

# COMPANY OVERVIEW

GRI 102-1, 102-2, 102-4, 102-5, 102-6, 102-9

## OUR PROGRESS

# 23,618

thousand tonnes

Oil and condensate production

23,618	2019
23,606	2018
23,362	2017

# 20,588

thousand tonnes

Oil refinery

20,588	2019
19,715	2018
18,207	2017

# 10,729

thousand tonnes

Oil transportation by sea

10,729	2019
7,077	2018
6,951	2017



*Joint Stock Company “National Company “KazMunayGas” is a unique vertically integrated oil and gas operator that implements the full production cycle, from upstream and downstream operations with respect to hydrocarbons to specialised services.*

KMG was established pursuant to Decree of the President of the Republic of Kazakhstan (hereinafter — the RoK) dated 20 February 2002, No. 811, regarding Activities to Further Pursue State Interests in the National Oil and Gas Sector, and RoK Governmental Resolution dated 25 February 2002, No. 248, regarding Activities to Enforce Decree of the RoK President dated 20 February 2002, No. 811. KMG is a legal successor of Closed Joint Stock Companies “National Oil and Gas Company “Kazakhoil” and “National Company “Oil and Gas Transport” and Joint Stock Company “KazMunayGas — Refining and Marketing”. KMG was founded by the RoK Government represented by the State Property and Privatisation Committee under the RoK Ministry of Finance.



**KMG shareholders** are “Samruk-Kazyna” Sovereign Wealth Fund Joint Stock Company (hereinafter referred to as Samruk-Kazyna JSC) **(90.42%)** and “Kazakhstan National Bank” Republican State Enterprise **(9.58%)**.

The KMG Group includes 144 companies with fifty and more voting shares (interest) directly or indirectly owned by KMG, of which 77 assets are located in the RoK. Other assets are based in such countries as Romania, Georgia, Switzerland, the Netherlands, Canada, Bulgaria, Ukraine, Moldova, Russia and Turkey.

On 30 December 2015, pursuant to RoK Governmental Resolution No. 1141, regarding Certain Privatisation Issues 2016–2020, the Comprehensive Privatisation Plan 2016–2020 was approved, including 73 KMG Group companies, of which 89 % of the activities have been completed. The number of legal entities forming part of the KMG Group is reduced under the privatisation and divestment programmes.

KMG ships diesel fuel for field agricultural activities and supplies fuel oil to social production facilities and enterprises during the heating season.

The remaining oil product volumes are sold to third-party consumers on the domestic market and for export.

In 2019, KMG’s share in the oil product output amounted to 12,513 thousand tonnes of finished products. In 2019, KMG fully covered the domestic market needs in light oil products in the Republic of Kazakhstan. KMG’s share in refining of raw hydrocarbons in the total oil refining volume in Kazakhstan made up 81% in 2019.

Starting from September 2019, KMG additionally commenced motor gasoline export (37 thousand tonnes).

In 2019, dark oil products and gasoline shipments to Europe predominated in the scheme of oil product export supplies. The petrochemicals, coke and sulphur were supplied to China, Russia and Tajikistan.

# 12,513

THOUSAND TONNES  
OF FINISHED PRODUCTS

Oil product output  
in 2019

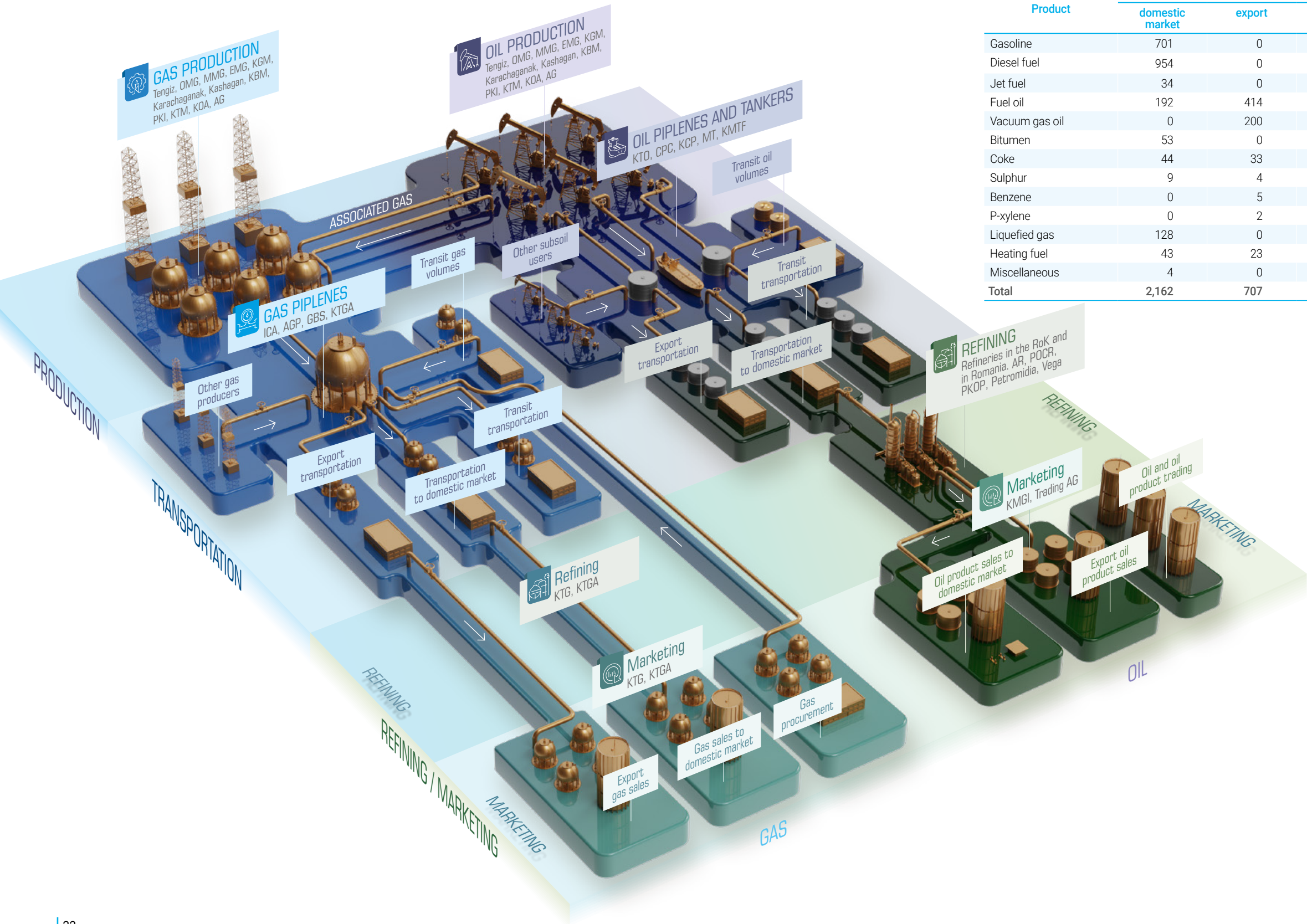
In 2019, jet fuel was sold by KMG-Aero to the following airports and air companies:

- JSC Aktau International Airport
- JSC Taraz International Airport
- JSC Sary-Arka International Airport
- Deutsche Lufthansa Aktiengesellschaft (Germany)
- PJSC Aeroflot (Russia)
- ATLAS GLOBAL (Turkey)
- JSC Air Astana
- JSC QAZAQ AIR
- JSC Ir-Aero (Russia)
- JSC Scat



Production Value Chain

GRI 102-7, 102-9



Wholesale of KMG Oil Products Produced in the Republic of Kazakhstan, thousand tonnes

Product	2018			2019		
	domestic market	export	total	domestic market	export	total
Gasoline	701	0	701	789	37	826
Diesel fuel	954	0	954	1,028	0	1,028
Jet fuel	34	0	34	85	0	85
Fuel oil	192	414	606	188	469	658
Vacuum gas oil	0	200	200	0	167	167
Bitumen	53	0	53	65	0	65
Coke	44	33	77	40	51	91
Sulphur	9	4	13	2	13	14
Benzene	0	5	5	0	12	12
P-xylene	0	2	2	0	55	55
Liquefied gas	128	0	128	114	0	114
Heating fuel	43	23	66	7	0	7
Miscellaneous	4	0	4	14	0	14
Total	2,162	707	2,868	2,333	804	3,136

GRI 417-1

In accordance with the Technical Regulations of the Customs Union, starting from 2018, motor fuels of environmental classes K4 and K5 (Euro-4 and Euro-5) are produced at domestic refineries.

K4 and K5 (EURO-4 and EURO-5)

OG8

- In this respect:
- The volume fraction of benzene shall not exceed 1% for environmental classes K4 and K5.
  - The weight fraction of sulphur for K4 shall not exceed 50 mg/kg, while the weight fraction of sulphur for K5 shall not exceed 10 mg/kg.
  - The lead content shall not exceed 5 mg/dm³ for environmental classes K4 and K5.

The information on the quality of products by Kazakhstan refineries is available at the official websites of the relevant refineries:

[https://www.pnhz.kz/product/quality\\_of\\_product/](https://www.pnhz.kz/product/quality_of_product/)

[https://www.anpz.kz/production/product/http://www.petrokazakhstan.kz/rus/pages/processing\\_subdivision.html](https://www.anpz.kz/production/product/http://www.petrokazakhstan.kz/rus/pages/processing_subdivision.html)

A more detailed overview of the Company's production operations and financial performance is presented in the 2019 Annual Report [http://www.kmg.kz/uploads/reports/KMG\\_AR19\\_RU.pdf](http://www.kmg.kz/uploads/reports/KMG_AR19_RU.pdf)

## COMPANY'S MISSION AND STRATEGIC INTENTS

GRI 102-16

### MISSION

Ensure the maximum benefits for the Shareholders for their participation in the national oil and gas industry development

### VISION

A highly efficient vertically integrated company – the national oil and gas industry leader that meets the highest safety and corporate governance standards

### STRATEGIC GOALS

1

Create value for the shareholders by improving production performance and investing into growth

2

Implement process digitalisation and optimisation

3

Implement the best sustainable development and corporate governance practices

4

Maintain financial stability

### KMG STRATEGIC PERFORMANCE

- ✓ Increased free cash flow and return on investments
- ✓ Implementation of digital solutions across the value chain
- ✓ Business process optimisation and transition to new operating model
- ✓ Ethics, compliance, corporate culture
- ✓ Sustainable development and environmental responsibility

### SHAREHOLDERS' STRATEGIC PERFORMANCE

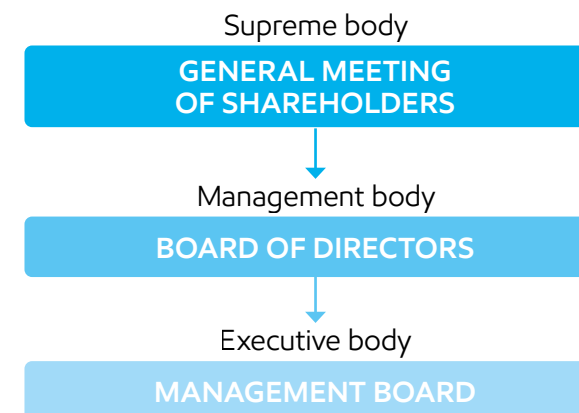
- ✓ Increased company's value
- ✓ Increased dividends to shareholders

## CORPORATE GOVERNANCE

GRI 102-18

Pursuant to the RoK laws and KMG Charter, the KMG corporate governance structure is as follows:

**KMG corporate governance bodies are:**



The Board of Directors is engaged in general management of KMG activities, prioritises the activity areas, defines the Company's development strategy and is accountable to the General Meeting of Shareholders as related to its management duties. The day-to-day activities are managed by the Management Board, which, in its turn, is accountable to the Board of Directors.

### Delegation of Authorities 102-19

The authorities related to economic, environmental and social issues are delegated by the management bodies to the top executives and other employees as part of the corporate governance processes in accordance with the KMG Charter and Corporate Governance Code. The corporate governance issues are controlled by the Board of Directors. The Corporate Secretary is responsible for the process of improving corporate governance practices at KMG, which is then implemented in KMG's subsidiaries and affiliates. The scope of sustainable development issues, including delegation of economic, environmental and social issues, is described in detail in the action plans on corporate governance improvement and is also envisaged in the decisions taken by the Board of Directors and its committees.

In order to address the most critical issues and to develop recommendations to the Board of Directors, the dedicated committees are established at KMG under the Board of Directors. The following committees operate under the Board of Directors:

- 1. Nomination and Remuneration Committee** is established to address the tasks related to succession planning for the Board of Directors and the Management Board, performance evaluation of the KMG bodies, ensuring the efficient HR policy, the wage and remuneration system, as well as social assistance, professional development and training of KMG officials and employees.
- 2. Strategy and Portfolio Management Committee** is established to address the issues of development strategy and investment policy, KMG operation priorities, improvement of KMG investment attractiveness, KMG financial and economic planning and transformation monitoring.
- 3. Finance Committee** is established to pursue an effective financial policy by evaluating the financial standing, monitoring the financial framework and strategy and controlling implementation of investment projects.
- 4. Audit Committee** is intended to efficiently control the financial and economic activities, to ensure efficiency of the internal control, risk management and corporate governance systems, to address audit and financial reporting issues.
- 5. Health, Safety, Environment, and Sustainability Committee** is intended to address the issues related to health, safety and environment, implementation of the sustainable development and social and economic development principles, social commitments and programmes, ensuring business continuity and environmental efficiency. This committee is responsible for initiation, in-depth review of and decision-making on economic, environmental and social aspects of the impact caused by the Company.



## Economic, Environmental and Social Responsibility GRI 102-20

Pursuant to the KMG Corporate Governance Code, the Board of Directors and the Management Board shall establish and implement the appropriate sustainable development system within their competence, while every employee and official at every level shall contribute to sustainable development.

During 2019, the responsibilities for sustainable development issues were allocated as follows at the executive body level:

1. Deputy Chairman of the Management Board – Chief Financial Officer is responsible for the economic scope of sustainable development issues, including promotion of economic development in the operating regions and increase in the local content in procurements.
2. Managing Director for Strategy is responsible for development and implementation of the sustainable development management system to ensure compliance with the sustainable development principles and integration of sustainable development into the key processes, the Company's development strategy and decision-making processes.

3. Managing Director for Safety and Environment is responsible for development and implementation of KMG's HSE strategy and policies, as well as industrial safety, occupational health, environmental protection and environmental security issues.
4. HR Managing Director is responsible for implementation of labour, HR and social processes and management within the sustainable development scope.

The above persons are accountable to the Management Board and/or its Chairman. Accountability of those responsible for economic, environmental and social issues is governed in detail by the Company's regulatory documents, internal control and business continuity procedures. In this regard, the issues according to the development plans are regularly presented for review to the Management Board, which, in its turn, is accountable to the Board of Directors. Comprehensive control over implementation of the appropriate duties and actions aimed at improving the corporate governance shall be exercised within the scope of authorities delegated to the Audit Committee under KMG's Board of Directors.

## Economic, Environmental and Social Consultations to Stakeholders GRI 102-21, 102-31, 102-32, 102-33, 102-34

Economic, environmental and social consultations between the stakeholders and the Company's supreme corporate governance body shall be implemented in various ways and on a continuous basis.

Safety, Environment, and Sustainability Committee of the Board of Directors (hereinafter – the Committee) develops and submits to the Board of Directors its recommendations in the following disciplines:

- Health, safety and environment
- Integration of the sustainable development principles into KMG strategic planning and social & economic development
- KMG social commitments and programmes under the existing subsoil use contracts
- KMG environmental efficiency monitoring.

In 2019, the Committee's activities were mainly focused on health, safety and environment, strategic management of the ESG (Environmental – Social – Governance)

aspects, as well as sustainability reporting. The key issues addressed by the Committee in 2019 are listed below:

- Improving transparency and quality of reports submitted by business units and management efficiency within the Committee's competence
- Obtaining the ESG rating from reputable international rating agencies
- Independent audit and verification of the 2018 Sustainability Report
- Recording the potential safety hazards, preventing incidents associated with high danger to the life and health of employees
- Acknowledging climate-related risks, such as water use risks, risks associated with air emissions of greenhouse gases and associated petroleum gas flaring, risks associated with the RoK environmental law amendments
- Contractor management as related to health, safety and environment, increasing responsibility among contractors

- Holding special-purpose internal audits on health, safety and environment, and analysing the audit findings
- Detailed review of environmental fines and sanctions imposed on the KMG Group and the response actions taken
- Comprehensive review of waste management issues, such as recording, identification and disposal of various waste types across the KMG Group
- Implementing the UN Global Sustainable Development Goals
- Establishing a balanced system of KPIs (key performance indicators) for the Company's specific managers by sustainable development areas
- Investigating and preventing fatal accidents, road traffic accidents and safety incidents, holding managers liable for actual safety incidents
- Defining the leadership position as related to management of environmental and nature preservation issues, participating in development of the RoK environmental laws
- Culture, training and accountability of managers and employees at KMG and its subsidiaries.

Moreover, the Committee reviewed and approved the following principal documents in 2019:

- JSC NC KazMunayGas Sustainability Report for 2018
- Sustainability Management Guideline across the KMG Group
- JSC NC KazMunayGas Health and Safety Policy
- JSC NC KazMunayGas Environmental Policy
- JSC NC KazMunayGas Policy on Alcohol, Drugs, Psychotropic Substances and Their Equivalents
- JSC NC KazMunayGas Policy on Safe Operation of Land Transport Vehicles
- Corporate Standard on Contractor Engagement in Health, Safety and Environment at the JSC NC KazMunayGas Group
- Corporate Standard on Competence Assurance in Health, Safety and Environment at the JSC NC KazMunayGas Group.

KMG officials and employees were regularly invited to take part in the Committee's activities by attending the meetings of the Committee without the voting rights. The KMG Board of Directors has accepted every recommendation developed by the Committee.

Economic, environmental and social consultations are provided to a wide range of stakeholders via

the Company's website, public relations service (press service), as well as by issuing the annual Sustainability Report that serves as a communication centre between KMG and its internal and external stakeholders in terms of disclosing sustainable development information. At the same time, KMG has various communication methods in place, which enable a proper dialogue with the stakeholders and the Company.

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*The Health, Safety, Environment, and Sustainability Committee of the Board of Directors is in charge of general management of the activities of the above-mentioned officials. In this regard, three meetings of the Committee were held in 2019, where 36 issues were addressed, with 57 decisions and assignments developed based on the meetings of the Committee*

For instance, the detailed information intended for the investment community is published on the dedicated portal at <http://ir.kmg.kz>

The employment issues are addressed at <http://work.kmg.kz>

The confidential reporting system is implemented via the helpline channel at [doverie@kmg.kz](mailto:doverie@kmg.kz)

Functional engagement is also carried out as related to the Ombudsman's activities at [ombudsman@kmg.kz](mailto:ombudsman@kmg.kz)

Safety and environment at [hse@kmg.kz](mailto:hse@kmg.kz)

Sustainable development at [sustainability@kmg.kz](mailto:sustainability@kmg.kz)

While the confidential reporting system is implemented via the hot line administrated by an independent third party.

## Management Body and its Committees GRI 102-22, 102-23

The Board of Directors is composed of the following persons (as on 31.12.2019):

1. Christopher John Walton

Chairman of the Board of Directors, Independent Director;
2. Alik Aidarbayev

Member of the Board of Directors, Chairman of KMG Management Board;
3. Baljeet Kaur Grewal

Member of the Board of Directors, Representative of JSC Samruk-Kazyna;
4. Uzakbay Karabalin

Member of the Board of Directors, Representative of JSC Samruk-Kazyna;
5. Almasadam Satkaliyev

Member of the Board of Directors, Representative of JSC Samruk-Kazyna;
6. Anthony Espina

Member of the Board of Directors, Representative of JSC Samruk-Kazyna;
7. Stephen James Whyte

Member of the Board of Directors, Independent Director;
8. Philip John Dayer

Member of the Board of Directors, Independent Director;
9. Luís Maria Viana Palha Da Silva

Member of the Board of Directors, Independent Director.

The composition of the Committees of the Board of Directors is as follows:

### AUDIT COMMITTEE

1. Philip John Dayer, *Chairman*
2. Stephen James Whyte
3. Luís Maria Viana Palha Da Silva

### STRATEGY AND PORTFOLIO MANAGEMENT COMMITTEE

1. Stephen James Whyte, *Chairman*
2. Christopher John Walton
3. Uzakbay Karabalin
4. Baljeet Kaur Grewal
5. Philip John Dayer
6. Luís Maria Viana Palha Da Silva
7. Anthony Espina

### Nomination and Remuneration Committee


1. Luís Maria Viana Palha Da Silva, *Chairman*
2. Philip John Dayer
3. Christopher John Walton
4. Stephen James Whyte
5. Uzakbay Karabalin
6. Anthony Espina

### FINANCE COMMITTEE

1. Christopher John Walton, *Chairman*
2. Stephen James Whyte
3. Baljeet Kaur Grewal
4. Philip John Dayer
5. Luís Maria Viana Palha Da Silva
6. Anthony Espina

### HEALTH, SAFETY, ENVIRONMENT, AND SUSTAINABILITY COMMITTEE

1. Philip John Dayer, *Chairman*
2. Christopher John Walton
3. Stephen James Whyte
4. Uzakbay Karabalin
5. Luís Maria Viana Palha Da Silva



The members of the Board of Directors are elected for up to three years. The Board of Directors includes one woman, Ms. Baljeet Kaur Grewal. Three out of nine members of the Board of Directors are the Kazakhstan citizens. The Board of Directors and its Committees maintain the balance of skills, experience and knowledge to ensure the independent, unbiased and efficient decision-making process in the interests of KMG and in view of equal treatment of all shareholders and sustainable development principles. The members of the Management Board, except the Chairman of the Management Board, cannot be elected to the Board of Directors, and the Chairman of the Management Board cannot be elected the Chairman of the Board of Directors. For more details on the members of the Board of Directors, visit KMG website: [http://kmg.kz/rus/kompaniya/korporativnoe-upravlenie/sovet\\_direktorov/](http://kmg.kz/rus/kompaniya/korporativnoe-upravlenie/sovet_direktorov/)

## Nomination and Selection of Supreme Management Body GRI 102-24

### Procedure for Nomination and Selection of Candidates to the Board of Directors

The procedure for nomination and selection of candidates to the Board of Directors is determined by the Charter and other regulatory documents and implemented by the General Meeting of Shareholders together with the Chairman of the Board of Directors and the Chairman of the Nomination and Remuneration Committee of the Board of Directors, and is governed by the transparent, fair and professional approach to recruitment and employment of candidates. The members of the Board

of Directors are elected from among the candidates nominated as potential representatives of shareholders and other parties. The candidates to the Board of Directors shall have the knowledge, skills and experience necessary to discharge their duties and to ensure long-term added value and sustainable development, and shall also have impeccable business reputation. The Chairman of the Board of Directors is elected at the General Meeting of Shareholders. Independent directors are selected in accordance with the approved Rules for Determining Composition of Boards of Directors / Supervisory Boards of the Samruk-Kazyna Companies.

## Role of the Management Body in Establishing Goals, Values, Mission and Strategy GRI 102-26

The Board of Directors shall prioritize the activity areas, approve and monitor implementation of the development strategy, including the goals, values, mission, as well as economic, environmental and social development related policies and tasks as agreed with the shareholders based on the proposals prepared by the executive body.

For instance, on 1 July 2019, the Annual Ad Hoc Joint Meeting of the KMG Board of Directors and Management Board on Sustainable Development for 2019 (hereinafter – SDM 2019) was held, where the members of the Board of Directors and the Management Board jointly discussed the topical issues of long-term sustainable development of the KMG Group.

Based on SDM-2019, the KMG Board of Directors and Management Board agreed on the long-term priorities in social & economic development, safety and environment, as well as corporate governance, including the following:

- All management decision-making processes by the KMG bodies shall envisage sustainable development principles.
- KMG shall strive to ensure continuous improvement of social security for the KMG employees, including

- attractive social conditions and social infrastructure for employees engaged at the KMG production facilities in order to retain and develop talents, foster the culture and favourable social environment in the teams and at workplaces.
- Social stability and community relations to address social risks shall be KMG’s key priorities at all decision-making levels on a continuous basis.
  - KMG shall strive to ensure the proper professional personnel and talent pool at KMG in order to efficiently perform the full range of works within the sustainable development scope.
  - KMG shall ensure continuous engagement with the respective governmental authorities to assist the government in addressing the pressing social issues in the operating regions where KMG has direct or indirect social impact and interests.

Thus, the members of the Board of Directors have established the following top priorities: ecology and environmental protection, protection of life and health of the company’s employees at all production facilities, talent pool development and commitment to the recognised global Sustainable Development Goals.

## Management Body Competence and Performance Review

### Collective Knowledge of the Management Body Members GRI 102-27

The members of the Board of Directors strive to regularly enhance their skills and professional competencies, including those related to economic, environmental and social management. The Nomination and Remuneration Committee regularly reviews the current balance of skills and knowledge among the members of the Board of Directors and develops a training plan.

Outreach sessions of the Board of Directors are held on a regular basis at production sites. The training plans for the KMG management and employees are also envisaged as related to sustainable management, ethics and compliance, along with other seminars and sessions implemented on a continuous basis in terms of corporate governance components.



Information on skill and knowledge enhancement for the members of the Board of Directors is available on the Company's website: [http://www.kmg.kz/rus/kompaniya/korporativnoe\\_upravlenie/treningi\\_chlenov\\_soveta\\_direkt/](http://www.kmg.kz/rus/kompaniya/korporativnoe_upravlenie/treningi_chlenov_soveta_direkt/)

### Management Body Performance Review GRI 102-28

According to the KMG Corporate Governance Code, the Board of Directors annually reviews its own performance, as well as performance of the Committees, Chairman and members of the Board of Directors. Moreover, a review is performed by an independent consultant once every three years. The procedure to review performance of the Board of Directors is governed by the Regulations on Performance Review of the Board of Directors, Committees of the Board of Directors, Chairman of the Board of Directors, Members of the Board of Directors and Corporate Secretary of KMG.

## Economic, Environmental and Social Impact Management GRI 102-29

The KMG Board of Directors plays a crucial role in management of economic, environmental and social impact and the associated prospects. The Company regularly performs the risk assessment on a quarterly basis and at the year-end in compliance with the approved risk management methodology, including economic, environmental and social risks. Based on the identified risks, the relevant action plans are developed and implemented to prevent, monitor and eliminate such risks. In particular, the following functions are deemed to be within the competence of the Board of Directors: determining the corporate risk management policy, approving the risk register and risk map, the critical risk management action plan, the overall risk appetite,

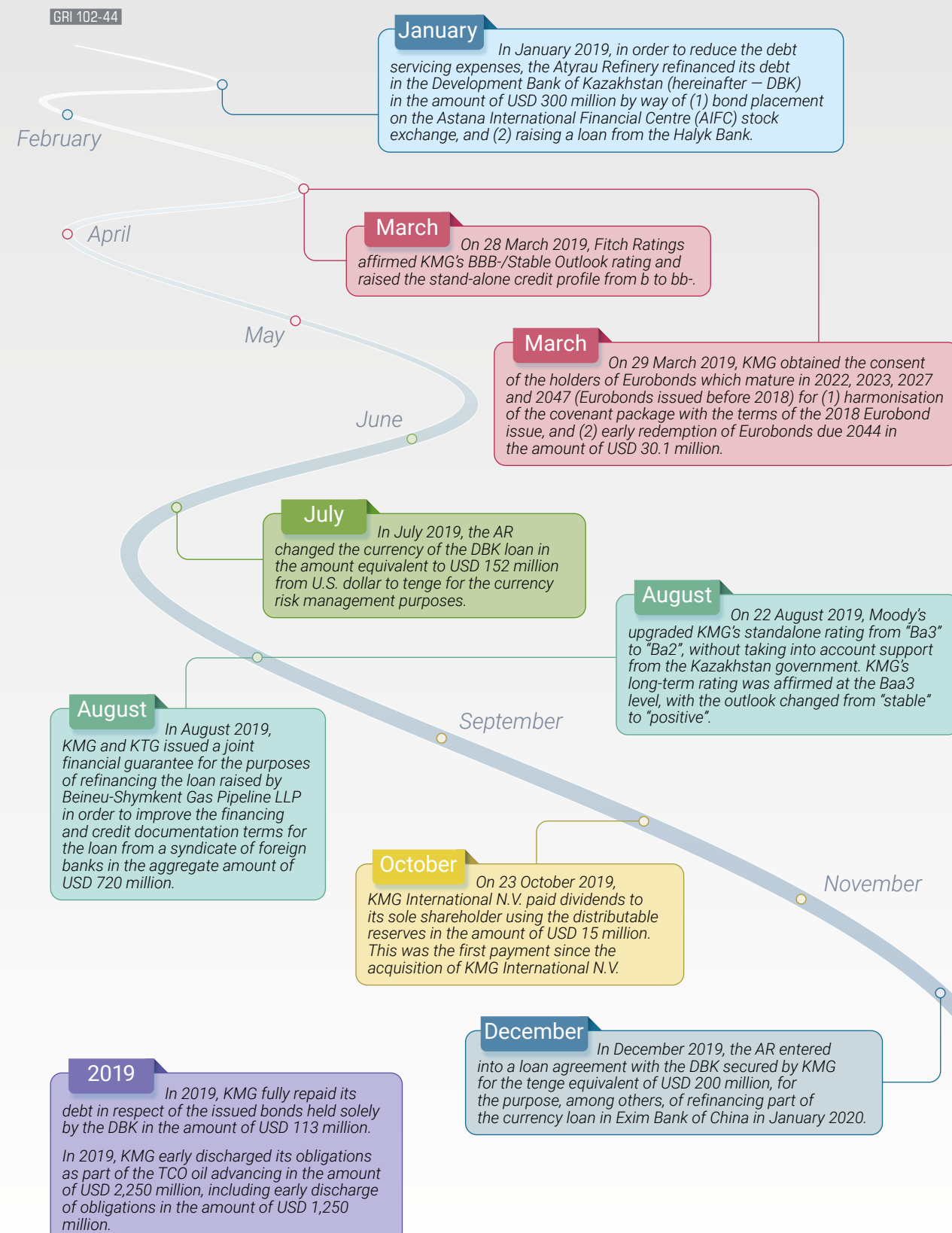
the tolerability levels for each key risk, approving the risk report, the internal control documents and the documents related to the KMG business continuity management system support.



For more details regarding the performance under **GRI 102-15, 102-30, 102-35, 102-36, 102-37, 102-38, 102-39** (risk management, remuneration of the Board of Directors), see the Annual Report at the KMG website: [http://ir.kmg.kz/storage/files/efba6caf32a34f5c/KMG\\_AR\\_2019\\_ENG\\_30.04\\_1451.pdf](http://ir.kmg.kz/storage/files/efba6caf32a34f5c/KMG_AR_2019_ENG_30.04_1451.pdf)

## KEY CORPORATE EVENTS in 2019

GRI 102-44





## DIGITAL TRANSFORMATION

GRI 102-10



KMG's digital transformation directly contributes to the achievement of the SDGs, and particularly supports SDG 9 "Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation".

Industrialisation drives the national economy and generates jobs. In addition to resilient infrastructure, it is based on research, innovation, and technical progress. The role of digitalisation in this context becomes greater. Today, digital technologies find their way into all the spheres of economy, and offer fundamental improvements in terms of efficiency and security. The energy sector is no exception — leading oil and gas companies worldwide are actively using the Big Data, predictive analytics, artificial intelligence, computer-assisted learning, robots, etc.

In view of the growing role of digitalisation all over the world, Kazakhstan is implementing the Digital Kazakhstan national programme aimed at ensuring the competitiveness of the country. The Programme covers almost all the economic sectors, including the oil and gas industry, and sets the following goals:

- Implement the smart field technologies in the large producing companies of Kazakhstan
- Ensure transparent accounting for commercial oil production by means of using metering devices
- Ensure uninterrupted fuel supply domestically by equipping the RoK refineries with monitoring systems, replacing equipment, and implementing an automated maintenance and repair system.

In 2019, based on the new vision for JSC Samruk-Kazyna, KMG revised the concept of the Transformation Programme by shifting the focus from business processes to digital technologies, updated the digital transformation project portfolio, and approved the Roadmap 2019–2024. The Company will introduce digital technologies into all its activities stage by stage, taking into account the current trends. The digitalisation projects in oil and gas production, refining and transportation, which are included in the current Programme portfolio, are intended to raise the quality of the data being used and operational asset management, to improve forecasting and simulation, and to reduce production losses. All this will contribute to higher operational efficiency of the Company.



Development of the KMG Digitalisation Strategy is scheduled for 2020. The Strategy will define priorities of digital technology implementation within the KMG Group based on the added-value chain, identify opportunities, assess potential effect of digitalisation, and indicate the focus of business functions and projects. At the corporate centre level, digitalisation will concentrate on the implementation of "continuity", "integration", and systemic methodology projects.

Three projects and two activities were completed in 2019. In particular, in the framework of project "Implementation of New Model of Maintenance and Repair (M&R) Management in Mangistaumunaygas", which was implemented in the oil production business. The M&R management process was automated through implementation of a tool for operational and strategic management by way of annual and monthly scheduling of production repairs of equipment, and prioritized performance of critical activities. A mechanism was implemented for generation of operational and analytical reports based on the cost planning and control for oilfield equipment M&R.



*The Company will introduce digital technologies into all its activities stage by stage, taking into account the current trends. The digitalisation projects in oil and gas production, refining and transportation, which are included in the current Programme portfolio, are intended to raise the quality of the data being used and operational asset management, to improve forecasting and simulation, and to reduce production losses*

In the refining business, the Implementation of Advanced Production Planning at KMG Refineries project was completed on the basis of Spiral software. The project



deliverables demonstrate high planning accuracy, the planning process is controlled at the corporate centre level, collaboration is in place between the refinery structural units and the head office in the development of the plans, and planning transparency is ensured. Implementation of advanced production planning has already resulted in better yield of HC products, which will contribute to cost reduction and higher competitiveness of the refineries.

Another project, which was implemented in Oil Refining and Marketing, is Transition of RoK Refineries to a Three-Year Workover Interval (Including Automation of M&R System). Implementation of the project has created conditions for increased refining output, reduction of repair costs, mitigation of the risk of accidents, and has made it possible to shut down refineries for repairs once every three years instead of every year.

Continued implementation of two vital initiatives of the Digital Transformation Programme is planned on the basis of the new approaches, namely introduction of a 'Smart Field' concept and "Transformation of Main ERP Business Functions" (hereinafter — ERP).

The Smart Field project deals with implementation of the industrial automation and data collection facilities,

and lays the basis for promotion of "Smart Field" technologies and models. Development of the concept of a full-scale smart field model using analytical systems, predictive analytics, and artificial intelligence is currently at the completion stage. The project will be restructured by reference to this concept, and will be included in the Digital Kazakhstan national programme in the new configuration.

Pursuant to the new approach, the ERP activities will be shaped into a project programme under which KMG's subsidiaries will independently implement the S4/HANA-based ERP system. KMG will control the programme implementation, monitor compliance with the unified corporate standards, methodologies, and harmonisation of reference materials.

The KMG transformation programme facilitates implementation of SDG 9, particularly Target 9.5, in terms of scaling up scientific research and upgrading the technological capabilities of industrial sectors. KMG invests heavily in scientific research and build-up of local content in this sphere. Should this target be achieved, SDG 9.b pertaining to support of domestic technology development ensuring industrial diversification will also positively influences the climatic situation in the country (SDG 13).