLP, Pavlodar Oil Chemistry Refinery LLP, KMG-Security LLP, Kazakhoil Aktobe LLP, KMG Systems & Services LLP, KMG Engineering LLP, Oil Transport Corporation LLP, Mangistauenergomunay LLP, KazGPZ LLP, Kazgermunai JV LLP, KazTransOil JSC, Professional Geo Solutions Kazakhstan LLP, Mangistaumunaigas JSC, Ozenmunaiservice LLP, Oil Services Company LLP, Munaitelem LLP, Ozenmunaigas JSC, Karazhanbasmunay JSC, KMG EP-Catering LLP, KMG-Kumkol LLP, Embamunaigas JSC, JV CASPI BITUM LLP, KMG-Kumkol LLP, Water Production and Transportation Department LLP, PetroKazakhstan Oil Products LLP, KMG Drilling & Services LLP.

# INDEPENDENT ASSURANCE REPORT

GRI 2-5

8

APPENDICES

INVESTING IN THE FUTURE SUSTAINABLE DEVELOPMENT REPORT FOR 2024

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## Independent practitioner's assurance report

To the Shareholders and Management of National Company "KazMunayGas" JSC

### Scope

We have been engaged by National Company "KazMunayGas" JSC (hereinafter "the Company") to perform a 'limited assurance engagement', as defined by International Standards on Assurance Engagements, (hereinafter "Engagement"), to report on the Company's information in the field of sustainability (hereinafter "Sustainability Information" or the "Subject Matter") contained in the Company's Sustainability report (hereinafter "the Report") for the period from January 1 to December 31, 2024 (hereinafter "the Reporting Period").

Under this Engagement, we did not perform any procedures with regard to the following:

- Forward-looking statements on performance, events or planned activities of the Company disclosed in the Report;
- Quantitative and qualitative data for contractors for the following indicators: Lost Time Injury Rate (LTIR), Fatal Accident Rate (FAR), and Road Accident Per Million Kilometer Rate (MVCR); and
- Information about Report compliance with the Sustainable Development Goals and with the principles of the UN Global Compact.

### Criteria applied by the Company

In preparing Subject Matter the Company applied the

- Global Reporting Initiative Sustainability Reporting Standards 2021 (hereinafter "the GRI Standards"),

as set forth in section "About the Report" (hereinafter "the Criteria").

### Company's responsibilities

The Company's management is responsible for selecting the Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

### EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our limited assurance Engagement in accordance with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ("ISAE 3000 (Revised)") and the terms of reference for this Engagement as agreed with the Company on May 14, 2021. ISAE 3000 requires that we plan and perform our Engagement to obtain limited assurance about whether we are aware of any material modifications that need to be made to the Subject Matter in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

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195



We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

#### **Our independence and quality management**

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Management 1, Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services engagements, which requires that we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### **Description of procedures performed**

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance Engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems. A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matter and related information, and applying analytical and other appropriate procedures.

Our procedures included the following:

- We checked the list of material topics required to be disclosed in the Subject Matter;
- We interviewed representatives of the Company's divisions involved in the preparation of the Subject Matter;
- We conducted analytical procedures of the quantitative information related to the Subject Matter;
- We examined sustainability-related internal corporate documents of the Company;
- On a sample basis we compared the items included in the Subject Matter with source information;
- We evaluated the presentation of the Subject Matter in the layout of the Report.

We also performed such other procedures as we considered necessary in the circumstances.





# GRI CONTENT INDEX

For the Content Index – Advanced Service, GRI Services reviewed that the GRI content index has been presented in a way consistent with the requirements for reporting in accordance with the GRI Standards, and that the information in the index is clearly presented and accessible to the stakeholders.



<b>Statement of Application</b>	NC KazMunayGas JSC has reported in accordance with the GRI Standards for the period 1 January to 31 December 2024.
<b>GRI Standard Used</b>	GRI 1: Foundation 2021
<b>Applicable Industry Standard</b>	GRI 11: Oil and Gas Sector 2021

GRI Standard	Disclosure	Page	Exclusions/ Comments	GRI Standard ref. No
GRI 2: General Disclosures 2021	1. Organization and its reporting practices			
	2-1 Organization details	16		
	2-2 Entities included in sustainability reporting	174		
	2-3 Reporting period, frequency of reporting, and contact point	174		
	2-4 Restatements of information	174		
	2-5 External assurance	195		
	2. Activities and employees			
	2-6 Activities, value chain, and other business relationships	22		
	2-7 Employees	145, 189		
	2-8 Non-employee workers	145, 189		
	3. Corporate governance			
	2-9 Governance structure and composition	44		
	2-10 Nomination and selection of the highest governance body	46		
	2-11 Chair of the highest governance body	46		
	2-12 Role of the highest governance body in overseeing the management of impacts	56		
	2-13 Delegation of responsibility for managing impacts	56		
	2-14 Role of the highest governance body in sustainability reporting	56		
	2-15 Conflicts of interest	49, 51		
	2-16 Reporting on critical issues	49		
	2-17 Collective knowledge of the highest governance body	45		
	2-18 Evaluation of the performance of the highest governance body	47		
	2-19 Remuneration policy	47		
	2-20 Process for determining remuneration	47		

GRI Standard	Disclosure	Page	Exclusions/ Comments	GRI Standard ref. No
	2-21 Annual total compensation ratio	--	Information about the remuneration of the Board of Directors is reflected in KMG's Annual Report for 2024 on the KMG website: <a href="https://www.kmg.kz/en/investors/reporting/">https://www.kmg.kz/en/investors/reporting/</a>	
	4. Strategy, policy, and practice			
	2-22 Statement on sustainable development strategy	32, 54		
	2-23 Political commitments	162		
	2-24 Implementation of political commitments	162		
	2-25 Processes for remedying negative impacts	50, 160		
	2-26 Mechanisms for seeking advice and raising concerns	50, 160		
	2-27 Compliance with laws and regulations	50, 182	Information on administrative fines is not available due to the absence of a mechanism for monitoring total paid fines for KMG Group	
	2-28 Membership in associations	80		
	5. Stakeholder engagement			
	2-29 Approach to stakeholder engagement	60		
	2-30 Collective bargaining agreements	156		
<b>GRI 3: Material Topics 2021</b>	3-1 Process for determining material topics	58		
	3-2 List of material topics	59		
<b>Greenhouse Gas Emissions</b>				
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	87, 96		11.1
<b>GRI 302: Energy 2016</b>	302-1 Energy consumption within the organization	99, 185		11.2
	302-2 Energy consumption outside the organization	--	Information unavailable. Energy consumption outside the organization is not tracked.	11.3
	302-3 Energy intensity	101		11.1.4
	302-4 Reduction in energy consumption	100, 185		

GRI Standard	Disclosure	Page	Exclusions/ Comments	GRI Standard ref. No
GRI 305: Emissions 2016	305-1 Direct GHG emissions (Scope 1)	97, 184		11.1.5
	305-2 Indirect GHG emissions from energy consumption (Scope 2)	97, 184		11.1.6
	305-3 Other indirect GHG emissions (Scope 3)	97, 184		11.1.7
	305-4 GHG emissions intensity	97, 184		11.1.8
<b>Climate Adaptation, Resilience, and the Transition Period</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	69		11.2.1
GRI 201: Economic Performance 2016	201-2 Financial impacts and other risks and opportunities related to climate change	92	Climate risks are being identified, but at present, there is no assessment of financial impacts. The Company does not emit ozone-depleting substances	11.2.2
GRI 305: Emissions 2016	305-5 Reduction of greenhouse gas emissions	97		11.2.3
<b>Atmospheric Emissions</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	112		11.3.1
GRI 305: Emissions 2016	305-7 Emissions of NOx, SOx, and other significant air pollutants	112, 185		11.3.2
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories		Not applicable; research on this effect is not carried out in the Company	11.3.3
<b>Waste</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	98		11.5.1
GRI 306: Waste 2020	306-1 Waste generation and significant waste impacts	114		11.5.2
	306-2 Management of significant waste impacts	114, 118		11.5.3
	306-3 Waste generated	114, 187		11.5.4
	306-4 Waste directed for recycling	114, 187		11.5.5
	306-5 Waste directed to landfill	114, 187		11.5.6
<b>Water and Wastewater</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	104		11.6.1
GRI 303: Water and Effluents 2018	303-1 Interaction with water as a shared resource	104		11.6.2
	303-2 Management of impacts related to wastewater discharge	104		11.6.3
	303-3 Water withdrawal	108, 183		11.6.4
	303-4 Water discharge	109, 183		11.6.5
	303-5 Water consumption	183		11.6.6

GRI Standard	Disclosure	Page	Exclusions/ Comments	GRI Standard ref. No
<b>Closure and Rehabilitation</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	144		11.7.1
GRI 402: Labor/ Management Relations 2016	402-1 Minimum notification periods for operational changes	144		11.10.5
GRI 404: Training and Education 2016	404-2 Employee skill development programs and programs for transitioning to new jobs	149		11.10.7
GRI 11: Oil and Gas Sector 2021	The total financial reserve value created by the organization for closure and rehabilitation	128		11.7.6
<b>Asset Integrity and Critical Incident Management</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	117		11.8.1
GRI 306: Effluents and Waste 2016	306-3 Significant spills	117		11.8.2
<b>Occupational Health and Safety</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	131		11.9.1
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	131		11.9.2
	403-2 Hazard identification, risk assessment, and incident investigation	131		11.9.3
	403-3 Occupational health services	131		11.9.4
	403-4 Employee participation, consultation, and communication on occupational health and safety matters	131		11.9.5
	403-5 Training on occupational health and safety	149		11.9.6
	403-6 Employee wellness programs	139		11.9.7
	403-7 Prevention and minimization of impacts on occupational health related to business relationships	137		11.9.8
	403-8 Workers covered by the Occupational health and safety management system	139, 194		11.9.9
	403-9 Work-related injuries	134		11.9.10
	403-10 Occupational diseases	139		11.9.11
<b>Employment Practice</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	144		11.10.1
GRI 401: Employment 2016	401-1 New employees and employee turnover	147, 192		11.10.2
	401-2 Benefits provided to full-time employees but not to temporary or part-time employees	154, 156		11.10.3
	401-3 Parental leave	193		11.11.3

GRI Standard	Disclosure	Page	Exclusions/ Comments	GRI Standard ref. No
GRI 404: Training and Education 2016	404-1 Average hours of training per employee per year	193		11.11.4
	404-3 Percentage of employees receiving regular performance and career development reviews	193		
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	--	Information unavailable, as the procurement function is centrally managed by Samruk-Kazyna JSC. Steps are being taken to improve inter-organizational data sharing, and relevant data is expected to become partially available within 3 years..	11.10.8
	414-2 Negative social impacts in the supply chain and measures taken	--	Information unavailable, as the procurement function is centrally managed by Samruk-Kazyna JSC. Steps are being taken to improve inter-organizational data sharing, and relevant data is expected to become partially available within 3 years.	11.10.9
<b>Non-discrimination and Equal Opportunities</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	162		11.11.1
GRI 202: Market Presence 2016	202-1 Ratio of basic salary of women and men to local minimum wage	154		
	202-2 Percentage of senior management hired from local communities	145		11.14.3
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	145, 189		11.11.5
	405-2 Ratio of basic salary and remuneration of women and men	154		11.11.6
GRI 406: Non-Discrimination 2016	406-1 Discrimination incidents and corrective actions taken	162		11.11.7
<b>Economic Impacts</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	28		11.14.1
GRI 201: Economic Performance 2016	201-1 Directly created and distributed economic value	26, 182		11.14.2
	201-3 Pension plan obligations and other pension plans	154		
GRI 203: Indirect Economic Impacts 2016	203-1 Investments in infrastructure and supported services	28, 166, 183		11.14.4
	203-2 Significant indirect economic impacts	28		11.14.5

GRI Standard	Disclosure	Page	Exclusions/ Comments	GRI Standard ref. No
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	168		11.14.6
<b>Anti-corruption</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	51		11.20.1
GRI 205: Anti-corruption 2016	205-1 Operations assessed for corruption risks	51	Information incomplete. Not all data on anti-corruption risk assessments and training is available due to the imperfection of the data reporting system. The Company plans to improve its system to close this gap within 3 years.	11.20.2
	205-2 Communication and training on anti-corruption policies and procedures	51	Information incomplete. Not all data on anti-corruption risk assessments and training is available due to the imperfection of the data reporting system. The Company plans to improve its system to close this gap within 3 years.	11.20.3
	205-3 Confirmed corruption incidents and actions taken	51		11.20.4
<b>Additional Disclosures</b>				
<b>Biodiversity</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	118		--
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	121, 188		--
	304-2 Significant impacts of activities, products and services on biodiversity	118, 119		
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	121, 122		--
<b>Local Communities</b>				
GRI 3: Material Topics 2021	3-3 Management of material topics	166		--
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	166		--



Topics Identified in the relevant GRI Industry Standards considered non-material	
Topic	Explanation
<b>GRI 11: Oil and Gas Sector 2021</b>	
Topic 11.4: Biodiversity	The topic of "Biodiversity" (GRI 11.4) was considered non-material, but potentially relevant due to the geographical presence of the Company and the nature of its production operations. As part of its ongoing environmental monitoring and control of impact on flora and fauna within the areas of influence of its production facilities, conducted in compliance with the environmental legislation of the Republic of Kazakhstan, no signs of significant impact on specially protected natural areas, Red Book-listed species, or other vulnerable ecosystems were identified during the reporting period. Also, within the analysis of stakeholder perspectives (including government agencies, public organizations and local communities), biodiversity was not identified as an area of heightened concern or priority. Nevertheless, in an effort to be transparent, the Company provides information on the disclosure GRI 304-1 ("Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas") in the ESG Indicators Appendix. See the section "Biodiversity Protection".
Topic 11.12: Forced Labor and Modern Slavery	The risk of forced labor was considered relatively low in the supply chain and production processes.
Topic 11.13: Freedom of Association and Collective Bargaining	Although this topic was not considered material, KMG provides detailed information on collective bargaining agreements and working with trade unions. See the section "Unions and Collective Agreements".
Topic 11.15: Local Communities	The topic "Local communities" (GRI 11.15) was considered non-material, however, the issue of impact on local communities was disclosed through other, more specific topics with a higher level of priority. As part of the assessment of material sustainability topics, an analysis of citizens' appeals, the results of public hearings and interaction with the local communities and local authorities was conducted, which showed that the topics of "Economic Performance" and "Employment practices" were of the greatest importance to local communities. These aspects were considered significant in terms of the Company's impact and stakeholder expectations, and were disclosed in the report. In order to ensure transparency and strengthen public trust, the report provides information on the mechanisms for submitting and processing appeals and complaints. This element meets GRI's industry requirements on the topic of interaction with local communities and provides an integrated approach to managing social impact. See the section "Our Communities".
Topic 11.16: Land and Resource Rights	The risks of violating the rights of local populations in relation to land resources are assessed as relatively low.
Topic 11.17: Rights of Indigenous Peoples	The regions of KMG's operations are characterized by low risks of violating the rights of indigenous peoples
Topic 11.18: Conflicts and Security	The company does not operate in conflict regions.
Topic 11.19: Anti-competitive Behavior	Impacts related to competition violations were assessed as relatively low.
Topic 11.21: Payments to Governments	The Company strictly adheres to the requirements of the tax legislation of the Republic of Kazakhstan and international transparency standards. In this regard, the Company annually publishes detailed information on tax payments in the sustainability report and on its corporate website, including disclosures in line with GRI 207 "Tax Reporting", and with reference to the OECD BEPS Action 13 (Country-by-Country Reporting) principles. Since this disclosure is systematic and mandatory, the topic of "Payments to Governments" was not additionally highlighted as a priority in the materiality assessment process. See the section "Tax Policy and Payment to Governments".
Topic 11.22: Public Policy	The company does not make contributions or other payments for political purposes.

# SASB INDEX

Topic	Code	Indicator	Disclosure	Comment
Greenhouse Gas Emissions	EM-EP-110a.1	Total global Scope 1 emissions, methane share, share covered by regulations	98, 184	
	EM-EP-110a.2	Total global Scope 1 emissions from: (1) flaring of hydrocarbons, (2) other combustion processes, (3) process emissions, (4) other venting emissions, (5) leaks	98, 184	
	EM-EP-110a.3	Discussion of long-term and short-term management strategy or plan for Scope 1 emissions, reduction targets, and performance analysis	87	
Air Quality	EM-EP-120a.1	Emissions of the following pollutants: (1) NOx (excluding N <sub>2</sub> O), (2) SOx, (3) Volatile Organic Compounds (VOCs), (4) Particulate Matter (PM10)	112, 185	
Water Management	EM-EP-140a.1	(1) Volume of water withdrawn, (2) volume of water consumed; share of each in regions with high or extremely high water stress	108, 183	
	EM-EP-140a.2	Volume of produced water and returned water; share (1) discharged, (2) injected, (3) treated; hydrocarbon content in discharged water	109, 184	
	EM-EP-140a.3	Share of hydraulic fracturing wells for which all chemicals used are disclosed		
	EM-EP-140a.4	Share of hydraulic fracturing sites where the quality of underground or surface water has deteriorated compared to baseline		
Biodiversity Impact	EM-EP-160a.1	Description of environmental management policies and practices for active sites	102, 118	
	EM-EP-160a.2	(1) Number and (2) total volume of hydrocarbon spills, (3) volume in the Arctic, (4) volume affecting shorelines with ESI indices 8-10, (5) volume recovered after spill	117	
	EM-EP-160a.3	Share of (1) proved and (2) probable reserves located near protected natural areas or habitats of endangered species	86	

Topic	Code	Indicator	Disclosure	Comment
Safety, Human Rights, and Indigenous Rights	EM-EP-210a.1	Share of (1) proved and (2) probable reserves near conflict zones	--	Company does not operate near conflict zones.
	EM-EP-210a.2	Share of (1) proved and (2) probable reserves near indigenous land	--	Company does not operate near indigenous land.
	EM-EP-210a.3	Discussion of engagement processes and comprehensive assessment of impacts on human rights, indigenous rights, and activities in conflict zones	162	
Community Relations	EM-EP-210b.1	Discussion of the process for managing risks and opportunities related to the rights and interests of local communities	162	
	EM-EP-210b.2	(1) Number and (2) duration of non-technical delays		
Worker Health and Safety	EM-EP-320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, (3) near-miss frequency rate (NMFR), (4) average hours of health, safety, and emergency response training for (a) employees and (b) contractors	134	
	EM-EP-320a.2	Discussion of management systems aimed at integrating safety culture throughout the exploration and production lifecycle	132	
Reserves Evaluation and Capital Expenditures	EM-EP-420a.1	Sensitivity of hydrocarbon reserve levels to projected price scenarios accounting for carbon emissions costs	--	No studies conducted as of now.
	EM-EP-420a.2	Estimated CO2 emissions contained in proved hydrocarbon reserves	--	No studies conducted as of now.
	EM-EP-420a.3	Volume of investments in renewable energy, revenue from renewable energy sales	63	
	EM-EP-420a.4	Discussion of the impact of oil prices, demand, and climate regulations on capital investment strategy in exploration, acquisition, and asset development	--	No studies conducted as of now.
Business Ethics and Transparency	EM-EP-510a.1	Share of (1) proved and (2) probable reserves in countries with the 20 lowest positions in Transparency International's Corruption Perceptions Index	--	Company does not operate in these regions.
	EM-EP-510a.2	Description of the management system to prevent corruption and bribery throughout the value chain	51, 186	

Topic	Code	Indicator	Disclosure	Comment
<b>Legal and Regulatory Environment Management</b>	EM-EP-530a.1	Discussion of corporate positions on government regulations or proposals concerning environmental and social factors affecting the industry	57	
<b>Critical Incident Risk Management</b>	EM-EP-540a.1	Process safety incident rate (PSE) for significant loss of primary containment (LOPC) Level 1 events		
	EM-EP-540a.2	Description of management systems used to identify and mitigate catastrophic and emergency risks	135	
<b>Operational Metrics</b>	EM-EP-000.A	Production: (1) oil, (2) natural gas, (3) synthetic oil, and (4) synthetic gas	2, 181	
	EM-EP-000.B	Number of offshore fields	183	
	EM-EP-000.C	Number of onshore fields	183	

# ABBREVIATIONS AND TERMS

<b>ACCA</b>	Association of Chartered Certified Accountants
<b>AEMS</b>	Automated Emissions Monitoring System
<b>AIX</b>	Astana International Exchange
<b>AMS</b>	Automated Monitoring Systems
<b>BP</b>	British Petroleum
<b>BRCC</b>	Biodiversity Research and Conservation Center
<b>CCUS</b>	Carbon Capture, Utilization and Storage
<b>CDP</b>	Carbon Disclosure Project
<b>CFA</b>	Chartered Financial Analyst
<b>CIA</b>	Certified internal auditor
<b>CIMA</b>	Chartered Institute of Management Accountants
<b>COP</b>	Conference of the Parties
<b>COVID-19</b>	Coronavirus Disease 2019
<b>DBA</b>	Doctor of Business Administration
<b>DipIFR</b>	Diploma in the International Financial Reporting
<b>EBITDA</b>	Earnings before interest, taxes, depreciation and amortization
<b>EP</b>	environmental protection
<b>ESG</b>	Environmental, Social, and Governance
<b>FAR</b>	Fatality accident rate
<b>GHG</b>	greenhouse gas
<b>GRI</b>	GRI Sustainability Reporting Standards
<b>HSE</b>	Health, Safety and Environment
<b>IOGP</b>	International Association of Oil & Gas Producers
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IPIECA</b>	International Petroleum Industry Environmental Conservation Association
<b>IPMA</b>	International Project Management Association
<b>I-REC</b>	International Renewable Energy Certificate

<b>ISO</b>	International Organization for Standardization
<b>JSC</b>	Joint stock company
<b>KASE</b>	Kazakhstan Stock Exchange
<b>KOA</b>	Kazakhoil Aktobe LLP
<b>KPI</b>	Kazakhstan Petrochemical Industries Inc
<b>LP</b>	labor protection
<b>LTIR</b>	Lost Time Incident Rate
<b>MBA</b>	Master of Business Administration
<b>NEBOSH</b>	National Examination Board in Occupational Safety and Health
<b>OGMP</b>	Oil and Gas Methane Partnership
<b>OHSAS</b>	Occupational Health and Safety Assessment Series
<b>OPITO</b>	Offshore Petroleum Industry Training Organization
<b>OSC</b>	Oil Services Company LLP
<b>OSRL</b>	Oil Spill Response Limited
<b>PMP</b>	Project Management Professional certificate
<b>PR</b>	public relations
<b>PwC</b>	PricewaterhouseCoopers
<b>RoSPA</b>	The Royal Society for the Prevention of Accidents SAF sustainable aviation fuel
<b>SBTi</b>	Science Based Targets initiative
<b>SRS</b>	Social Responsibility Scale
<b>TCFD</b>	Task Force on Climate-related Financial Disclosures
<b>UNEP</b>	United Nations Environment Programme
<b>WEP</b>	United Nations Women's Empowerment Principles
<b>WRI</b>	World Resource Institute